



# TPA03 Well Intervention Environment Plan

Revision 3

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# 1 INTRODUCTION

## 1.1 Overview

Woodside Energy Ltd (Woodside), as Titleholder under the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth) (referred to as the Environment Regulations), on behalf of the Joint Venture detailed in Section 1.7, is Operator of the TPA03 well located in WA-5-L. The TPA03 well is connected via the TPA manifold and pipelines, to the GWA facility which processes wells fluids under the accepted Goodwyn Alpha Facility Operations Environment Plan (Woodside Ref. A1800RH158693).

Woodside plans to perform a wireline well intervention on the TPA03 well from a Well Intervention Vessel (WIV), hereafter referred to as the Petroleum Activities Program which forms the scope of this Environment Plan (EP). A more 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).

## 1.2 Defining the Petroleum Activity

The Petroleum Activities Program to be undertaken in Permit Area WA-5-L comprises of a single wireline well intervention on an existing production well, which is a petroleum activity as defined in Regulation 4 of the Environment Regulations. As such an EP is required. Following the intervention, the TPA03 well will recommence production under the Goodwyn Alpha Facility Operations Environment Plan.

## 1.3 Purpose of the Environment Plan

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

- The potential environmental impacts and risks (planned (routine and non-routine) and unplanned) that may result from the Petroleum Activities Program 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 Activities Program 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]).
- This EP describes the process and resulting outputs of the risk assessment, whereby impacts and risks are managed accordingly.
- The EP defines activity-specific environmental performance outcomes, standards, and measurement criteria. These form the basis for monitoring, auditing, and managing the Petroleum Activities Program to be undertaken by Woodside and its contractors. The implementation strategy (derived from the decision support framework tools) specified in this EP provides Woodside and NOPSEMA with the required level of assurance that impacts and risks associated with the activity are reduced to ALARP and are acceptable.

## 1.4 Scope of the Environment Plan

The scope of this EP covers the activities that define the Petroleum Activities Program, as described in **Section 3**.

## 1.5 Environment Plan Summary

An EP summary will be prepared based on the material provided in this EP. **Table 1-1** summarises the content that will be provided within the EP summary, as required by Regulation 11(4).

**Table 1-1: EP Summary**

| EP Summary material requirement  | Relevant section of this EP containing EP Summary material |
|--|--|
| The location of the activity   | <b>Section 3.3</b>   |
| A description of the receiving environment   | <b>Section 4</b>   |
| A description of the activity  | <b>Section 3</b>   |
| Details of the environmental impacts and risks   | <b>Section 6</b>   |
| The control measures for the activity  | <b>Section 6</b>   |
| The arrangements for ongoing monitoring of the titleholder's environmental performance | <b>Section 7.6</b>   |
| Response arrangements in the oil pollution emergency plan                              | <b>Section 7.10</b>  |
| Consultation already undertaken and plans for ongoing consultation                     | <b>Section 5</b>   |
| Details of the titleholder's nominated liaison person for the activity                 | <b>Section 1.8</b>   |

## 1.6 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 10A(a): is appropriate for the nature and scale of the activity   | Regulation 13:<br>Environmental Assessment<br><br>Regulation 14:<br>Implementation strategy for the environment plan<br><br>Regulation 16:<br>Other information in the environment plan   | The principle of 'nature and scale' applies throughout the EP  | <b>Section 2</b><br><b>Section 3</b><br><b>Section 4</b><br><b>Section 6</b><br><b>Section 6</b><br><b>Section 7</b>                     |
| Regulation 10A(b): demonstrates that the environmental impacts and risks of the activity will be reduced to as low as reasonably practicable | Regulation 13(1)–13(7):<br>13(1) Description of the activity<br>13(2)(3) Description of the environment<br>13(4) Requirements<br>13(5)(6) Evaluation of environmental impacts and risks<br>13(7) Environmental performance outcomes and standards | Set the context (activity and existing environment)<br>Define 'acceptable' (the requirements, the corporate policy, relevant persons)<br>Detail the impacts and risks<br>Evaluate the nature and scale<br>Detail the control measures – ALARP and acceptable | <b>Section 1</b><br><b>Section 2</b><br><b>Section 3</b><br><b>Section 4</b><br><b>Section 6</b><br><b>Section 6</b><br><b>Section 7</b> |
| Regulation 10A(c): demonstrates that the environmental impacts and risks of the activity will be of an acceptable level                      | Regulation 16(a)–16(c):<br>A statement of the titleholder's corporate environmental policy<br>A report on all consultations between the titleholder and any relevant person   |  |  |

| Criteria for acceptance   | Content Requirements/Relevant Regulations  | Elements   | Section of EP                         |
|---|--|--|---------------------------------------|
| Regulation 10A(d): provides for appropriate environmental performance outcomes, environmental performance standards and measurement criteria  | Regulation 13(7): Environmental performance outcomes and standards   | Environmental Performance Objectives (EPOs)<br>Environmental Performance Standards (EPSs)<br>Measurement Criteria (MC)   | <b>Section 6</b>                      |
| Regulation 10A(e): includes an appropriate implementation strategy and monitoring, recording and reporting arrangements   | Regulation 14: Implementation strategy for the environment plan  | Implementation strategy, including: <ul style="list-style-type: none"> <li>• systems, practices and procedures</li> <li>• performance monitoring</li> <li>• Oil Pollution Emergency Plan (OPEP – <b>per Table 7-5</b>) and scientific monitoring</li> <li>• ongoing consultation.</li> </ul> | <b>Section 7</b><br><b>APPENDIX D</b> |
| Regulation 10A(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 | Regulation 13 (1)–13(3):<br>13(1) Description of the activity<br>13(2) Description of the environment<br>13(3) Without limiting [Regulation 13(2)(b)], particular relevant values and sensitivities may include any of the following:<br>(a) the world heritage values of a declared World Heritage property within the meaning of the EPBC Act;<br>(b) the national heritage values of a National Heritage place within the meaning of that Act;<br>(c) the ecological character of a declared Ramsar wetland within the meaning of that Act;<br>(d) the presence of a listed threatened species or listed threatened ecological community within the meaning of that Act;<br>(e) the presence of a listed migratory species within the meaning of that Act;<br>(f) any values and sensitivities that exist in, or in relation to, part or all of:<br>(i) a Commonwealth marine area within the meaning of that Act; or<br>(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   | <b>Section 3</b><br><b>Section 4</b>  |
| Regulation 10A(g): (i) the titleholder has carried out the consultations  | Regulation 11A: Consultation with relevant authorities, persons and organisations, etc.<br>Regulation 16(b):   | Consultation in preparation of the EP  | <b>Section 5</b>                      |

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| Criteria for acceptance  | Content Requirements/Relevant Regulations   | Elements  | Section of EP                            |
|--|---|---|--|
| required by Division 2.2A<br>(ii) the measures (if any) that the titleholder has adopted, or proposes to adopt, because of the consultations are appropriate | A report on all consultations between the titleholder and any relevant person   |   |  |
| Regulation 10A(h):<br>complies with the Act and the regulations  | Regulation 15:<br>Details of the Titleholder and liaison person<br>Regulation 16(c):<br>Details of all reportable incidents in relation to the proposed activity. | All contents of the EP must comply with the Act and the regulations | <b>Section 1.6</b><br><b>Section 7.8</b> |

## 1.7 Description of the Titleholder

Woodside is the Titleholder for this activity, on behalf of a Joint Venture including 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 Australia Pty Ltd.

Woodside's mission is to deliver superior shareholder returns through realising its vision of becoming a global leader in upstream oil and gas. Wherever Woodside works, it is committed to living its values of integrity, respect, working sustainably, discipline, excellence and working together.

Woodside's operations are characterised by strong safety and environmental performance in remote and challenging locations.

Since 1984 the company has been operating, on behalf of the Joint Venture, the landmark Australian project, the North West Shelf (NWS), which is one of the world's premier liquefied natural gas (LNG) facilities.

Woodside has an excellent track record of efficient and safe production. Woodside strives for excellence in safety and environmental performance and continues to strengthen relationships with customers, partners, co-venturers, governments and communities. Further information about Woodside can be found at <http://www.woodside.com>.

## 1.8 Details of Titleholder, Liaison Person and Public Affairs Contact

In accordance with Regulation 15 of the Environment Regulations, details of the titleholder, liaison person and arrangements for the notification of changes are described below.

### 1.8.1 Titleholder

Woodside Energy Ltd  
 11 Mount Street  
 Perth, Western Australia  
 T: 08 9348 4000  
 E: [feedback@woodside.com.au](mailto:feedback@woodside.com.au)  
 ACN: 63 005 482 986

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Woodside ID: 1401779378

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## 1.8.2 Nominated Liaison Person

Andrew Winter  
Corporate Affairs Manager  
11 Mount Street  
Perth, Western Australia  
T: 08 9348 4000  
E: feedback@woodside.com.au

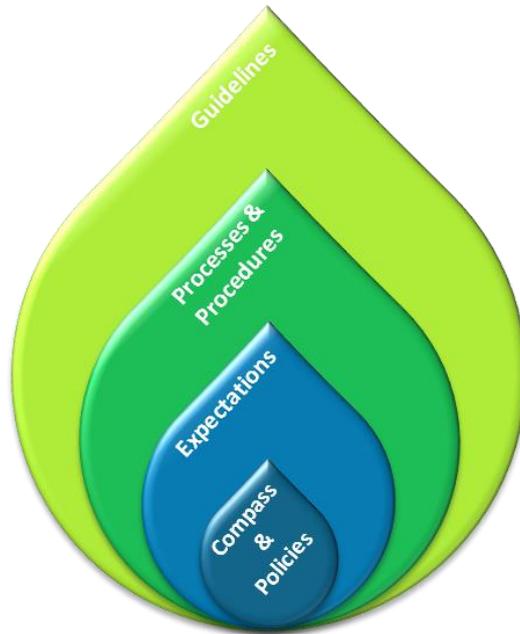
## 1.8.3 Arrangements for Notifying Change

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

## 1.9 Woodside Management System

The Woodside Management System (WMS) provides a structured framework of documentation to set common expectations governing how all employees and contractors at Woodside will work. Many of the standards presented in **Section 6** are drawn from the WMS documentation, which comprises four elements: Compass and Policies; Expectations; Processes and Procedures; and Guidelines, as outlined below (and illustrated in **Figure 1-1**).

- **Compass and Policies:** Set the enterprise-wide direction for Woodside by governing our behaviours, actions, and business decisions and ensuring we meet our legal and other external obligations.
- **Expectations:** Set essential activities or deliverables required to achieve the objectives of the Key Business Activities and provide the basis for developing processes and procedures.
- **Processes and Procedures:** Processes identify the set of interrelated or interacting activities that transforms inputs into outputs, to systematically achieve a purpose or specific objective. Procedures specify what steps, by whom, and when required to carry out an activity or a process.
- **Guidelines:** Provide recommended practice and advice on how to perform the steps defined in Procedures, together with supporting information and associated tools. Guidelines provide advice on: how activities or tasks may be performed; information that may be taken into consideration; or, how to use tools and systems.



**Figure 1-1: The four major elements of the WMS Seed**

The WMS is organised within a Business Process Hierarchy based upon Key Business Activities to ensure the system remains independent of organisation structure, is globally applicable and scalable wherever required. These Key Business Activities are grouped into Management, Support, and Value Stream activities as shown in **Figure 1-2**. The Value Stream activities capture, generate and deliver value through the exploration and production lifecycle. The Management activities influence all areas of the business, while Support activities may influence one or more value stream activities.

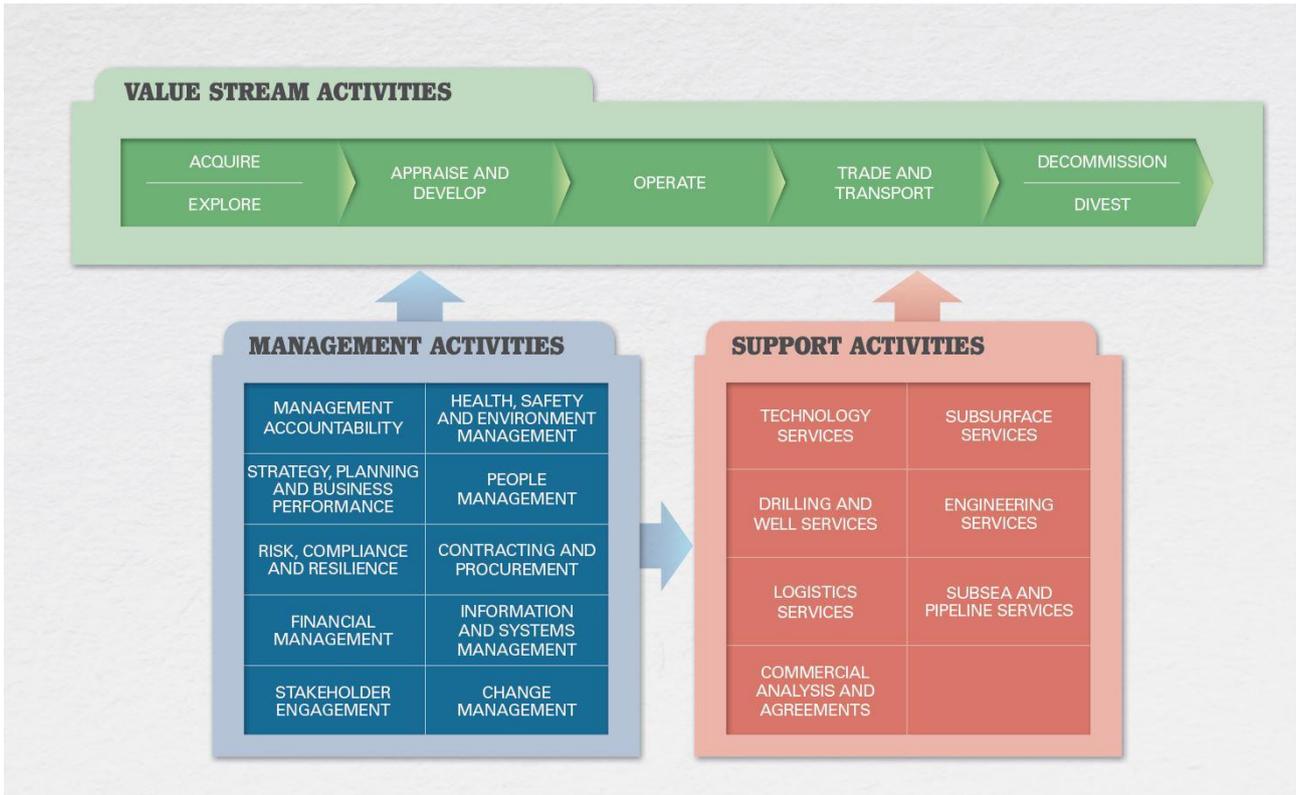


Figure 1-2: The WMS business process hierarchy

**1.9.1 Health and Safety, Environment and Biodiversity Policies**

In accordance with Regulation 16(a) of the Environment Regulations, Woodside’s Corporate Health and Safety and Environment and Biodiversity Policies are provided in **APPENDIX A** of this EP.

**1.10 Description of Relevant Requirements**

In accordance with Regulation 13(4) of the Environment Regulations, a description of requirements, including legislative requirements, that apply to the activity and are relevant to the management of risks and impacts of the Petroleum Activities Program are detailed in **APPENDIX B**. This EP will not be assessed under the *WA Environment Protection Act 1986* as the activity does not occur on State land or within State Waters.

**1.10.1 Offshore Petroleum and Greenhouse Gas Storage Act 2006**

The Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act) controls exploration and production activities beyond three nautical miles (nm) of the mainland (and islands) to the outer extent of the Australian Exclusive Economic Zone (EEZ) at 200 nm. The objective of the act is to provide a regulatory framework for petroleum exploration and recovery, greenhouse gas activities in offshore areas.

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:

- carried out in a manner consistent with the principles of ESD
- carried out in a manner by which the environmental impacts and risks of the activity will be reduced to ALARP

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- carried out in a manner by which the environmental impacts and risks of the activity will be of an acceptable level.

### 1.10.2 Environment Protection and Biodiversity Conservation Act 1999

One of the objectives EPBC Act is to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places in Australia. These are defined under Part 3 of the Act as “Matters of National Environmental Significance” (MNES). The EPBC Act sets a regime which aims to ensure actions taken on (or impacting upon) Commonwealth land or waters are consistent with the principles of Ecologically Sustainable Development (ESD). When a person proposes to take an action that they believe may need approval under the EPBC Act, they must refer the proposal to the Commonwealth Minister for Environment.

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

#### 1.10.2.1 Offshore Project Approval

The GWA facility commenced operations in 1995 and subsequent tie-ins have been referred for assessment under the EPBC Act. The TPA03 well was referred under the Greater Western Flank (GWF) Phase 1 Gas Development (2011/5980) and the decision by the Environment Minister determined the action is not a controlled action if undertaken in a particular manner.

#### 1.10.2.2 Recovery Plans and Threat Abatement Plans

Under s139(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 s268 of the EPBC Act:

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

In relation to offshore petroleum activities in Commonwealth waters, these requirements are now administered by NOPSEMA in accordance with commitments set out in the Program. Commitments relating to listed threatened species and ecological communities under the Act are included in the Program Report (Commonwealth of Australia, 2014):

- NOPSEMA will not accept an Environment Plan that proposes activities that will result in unacceptable impacts to a listed threatened species or ecological community.
- NOPSEMA will not accept an Environment Plan 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 Environment Plan.

#### 1.10.2.3 Australian Marine Parks

Under the EPBC Act, Australian Marine Parks (AMPs), formally known as Commonwealth Marine Reserves, 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. Other parts of the Commonwealth Government must not perform functions or exercise powers in relation to these parks that are inconsistent with management plans (s362 of the EPBC Act). Relevant AMPs are listed in

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Section 4.3 and described in the Woodside Master Existing Environment. In accordance with Regulation 31 of the Environmental Regulation, this Master Existing Environment was accepted on March 3<sup>rd</sup> 2022 as Appendix C in the [Goodwyn Alpha \(GWA\) Facility Operations Environment Plan](#). The North-west Marine Parks Network Management Plan describes the requirements for management.

Specific zones within the AMPs have been allocated conservation objectives as stated below (International Union for Conservation of Nature [IUCN] Protected Area Category) based on the Australian IUCN reserve management principles outlined in Schedule 8 of the EPBC Regulations 2000:

- Special Purpose Zone (IUCN category VI): managed to allow specific activities through special purpose management arrangements while conserving ecosystems, habitats and native species. The zone allows or prohibits specific activities.
- Sanctuary Zone (IUCN category Ia): managed to conserve ecosystems, habitats and native species in as natural and undisturbed a state as possible. The zone allows only authorised scientific research and monitoring.
- National Park Zone (IUCN category II): managed to protect and conserve ecosystems, habitats and native species in as natural a state as possible. The zone only allows non-extractive activities unless authorised for research and monitoring.
- Recreational Use Zone (IUCN category IV): managed to allow recreational use, while conserving ecosystems, habitats and native species in as natural a state as possible. The zone allows for recreational fishing, but not commercial fishing.
- Habitat Protection Zone (IUCN category IV): managed to allow activities that do not harm or cause destruction to seafloor habitats, while conserving ecosystems, habitats and native species in as natural a state as possible.
- Multiple Use Zone (IUCN category VI): managed to allow ecologically sustainable use while conserving ecosystems, habitats and native species. The zone allows for a range of sustainable uses, including commercial fishing and mining where they are consistent with park values.

#### 1.10.2.4 World Heritage Properties

Australian World Heritage management principles are prescribed in Schedule 5 of the EPBC Regulations 2000. Management principles that are considered relevant to the scope of this EP are provided in **Table 1-3**.

**Table 1-3: Relevant Management Principles under Schedule 5—Australian World Heritage management principles of the EPBC Act.**

| Number | Principle  | Relevant Section of the EP   |
|--------|--|--|
| 3      | <p>Environmental impact assessment and approval</p> <p>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).</p> <p>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.</p> <p>3.03 The assessment process should:</p> <p>(a) identify the World Heritage values of the property that are likely to be affected by the action; and</p> <p>(b) examine how the World Heritage values of the property might be affected; and</p> | <p>3.01 and 3.02: Assessment of significant impact on World Heritage values is included in <b>Section 6</b>. Principles are met by the submitted EP.</p> <p>3.03 (a) and (b): World Heritage values are identified in <b>Section 4</b> and considered in the assessment of impacts and risks for the Petroleum Activity in <b>Section 6</b>.</p> |

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|  |   |   |
|--|---|---|
|  | <p>(c) provide for adequate opportunity for public consultation.</p> <p>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.</p> <p>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.</p> <p>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.</p> | <p>3.03 (c): Relevant consultation and feedback received in relation to impacts and risks to the Ningaloo World Heritage Property are outlined in <b>Section 6</b></p> <p>·</p> <p>3.04, 3.05 and 3.06: Principles are considered to be met by the acceptance of this EP.</p> |
|--|---|---|

*Note that Section 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.*

## 2 ENVIRONMENT PLAN PROCESS

### 2.1 Overview

This section outlines the process taken by Woodside to prepare this EP, once the activity was defined as a petroleum activity. The process describes the activity, the existing environment, followed by the environmental risk management methodology used to identify, analyse and evaluate risks to meet ALARP levels and acceptability requirements, and develop environmental performance outcomes (EPOs) and environmental performance standards (EPSs). This section also describes Woodside's risk management methodologies as applied to implementation strategies for the activity.

Regulation 13(5) of the Environment Regulations requires the detailing of environmental impacts and risks, and evaluation appropriate to the nature and scale of each impact and risk associated with the Petroleum Activities Program. The objective of the risk assessment process described in this section is to identify risks and associated impacts of an activity, so they can be assessed and appropriate control measures applied to eliminate, control or mitigate the impact/risk to ALARP, and to determine if the impact or risk level is acceptable.

Environmental impacts and risks include those directly and indirectly associated with the Petroleum Activities Program, and include potential emergency and accidental events:

- **Planned activities** have the potential for inherent environmental impacts.
- **Environmental risks** are unplanned events with the potential for environmental impact (termed risk 'consequence').

Herein, potential impacts from planned activities are termed 'impacts' and 'risks' are associated with unplanned events with the potential for environmental impact (should the risk be realised), with such impacts termed potential 'consequences'.

### 2.2 Environmental Risk Management Methodology

#### 2.2.1 Woodside Risk Management Process

Woodside recognises that risk is inherent to its business and that effective management of risk is vital to delivering on company objectives, success and continued growth. Woodside is committed to managing all risk proactively and effectively. The objective of Woodside's risk management system is to provide a consistent process for recognising and managing risks across Woodside's business. Achieving this objective includes ensuring risks consider impacts across these key areas of exposure: health and safety, environment, finance, reputation and brand, legal and compliance, and social and cultural. A copy of Woodside's Risk Management Policy is provided in **APPENDIX A**.

The environmental risk management methodology used in this EP is based on Woodside's Risk Management Procedure. This procedure aligns to industry standards, such as international standard ISO 31000. Woodside's WMS risk management procedures, guidelines and tools provide guidance of specific techniques for managing risk, tailored for particular areas of risk within certain business processes. Procedures applied for environmental risk management include:

- Health, Safety and Environment Management Procedure.
- Impact Assessment Procedure.
- Process Safety Management Procedure.

The risk management methodology provides a framework to demonstrate that risks and impacts are continually identified, reduced to ALARP and assessed to be at an acceptable level, as required by the Environment Regulations. The key steps of Woodside's Risk Management Process are shown

in Figure 2-1. A description of each step and how it is applied to the scopes of this activity is provided in **Sections 2.2 to 2.11**.



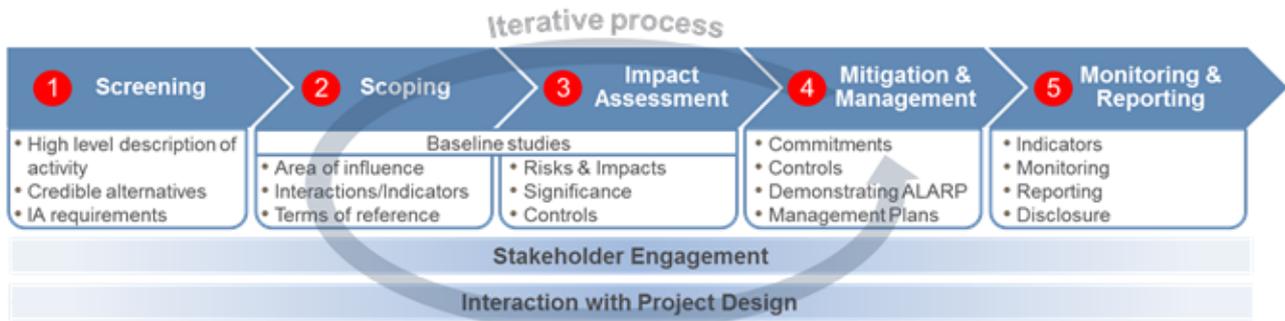
**Figure 2-1: Woodside's risk management process**

### 2.2.2 Health, Safety and Environment Management Procedure

The Health, Safety and Environment Management Procedure provides the structure for managing health, safety and environment (HSE) risks and impacts across Woodside, defines the decision authorities for company-wide HSE management activities and deliverables, and supports continuous improvement in HSE management.

### 2.2.3 Impact Assessment Procedure

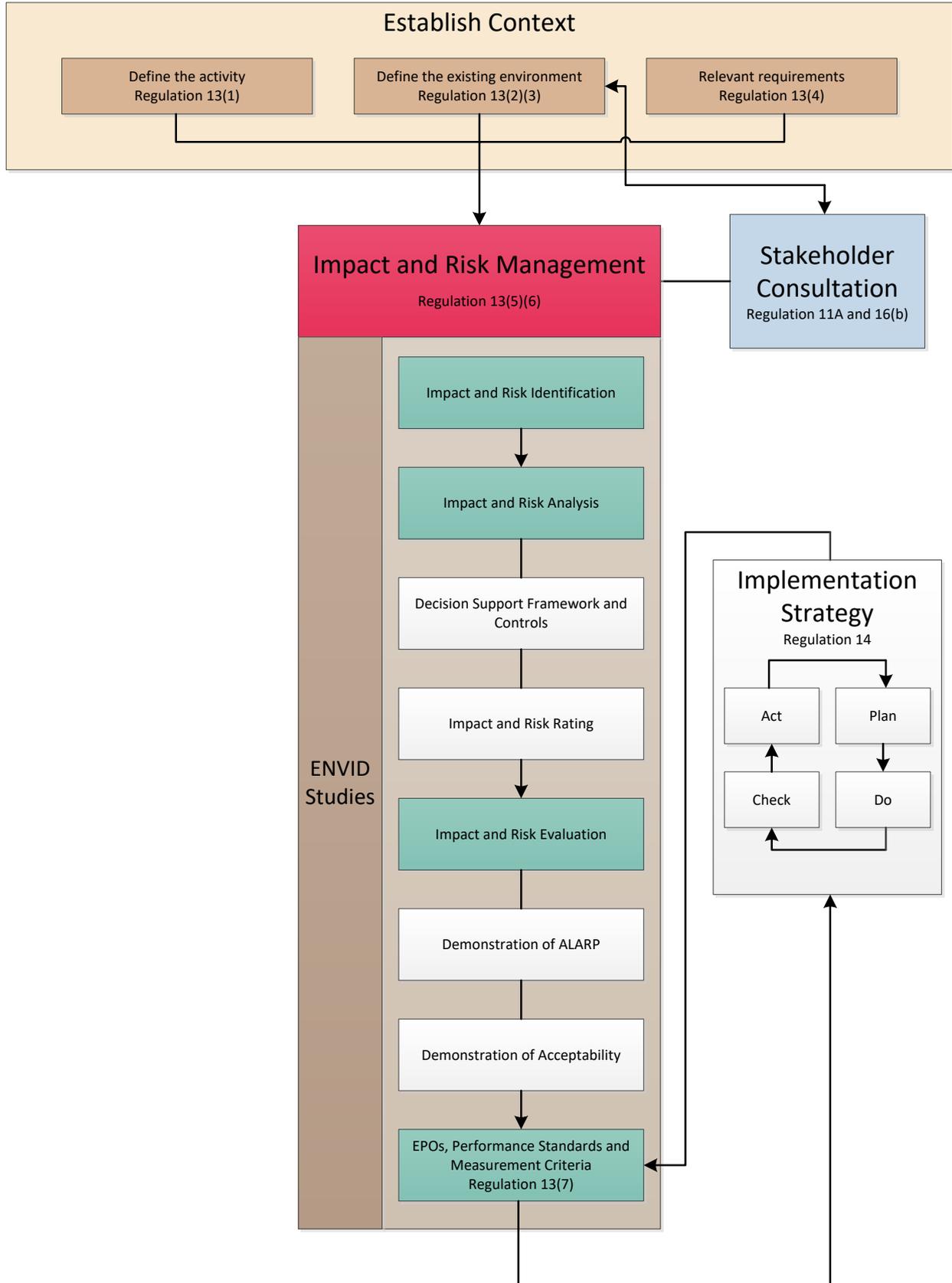
To support effective environmental risk assessment, Woodside's Impact Assessment Procedure (**Figure 2-2**) provides the steps to meet the required environment, health and social standards by ensuring impact assessments are undertaken appropriate to the nature and scale of the activity, the regulatory context, the receiving environment, interests, concerns and rights of people and organisations, and the applicable framework of standards and practices.



**Figure 2-2: Woodside’s impact assessment process**

### 2.3 Environment Plan Process

**Figure 2-3** illustrates the EP development process. Each element of this process is discussed further in **Sections 2.5 to 2.10**.



**Figure 2-3: Environment Plan development process**

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## 2.4 Establish the Context

### 2.4.1 Define the Activity

This first stage involves evaluating whether the activity meets the definition of a 'petroleum activity' as defined in the Environment Regulations. The activity is described in relation to:

- the location
- what is to be undertaken
- how it is planned to be undertaken, including outlining operational details of the activity and proposed timeframes.

The 'what' and 'how' are described in the context of 'environmental aspects'<sup>1</sup> to inform the risk and impact assessment for planned (routine and non-routine) and unplanned (accidents/incidents/emergency conditions) activities.

The activity is described in **Section 3** and is referred to as the Petroleum Activities Program.

### 2.4.2 Define the Existing Environment

The context of the existing environment is described and determined by considering the nature and scale of the activity (size, type, timing, duration, complexity, and intensity of the activity), as described in **Section 3**. In accordance with Regulation 31(1) of the Environment Regulations, references to the Master Existing Environment, Appendix C in the Goodwyn Alpha Facility Operations Environment Plan (hereafter referred to as the Master Existing Environment), have been made throughout this EP. This EP (NOPSEMA EP No: 5723) was accepted on the 3<sup>rd</sup> of March 2022 and is available on the NOPSEMA website: [Goodwyn Alpha \(GWA\) Facility Operations EP](#). The purpose is to describe the existing environment that may be impacted by the activity, directly or indirectly, by planned or unplanned<sup>2</sup> events.

The Existing Environment (**Section 4**) is structured into subsections defining the physical, biological, socioeconomic and cultural attributes of the area of interest, in accordance with the definition of environment in Regulation 4(a) of the Environment Regulations. These subsections make particular reference to:

- The environmental, and social and cultural consequences as defined by Woodside (refer to **Table 2-1**), which address key physical and biological attributes, as well as social and cultural values of the existing environment. These consequence definitions are applied to the impact and risk analysis (refer **Section 2.2**) and rated for all planned and unplanned activities. Additional detail is provided for unplanned hydrocarbon spill risk evaluation.
- EPBC Act MNES including listed threatened species and ecological communities and listed migratory species. Defining the spatial extent of the existing environment is guided by the nature and scale of the Petroleum Activities Program (and associated sources of environmental risk). This considers the Operational Area and wider environment that may be affected (EMBA), as determined by the hydrocarbon spill risk assessments presented in Section 6.7.1. MNES, as defined within the EPBC Act, are addressed through Woodside's impact and risk assessment (Section 6).

<sup>1</sup> An environmental aspect is an element of the activity that can interact with the environment

<sup>2</sup> For each source of risk, the credible worst-case scenario in conjunction with impact thresholds is used to determine the spatial extent of the EMBA. The worst-case unplanned event is considered to be an unplanned hydrocarbon release, further defined for each activity through the risk assessment process. Interpretation of stochastic oil spill modelling determines the EMBA for the release, which defines the spatial scale of the environment that may be potentially impacted by the Petroleum Activities Program, which provides context to the 'nature and scale' of the existing environment.

- Relevant values and sensitivities, which may include world or national heritage listed areas, listed threatened species or ecological communities, listed migratory species, or sensitive values.

By grouping potentially impacted environmental values by aspect (as presented in **Table 2-1**), the presentation of information about the receiving environment is standardised. This information is then consistently applied to the risk evaluation section to provide a robust approach to the overall environmental risk evaluation and its documentation in the EP.

**Table 2-1: Example of the environment values potentially impacted which are assessed within the EP**

| Environmental Value Potentially Impacted<br>Regulations 13(2)(3) |                 |               |                           |                         |         |               |
|--|-----------------|---------------|---------------------------|-------------------------|---------|---------------|
| Soil and Groundwater   | Marine Sediment | Water Quality | Air Quality (incl. Odour) | Ecosystems/<br>Habitats | Species | Socioeconomic |

### 2.4.3 Relevant Requirements

The relevant requirements in the context of legislation, other environmental approval requirements, conditions and standards that apply to the Petroleum Activities Program are identified and reviewed, and are presented in **APPENDIX B**.

The Corporate Health and Safety and Environment and Biodiversity Policy is presented in **APPENDIX A**.

## 2.5 Impact and Risk Identification

Relevant environmental aspects and hazards were identified that support the process to define environmental impacts and risks associated with an activity.

The environmental impact and risk assessment presented in this EP has been informed by recent and historic hazard and environment identification studies (e.g. HAZID/ENVID), PSRA processes, reviews, and desktop studies associated with the Petroleum Activities Program. Impacts, risks and potential consequences were identified based on planned and potential interaction with the activity (based on the description in **Section 3**), the existing environment (**Section 4**) and the outcomes of Woodside’s consultation engagement process (**Section 5**). The environmental outputs of applicable risk and impact workshops and associated studies are referred to as ENVID in this EP.

The ENVID was undertaken by multidisciplinary teams comprising relevant engineering 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.

The impact and risk information was classified, evaluated and tabulated for each planned activity and unplanned event. Environmental impacts and risk were recorded in an environmental impacts and risk register. The output of the ENVID is used to present the risk assessment and form the basis of performance outcomes, standards, and measurement criteria. This information is presented in **Section 6**, following the format presented in **Table 2-2**.

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

| Impacts and Risks Evaluation Summary |  |                 |               |                          |                    |         |               |               |                      |            |             |             |               |
|--------------------------------------|--|-----------------|---------------|--------------------------|--------------------|---------|---------------|---------------|----------------------|------------|-------------|-------------|---------------|
| Source of Risk                       | Environmental Value Potentially Impacted |                 |               |                          |                    |         |               | Evaluation    |                      |            |             |             |               |
|                                      | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour) | Ecosystems/Habitat | Species | Socioeconomic | Decision Type | Consequence / Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability |
| Summary of source of impact/risk     |  |                 |               |                          |                    |         |               |               |                      |            |             |             |               |

## 2.6 Impact and Risk Analysis

Risk analysis further develops the understanding of a risk by defining the impacts and assessing appropriate controls, as well as considering previous risk assessments for similar activities, relevant studies, past performance, external consultation feedback, and the existing environment.

These key steps were undertaken for each identified risk during the risk assessment:

- identify the decision type in accordance with the decision support framework
- identify appropriate control measures (preventive and mitigation) aligned with the decision type
- assess the risk rating.

### 2.6.1 Decision Support Framework

To support the risk assessment process and Woodside’s determination of acceptability (**Section 2.7.2**), Woodside’s HSE risk management procedures include the use of a decision support framework based on principles set out in the Guidance on Risk Related Decision Making (Oil and Gas UK 2014). This concept was applied during the ENVID, or equivalent processes during historical design decisions, to determine the level of supporting evidence that may be required to draw sound conclusions regarding risk level and whether the risk is acceptable and ALARP (**Figure 2-4**). Application of the decision support framework confirms:

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

The framework provides appropriate tools, commensurate to the level of uncertainty or novelty associated with the risk/impact (referred to as the Decision Type A, B, or C). The decision type is selected based on an informed discussion around the uncertainty of the risk/impact and is documented in ENVID worksheets.

This framework enables Woodside to appropriately understand a risk and determine if the risk or impact is acceptable and can be demonstrated to be ALARP.

### 2.6.1.1 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 judgment.

### 2.6.1.2 Decision Type B

Decision Type B risks and impacts typically involve greater uncertainty and complexity (and can include potential higher-order impacts/risks). These risks may deviate from established practice or have some lifecycle implications and therefore require further engineering risk assessment to support the decision and ensure that the risk is ALARP. Engineering risk assessment tools may include:

- risk-based tools such as cost-based analysis or modelling
- consequence modelling
- reliability analysis
- company values.

### 2.6.1.3 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 the adoption of the precautionary approach. The risks may result in significant environmental impact, significant project risk/exposure, or may elicit negative 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 consultation as part of the risk assessment process.

Risk Related Decision Making Framework

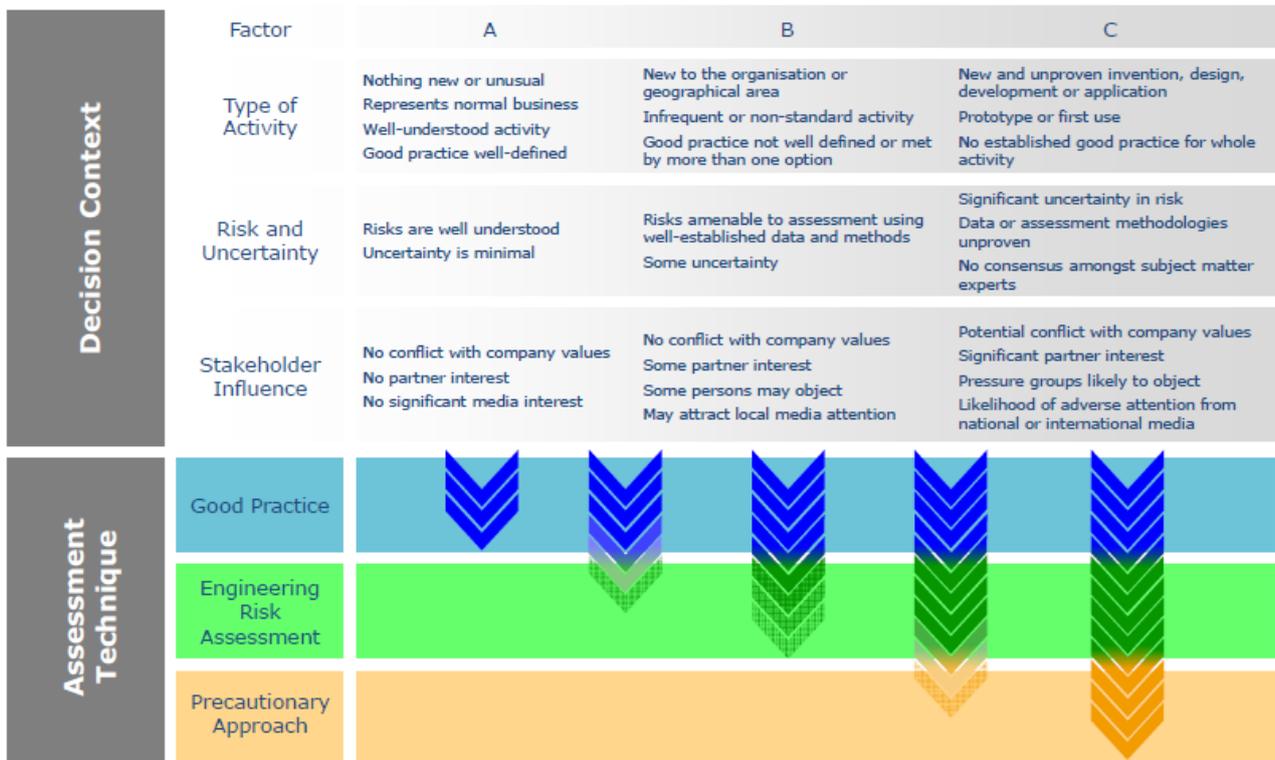


Figure 2-4: Risk-related decision-making framework

Source: Oil and Gas UK (2014)

2.6.1.4 Decision Support Framework Tools

These framework tools are applied, as appropriate, to help identify control measures based on the 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 that may be applied by Woodside 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/or cost–benefit analysis to support the selection of control measures identified during the risk assessment process.
- Company Values (CV) – identifies values identified in Woodside’s code of conduct, policies and the Woodside Compass. 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 the views, concerns and perceptions of relevant people and organisations and addresses relevant views, concerns and perceptions.

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### 2.6.1.5 Decision Calibration

To determine that the alternatives selected and the control measures applied are suitable, these tools may be used for calibration (i.e. checking) where required:

- LCS/Verification of Predictions – Verification of compliance with applicable LCS and/or good industry practice.
- 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 Consultation – Consultation undertaken within Woodside to inform the decision and verify company values are met.
- External Consultation – Consultation undertaken to inform the decision and verify societal values are considered.

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

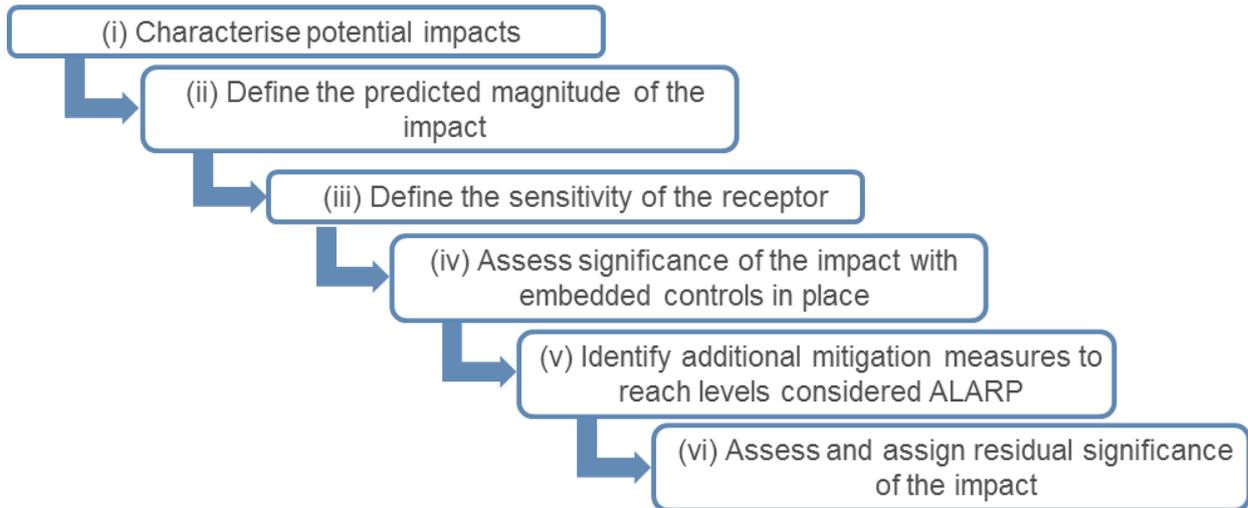
### 2.6.2 Control Measures (Hierarchy of Controls)

Risk reduction measures are prioritised and categorised in accordance with the hierarchy of controls, where risk reduction measures at the top of the hierarchy take precedence over risk reduction measures further down:

- Elimination of the risk by removing the hazard.
- Substitution of a hazard with a less hazardous one.
- Engineering Controls include design measures to prevent or reduce the frequency of the risk event, or detect or control the 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 clean-up/response after a hazardous event occurs.
- Procedures and Administration includes management systems and work instructions used to prevent or mitigate environmental exposure to hazards.
- Emergency Response and Contingency Planning includes methods to enable recovery from the impact of an event (e.g. protection barriers deployed near the sensitive receptor).

### 2.6.3 Impact and Risk Classification

Environmental impacts and risks are assessed to determine the potential impact significance/consequence. The impact significance/consequence considers the magnitude of the impact or risk and the sensitivity of the potentially impacted receptor (represented by **Figure 2-5**).



**Figure 2-5: Environmental risk and impact analysis**

Impacts are classified in accordance with the consequence (**Table 2-3**) outlined in Woodside’s Risk Management Procedure and Risk Matrix (**Figure 2-6**). Risks are assessed qualitatively and/or quantitatively in terms of both likelihood and consequence in accordance with this matrix.

The impact and risk information, including classification and evaluation information as shown in the example (**Table 2-2**), are tabulated for each planned activity and unplanned event.

**Table 2-3: Woodside risk matrix (Environment and Social and Cultural) consequence descriptions**

| Environment  | Social and Cultural   | Consequence Level |
|--|---|-------------------|
| Catastrophic, long-term impact (>50 years) on highly valued ecosystem, species, habitat or physical or biological attribute.       | Catastrophic, long-term impact (>20 years) to a community, social infrastructure or highly valued area/item of international cultural significance. | <b>A</b>          |
| Major, long-term impact (10–50 years) on highly valued ecosystem, species, habitat or physical or biological attribute.            | Major, long-term impact (5–20 years) to a community, social infrastructure or highly valued area/item of national cultural significance.            | <b>B</b>          |
| Moderate, medium-term impact (2–10 years) on ecosystem, species, habitat or physical or biological attribute.                      | Moderate, medium-term impact (2–5 years) to a community, social infrastructure or highly valued area/item of national cultural significance.        | <b>C</b>          |
| Minor, short-term impact (1–2 years) on species, habitat (but not affecting ecosystem function), physical or biological attribute. | Minor, short-term impact (1–2 years) to a community or highly valued area/item of cultural significance.  | <b>D</b>          |
| Slight, short-term impact (<1 year) on species, habitat (but not affecting ecosystem function), physical or biological attribute.  | Slight, short-term impact (<1 year) to a community or area/item of cultural significance.   | <b>E</b>          |
| No lasting effect (<1 month). Localised impact not significant to environmental receptor.  | No lasting effect (<1 month). Localised impact not significant to area/item of cultural significance.   | <b>F</b>          |

### 2.6.3.1 Risk Rating Process

The risk rating process assigns a level of risk to each risk event, measured in terms of consequence and likelihood. 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 rating process considers the potential environmental consequences and, where applicable, the social and cultural consequences of the risk. The risk ratings are assigned using the Woodside Risk Matrix (**Figure 2-6**).

The risk rating process is done using the steps described in the subsections below.

#### 2.6.3.1.1 Select the Consequence Level

Determine the worst-case credible consequence (**Table 2-3**) associated with the selected event, assuming all controls (preventive and mitigative) are absent or have failed. If more than one potential consequence applies, select the highest severity consequence level.

#### 2.6.3.1.2 Select the Likelihood Level

Determine the description that best fits the chance of the selected consequence occurring, assuming reasonable effectiveness of the prevention and mitigation controls (**Table 2-4**).

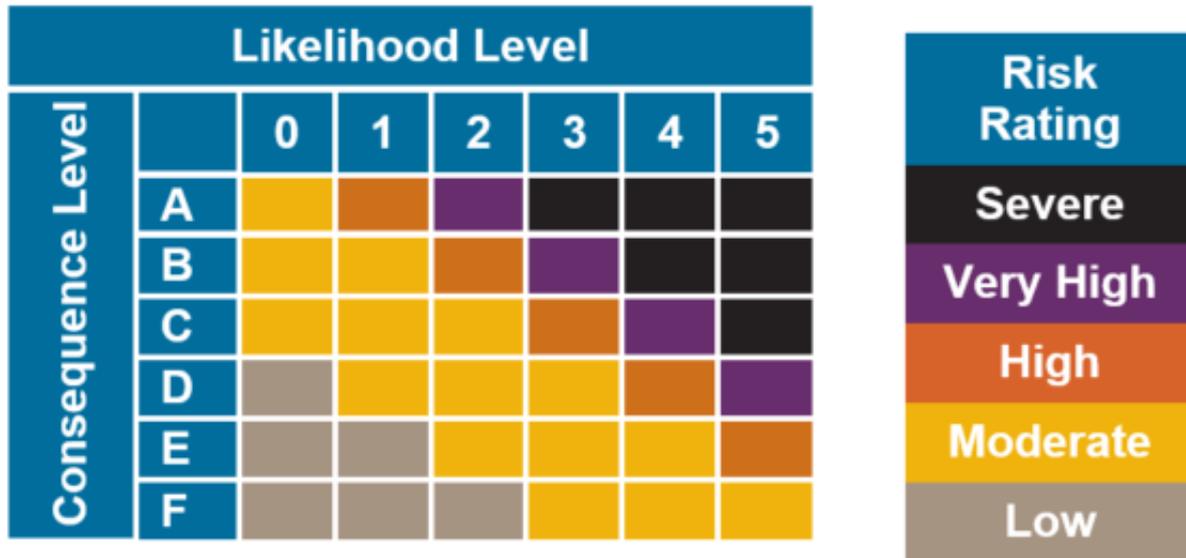
**Table 2-4: Woodside risk matrix likelihood levels**

| Likelihood Description |  |   |  |  |  |  |
|------------------------|--|---|--|--|--|--|
| Frequency              | 1 in 100,000–<br>1,000,000 years         | 1 in 10,000–<br>100,000 years   | 1 in 1,000–<br>10,000 years  | 1 in 100–<br>1,000 years   | 1 in 10–<br>100 years  | >1 in<br>10 years  |
| Experience             | Remote:<br>Unheard of in<br>the industry | Highly<br>Unlikely:<br>Has occurred<br>once or twice<br>in the industry | Unlikely:<br>Has occurred<br>many times in<br>the industry<br>but not at<br>Woodside | Possible:<br>Has occurred<br>once or twice<br>in Woodside<br>or may<br>possibly<br>occur | Likely:<br>Has occurred<br>frequently at<br>Woodside or<br>is likely to<br>occur | Highly Likely:<br>Has occurred<br>frequently at<br>the location<br>or is<br>expected to<br>occur |
| Likelihood<br>Level    | <b>0</b>                                 | <b>1</b>  | <b>2</b>   | <b>3</b>   | <b>4</b>   | <b>5</b>   |

#### 2.6.3.1.3 Calculate the Risk Rating

The risk rating is derived from the consequence and likelihood levels above, in accordance with the Woodside Risk Matrix shown in **Figure 2-6**. A likelihood and risk rating are only applied to environmental risks, not environmental impacts from planned activities.

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 as an output of the ENVID studies.



**Figure 2-6: Woodside risk matrix – risk level**

To support ongoing risk management (as a key component of Woodside’s Process Safety Management Framework – refer to the implementation strategy in **Section 7**), Woodside uses the concept of ‘current risk’ and applies a Current Risk Rating to indicate the current or ‘live’ level of risk, considering controls that are currently in place and effective on a day-to-day basis. The Current Risk Rating is effective in articulating potential divergence from baseline risk, such as if certain controls fail or could potentially be compromised. Current Risk Ratings aid in communicating and making visible the risk events and ensures the continual management of risk to ALARP by identifying risk reduction measures and assessing acceptability.

**2.7 Impact and Risk Evaluation**

- Environmental impacts and risks cover a wider range of issues, differing species, persistence, reversibility, resilience, cumulative effects, and variability in severity than safety risks. Determining the degree of environmental risk, and the corresponding threshold for whether a risk/impact has been reduced to ALARP and is acceptable, is evaluated to a level appropriate to the nature and scale of each impact or risk. Evaluation includes considering the:
  - decision type
  - principles of ESD – as defined under the EPBC Act
  - internal context – ensuring the proposed controls and risk level are consistent with Woodside policies, procedures and standards (**Section 7** and **APPENDIX A**)
  - external context – the environment consequence (**Section 6**) and social / community acceptability (**Section 5**)
  - other requirements – ensuring the proposed controls and risk level are consistent with national and international standards, laws and policies.

In accordance with Environment Regulation 10A(a), 10A(b), 10A(c) and 13(5)(b), Woodside applies the process described in the subsections below to demonstrate ALARP and acceptability for environmental impacts and risks, appropriate to the nature and scale of each impact or risk.

### 2.7.1 Demonstration of ALARP

The descriptions in **Table 2-5** articulate how Woodside demonstrates that different risks, impacts and Decision Types identified within the EP are ALARP.

**Table 2-5: Summary of Woodside’s criteria for ALARP demonstration**

| Risk  | Impact  | Decision Type  |
|---|---|----------------|
| <b>Low and Moderate<br/>(below C level consequence)</b>   | <b>Negligible, Slight, or Minor<br/>(D, E or F)</b> | <b>A</b>       |
| Woodside demonstrates these risks, impacts and decision types are reduced to ALARP if: <ul style="list-style-type: none"> <li>identified controls meet legislative requirements, industry codes and standards, applicable company requirements and industry guidelines, or</li> <li>further effort towards impact/risk reduction (beyond using opportunistic measures) is not reasonably practicable without sacrifices that are grossly disproportionate to the benefit gained.</li> </ul> |   |                |
| <b>High, Very High or Severe<br/>(C+ consequence risks)</b>   | <b>Moderate and above<br/>(A, B, C)</b>             | <b>B and C</b> |
| Woodside demonstrates these higher-order risks, impacts and decision types are reduced to ALARP (where it can be demonstrated using good industry practice and risk-based analysis) that: <ul style="list-style-type: none"> <li>legislative requirements, applicable company requirements and industry codes and standards are met</li> <li>societal concerns are accounted for</li> <li>the alternative control measures are grossly disproportionate to the benefit gained.</li> </ul>   |   |                |

### 2.7.2 Demonstration of Acceptability

The descriptions in **Table 2-6** articulate how Woodside demonstrates different risks, impacts and Decision Types identified within the EP are Acceptable.

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

| Risk   | Impact  | Decision Type  |
|--|---|----------------|
| <b>Low and Moderate</b>  | <b>Negligible, Slight, or Minor<br/>(D, E or F)</b> | <b>A</b>       |
| Woodside demonstrates these risks, impacts and decision types are 'Broadly Acceptable' if they meet: <ul style="list-style-type: none"> <li>legislative requirements</li> <li>industry codes and standards</li> <li>applicable company requirements and industry guidelines</li> <li>further effort towards risk reduction (beyond using opportunistic measures) is not reasonably practicable without sacrifices that are grossly disproportionate to the benefit gained.</li> </ul>  |   |                |
| <b>High, Very High or Severe</b>   | <b>Moderate and above (A, B, C)</b>                 | <b>B and C</b> |
| Woodside demonstrates these higher-order risks, impacts and decision types are of an 'Acceptable' level if it can be demonstrated that the predicted levels of impact and/or residual risk, are: <ul style="list-style-type: none"> <li>managed to ALARP (as described in Section 2.7.1)</li> <li>meet the following criteria, appropriate to the nature and scale of each impact and risk:                             <ul style="list-style-type: none"> <li>the Principles of Ecological Sustainable Development as defined under the EPBC Act</li> <li>the internal context – the proposed controls and consequence/risk level are consistent with Woodside policies, procedures and standards</li> <li>the external context – consideration of the environment consequence (<b>Section 6</b>) and acceptability (<b>Section 5</b>) are considered</li> <li>other requirements – the proposed controls and consequence/risk level are consistent with national and international industry standards, laws and policies and consideration of applicable plans for management and conservation advices, conventions and significant impact guidelines (e.g. MNES).</li> </ul> </li> </ul> For potential C or above consequence/impact levels where significant uncertainty exists in analysis of the risk or impact (such as, for predicted or potential high risk of significant environmental impacts, significant project |   |                |

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| Risk   | Impact | Decision Type |
|--|--------|---------------|
| <p>risk/exposure, novel activities, lack of consensus on standards, and significant concerns. E.g. Decision Type C), acceptability may be required to be conducted separately for key receptors. This is not applicable for risks, given the consequence of an unplanned risk event occurring may not be acceptable and, therefore, acceptability is demonstrated in the context of the residual likelihood of an event occurring.</p> <p>Additionally, Very High and Severe risks require 'Escalated Investigation' and mitigation. If after further investigation the risk remains in the Very High or Severe category, the risk requires appropriate business engagement with increasing involvement of senior management in accordance with Woodside's Risk Management Procedure to accept the risk. This includes due consideration of regulatory requirements.</p> |        |               |

## 2.8 Recovery Plan and Threat Abatement Plan Assessment

To support the demonstration of acceptability, a separate assessment is undertaken to demonstrate that the EP is not inconsistent with any relevant recovery plans or threat abatement plans (refer **Section 1.10.2.2**). The steps in this process are:

- identify relevant listed threatened species and ecological communities (Section 4.5).
- identify relevant recovery plans and threat abatement plans (Section 4.5.2).
- list all objectives and (where relevant) the action areas of these plans and assess whether these objectives/action areas apply to government, the Titleholder, and the Petroleum Activities Program (Section 6.8).
- for those objectives/action areas applicable to the Petroleum Activities Program, identify the relevant actions of each plan, and evaluate whether impacts and risks resulting from the activity are clearly not inconsistent with that action (Section 6.8).

## 2.9 Environmental Performance Outcomes, Environmental Performance Standards, and Measurement Criteria

EPOs, EPSs and measurement criteria (MC) are defined to address the potential environmental impacts and risks. These are explored in **Section 6**.

## 2.10 Implement, Monitor, Review and Reporting

An implementation strategy for the Petroleum Activities Program describes the specific measures and arrangements to be implemented for the duration of the program. The strategy is based on the principles of AS/NZS ISO 14001 Environmental Management Systems, and demonstrates:

- control measures are effective in reducing the environmental impacts and risks of the Petroleum Activities Program 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 Activities Program 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 7**.

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## 2.11 Consultation

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

### 3 DESCRIPTION OF THE ACTIVITY

#### 3.1 Overview

This section has been prepared in accordance with Regulation 13(1) of the Environment Regulations and describes the activities to be undertaken as part of the Petroleum Activities Program under this EP. It includes the location of the activities, operational details and additional information relevant to considering environmental risks and impacts. Activity changes during the development of the EP are detailed in **Table 3-1**.

**Table 3-1: Activity Changes**

| EP Revision | Activity Change   | Relevance to the EP   |
|-------------|---|---|
| 1           | <ul style="list-style-type: none"> <li>The proposed activity timing changed from Q4 2022 to H1 2024, with contingency for the activity to take place in 2025.</li> <li>Due to schedule changes, the proposed vessel for this activity has changed from a Semi Submersible Well Intervention Unit to a Monohull Light Well intervention Vessel. As such, associated activity equipment has changed, from a Work Over Control System/ Work Over Riser System (WOCS/ WORS) intervention system to Light Well Intervention Well Control Package (LWI WCP).</li> </ul> | <ul style="list-style-type: none"> <li>Using the LWI WCP means there is no credible scenario in which the vessel could put sufficient load onto the Xmas Tree or Wellhead to cause complete structural failure of the lower well control package, tree or wellhead.</li> <li>The credible scenario when using the LWI WCP is the possibility of an umbilical or guidewire snagging during a drive off potentially resulting in the upper well control package being damaged.</li> <li>The credible spill scenario results in a 12-hour subsea release from the TPA03 well (515 m<sup>3</sup>).</li> </ul> |

#### 3.2 Project Overview

Woodside proposes to conduct well intervention activities at the TPA-03 well in Permit Area WA-5-L. TPA-03 is a dual zone well connected to the Tidepole manifold. The well is produced by the Goodwyn Platform via subsea tieback before being exported to the interfield line (IFL) and to the Karratha Gas Plant for processing.

The Petroleum Activities Program will involve well intervention activities to remediate a down-hole smart valve and restore production from the lower reservoir zone, as per the well design. A wireline intervention is planned using either slickline or electrical line (e-line) tooling from a Well Intervention Vessel (WIV). Once the intervention has been completed, the well will be started up and operated under the Goodwyn Alpha (GWA) Operations Environment Plan as part of ongoing operations. Any future decommissioning, well plug and abandonment or drilling will be the subject of a separate EP.

An overview of the Petroleum Activities Program is provided in **Table 3-2**.

**Table 3-2: Petroleum Activities Program Overview**

| Item                   | Description  |
|------------------------|--|
| <b>Permit Titles</b>   | WA-5-L   |
| <b>Location</b>        | North West Shelf   |
| <b>Water depth</b>     | Approx. 113 m  |
| <b>Number of wells</b> | Well intervention activities at one well (TPA-03) in the Tidepole reservoir. |

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| Item                         | Description  |
|------------------------------|--|
| <b>Subsea infrastructure</b> | Subsea Vertical Xmas Tree tied back to GWA platform via a subsea manifold  |
| <b>Vessels</b>               | Well Intervention Vessel (WIV)<br>Support vessels including general supply/support vessels (if required).  |
| <b>Key activities</b>        | Connection to Xmas tree with subsea intervention system<br>Wireline intervention activities<br>Handover control to GWA Platform<br>Temporary suspension (planned or if necessary, for unforeseen circumstances). |

### 3.3 Location

The Petroleum Activities Program is located in Permit Area WA-5-L in Commonwealth waters, about 138 km north-west of Dampier. The closest landfall to the Petroleum Activities Program is the North West Island, about 76 km south-west at its nearest point (**Figure 3-1**). Approximate location details for the Petroleum Activities Program are provided in **Table 3-3**.

**Table 3-3: Location details for the TPA-03 well intervention activities**

| Activity                 | Water depth (approx. m LAT) | Latitude (WGS84)  | Longitude (WGS84)  | Petroleum title(s) |
|--------------------------|-----------------------------|-------------------|--------------------|--------------------|
| TPA-03 Well Intervention | 113                         | 19° 45' 43.618" S | 115° 53' 23.986" E | WA-5-L             |

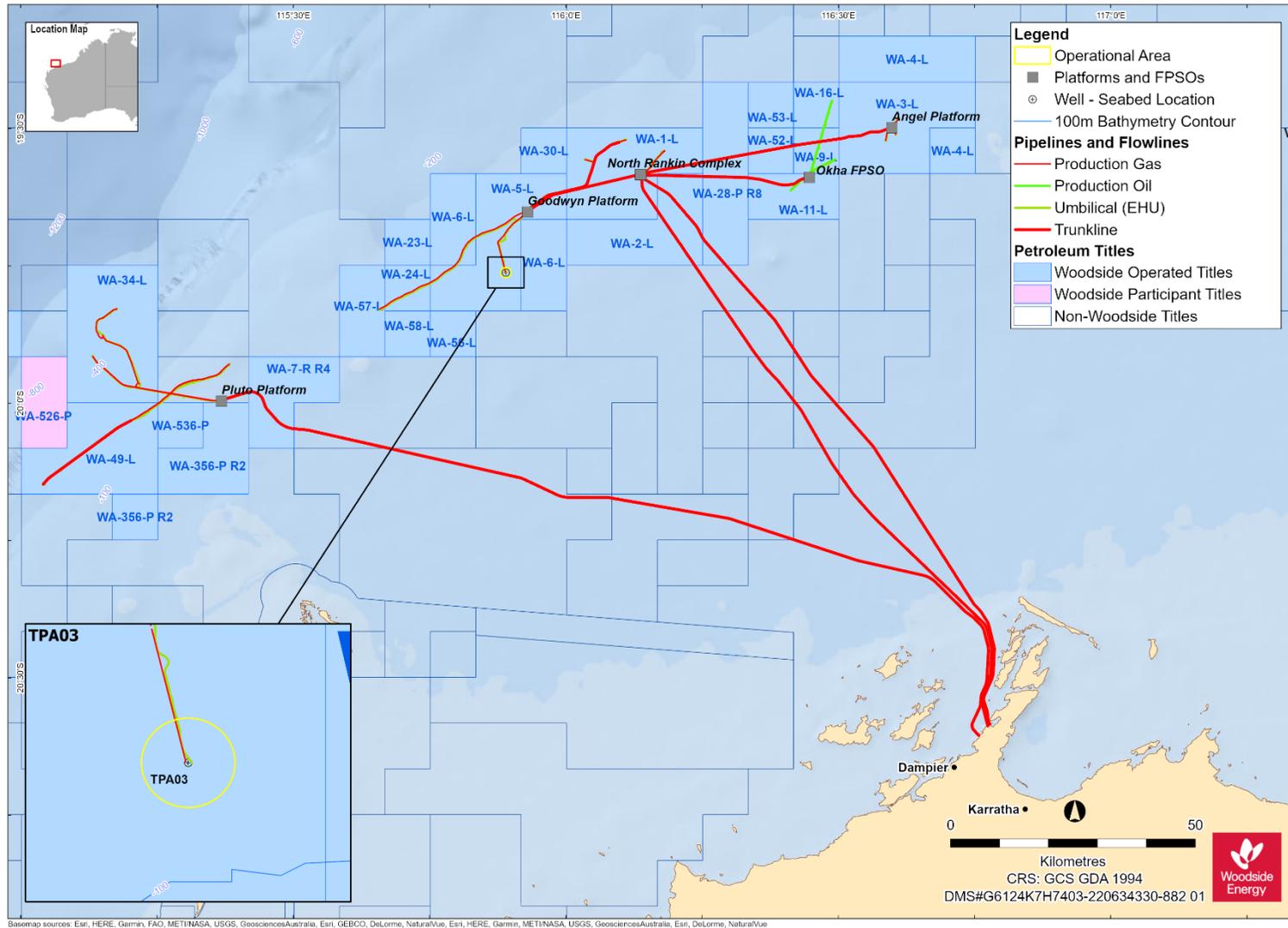


Figure 3-1: Location of the Petroleum Activities Program

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### 3.4 Operational Area

The spatial boundary of the Petroleum Activities Program has been described and assessed using the Operational Area. For the purposes of this EP, the following Operational Area applies:

For a dynamically positioned (DP) Well Intervention Vessel (WIV), the Operational Area encompasses a radius of 1 km from the TPA-03 drill centre, in which well intervention related petroleum activities will take place and will be managed under this EP.

The Operational Area for the activity includes a 500 m safety exclusion zone around the WIV to manage vessel movements. The 500 m safety exclusion zone is under the control of the Person in Charge.

Vessel-related activities within the Operational Area will comply with this EP. Vessels supporting the Petroleum Activities Program when outside the Operational Area must adhere to applicable maritime regulations and other requirements.

### 3.5 Timing

The Petroleum Activities Program is planned to commence in H1 2024, with contingency for the activity to take place in 2025. The activity is expected to take between 5 to 14 days and will take place 24 hours, 7 days a week.

When underway, activities will be 24 hours per day, seven days per week. No Simultaneous Operations (SIMOPS) activities will occur and the manifold may be shut in during activities. Timing and duration of all activities is subject to change due to project schedule requirements, WIV/vessel availability, unforeseen circumstances and weather.

The EP has risk-assessed intervention activities, support operations and contingency activities throughout the year (all seasons) to provide operational flexibility for requirements and schedule changes and WIV/vessel availability.

### 3.6 Subsea Intervention Activities

This Environment Plan assesses a planned well intervention on TPA03, which will be carried out to restore production from the lower reservoir zone in the well. Well intervention work will be carried out with appropriate barriers, i.e. a Light Well Intervention Well Control Package (LWI WCP) or equivalent and Wireline Pressure Containing Equipment. The objective of the intervention is to remove the blanking plug from the lower smart valve in the well.

The primary scope of well intervention is likely to involve:

- Connecting subsea intervention equipment, connecting wireline pressure containing equipment, and pressure testing;
- Running a toolstring to equalise pressure either side of the blanking plug;
- Running a toolstring to pull the equalised blanking plug from the well;
- Closing valves, pressure testing, disconnecting subsea intervention equipment and wireline pressure containing equipment and re-installing the Xmas tree cap.

Potential contingency activities during this well intervention may include:

- Drift runs, to confirm no downhole obstructions are present;
- Running tooling to perform real-time downhole diagnostics;
- Pumping an inhibited brine / MEG package to assist with equalising pressures either side of the blanking plug;
- Running a stroker and tractor assembly on e-line, a contingency to provide high pulling force;

- Running a wire-cutter, to sever the slickline / e-line in the event of stuck equipment downhole;
- Fishing runs, to collect any equipment lost downhole.

Potential environmental impacts from intervention activities have been included in this EP, including venting at surface, release of small volumes of residual hydrocarbons subsea during toolstring changeouts and small volume gas releases subsea due to removal of the tree cap.

During intervention activities, local control of the Xmas tree from the WIV will be required. Valve actuation of the trees will result in small releases of subsea control fluids to the marine environment.

### 3.6.1 Inspection

Subsea infrastructure inspections physically verify and assess components to detect changes to the as-installed location and condition by comparing them to previous inspections. The scope and frequency of subsea inspections are determined using risk-based inspection (RBI) methodology, resulting in detailed RBI plans. **Table 3-4** lists typical relevant subsea infrastructure inspections/surveys.

**Table 3-4: Typical inspections/surveys**

| Type of Inspection/Survey  | Purpose  |
|----------------------------|--|
| General visual inspections | Check general infrastructure integrity   |
| Close visual inspections   | Investigate certain subsea infrastructure components   |
| Cathodic protection        | Check for corrosion  |
| Wall thickness surveys     | Monitor the condition of subsea infrastructure. (i.e. ultrasonic testing)  |
| Non-destructive testing    | Evaluate the properties of material/items using electromagnetic, radio graphic, acoustic resonance technology, ultrasonic, or magnetic equipment |
| Anode sampling             | Take samples of anode materials for testing  |
| Laser surveys              | Conduct dimensional checks on trees etc. and measure proximity   |

Inspection methods will not directly result in environmental aspects which could lead to impacts on the environment and are therefore not discussed further. Vessel and ROV operations associated with inspections are described in **Section 3.7**.

### 3.6.2 Monitoring

Subsea infrastructure monitoring surveys the physical and chemical environment that a subsea system or component is exposed to, to determine if and when damage may occur, and (where relevant) predict the rate or extent of that damage.

Monitoring activities may include corrosion probes, corrosion mitigation checks, metocean and seismic monitoring, and cathodic protection testing.

Monitoring will not directly result in environmental aspects which could lead to impacts on the environment and are therefore not discussed further. Vessel and ROV operations associated with monitoring are described in **Section 3.7**.

### 3.6.3 Connection of Integrated WCP

Intervention of TPA03 will commence with the deployment of an integrated WCP onto the well (Xmas tree) to allow access into the well. The WCP is not physically connected to the WIV, other than via a control umbilical and a flush-return umbilical. In conjunction with subsea wireline pressure containing equipment, this enables a contained envelope, known as the lubricator, to be maintained. Between wireline runs the lubricator contents will be flushed back to the WIV via the flush-return umbilical to remove hydrocarbons from the lubricator. The only fluids planned to be used in this activity are drill water and a MEG mix. The exception to this is for control fluids used to operate the

Well Control Package (WCP) and Xmas tree (XT). These systems operate in an open loop. The Xmas tree valves will be controlled by the WIV via an umbilical and ROV, if required.

The LWI WCP, comprising of a Lower and Upper WCP, includes a series of independent barriers to seal the well in addition to the Xmas tree, to prevent loss of containment. WCP well control valves will be pressure tested similarly to a BOP. Various system tests of both the WCP and the Xmas tree will be completed following connection of the WCP, and when establishing communications with the Xmas tree.

Wireline pressure containing equipment (including a stuffing box and/or grease system) will be rigged up to provide well barriers and control pressure during wireline operations. The grease system is comprised of a readily biodegradable vegetable based oil. During wireline operations, this BioGrease will be used subsea on top of the lubricator in the Pressure Control Equipment (PCE) to achieve a dynamic seal around the wire. Under this contingency, approximately 50mL/min would be applied during operations, equating to around 25L for a single run. The grease would be applied into the PCE with the majority traveling into the wellbore, though some is likely to be released to the marine environment.

Barrier pressure testing will be conducted upon connection of the WCP to the Xmas tree. Following this, there will be a function test about every 7 days and a barrier pressure test about every 14 days thereafter. Each of the tests will result in 1000 – 3000 L of hydraulic / control fluids (e.g. HW443) being discharged, depending on the level of testing required. These tests may be standalone tests, or may be incorporated into operational procedures.

### 3.6.4 Fluid Circulation Tanks

Fluid required for the campaign will be stored in tanks on deck. The only fluids likely required for this activity include a MEG/brine mix and drill water. It is intended tanks will be offloaded during demobilisation and cleaned onshore.

Between wireline runs there will be a volume of hydrocarbons in the lubricator between the Lower WMP and the wireline pressure control equipment (PCE) (nominally 5bbl). The lubricator will be flushed with MEG/water to surface via the Flush-Return umbilical to a separator on deck. Any gas will be cold vented, and any returned MEG/water/hydrocarbons will be stored in a return tank for disposal onshore.

Following the intervention fluids contained within the WCP and lubricator will be routed back to stock tanks during depressuring and flushing the WCP. Any fluids received by the WIV will be returned onshore for disposal.

During Emergency Shut Down (ESD) the WCP will shut in the well, containing hydrocarbons. The full WCP, including PCE, stays in place on the well.

### 3.6.5 Air Emissions

During well intervention activities, surface returns of small volumes of hydrocarbon gas from annular spaces will be cold vented in a controlled and safe manner via a choke manifold or through degassing of the stock tank returns. Due to the small volume of the gas, it is not feasible that this gas could be flared.

### 3.6.6 Subsea Equipment Preservation Chemicals

Following well intervention activities, subsea equipment may contain preservation fluids including monoethyleneglycol (MEG) and biocide to prevent corrosion and any other deterioration of the equipment prior to production re-commencing.

### 3.6.7 Shut-In prior to Return to Production

Following intervention activities, the well will be shut-in pending return to production operations Xmas tree valves will be shut, the WCP will be disconnected and retrieved to surface, and an Xmas tree cap will be installed. Well control will be handed back over to the Goodwyn-A Facility where it will remain shut-in until the well resumes production.

### 3.6.8 Underwater Acoustic Positioning

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

An array of transponders is proposed within a radius of 500 m from the proposed location of the wells. Transmissions are not continuous but consist of short ‘chirps’ with a duration that ranges from 3 to 40 milliseconds. Transponders will not emit any sound when on standby and are planned to only actively emit sound for about six hours per well. When 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). Transmissions from USBL transponders are similar to LBL transponders.

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

### 3.6.9 Repair

Repair activities are required when a subsea system or component is degraded, damaged, or has deteriorated to a level outside acceptance limits. Damage sustained may not necessarily pose an immediate threat to continued system integrity, but presents an elevated level of risk to safety, environment, or production. Typical subsea repair activities include:

- Xmas tree or component/cap repair and/or replacement
- corrosion protection.

Some environmental discharges are expected during subsea repair activities. **Table 3-5** lists typical discharge volumes during repair activities.

**Table 3-5: Typical discharge volume during repair activities**

| Activity                                    | Typical Discharge   |
|---|---|
| Pressure/leak testing                       | Chemical dye >10 L  |
| Valve functioning                           | 0.5 L to 5 L per valve actuation  |
| Flushing                                    | Residual hydrocarbon or chemical releases volume depends on injection port size, component geometry, and pumping rates  |
| Hot stab changeout                          | Hydrocarbons or control fluid <10 L.  |
| Xmas tree repair, replacement, and recovery | Typical release of hydrocarbon or other chemicals depends on equipment configuration and flushing ability. This will be subject to an ALARP determination for the activity, as per normal practice. |

Excess marine growth may need to be removed before undertaking activities. An ROV is used for this activity; **Table 3-6** lists the different techniques used.

**Table 3-6: Marine growth removal**

| Activity/Equipment | Description  |
|--------------------|--|
| Water jetting      | Uses high-pressure water to remove marine growth                   |
| Brush systems      | Uses brushes attached to an ROV to physically remove marine growth |
| Acid               | Chemically dissolves calcium deposits                              |

### 3.7 Project Fluids

#### 3.7.1 Assessment of Project Fluids

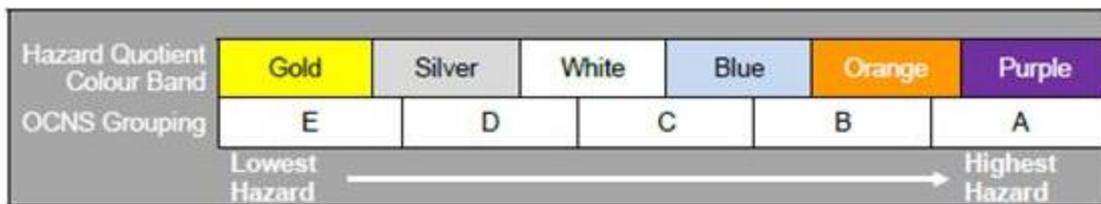
All chemicals that may be operationally released or discharged to the marine environment by the Petroleum Activities Program are evaluated using a defined framework and set of tools to ensure the potential impacts are acceptable, ALARP and meet Woodside’s expectation for environmental performance.

All approved intervention chemicals are included on the Woodside Drilling and Completions Chemical Assessment Register which is reviewed as per the Chemical Selection and Assessment Environment Guideline. No mercury discharges are expected from this well intervention activity.

The chemical assessment process follows the principles outlined in the Offshore Chemical Notification Scheme (OCNS) which manages chemical use and discharge in the United Kingdom (UK) and the Netherlands. It applies the requirements of the 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 chemical management.

All chemical substances listed 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 3-2**).

- Hazard Quotient (HQ) Colour Band: Gold, Silver, White, Blue, Orange and Purple (listed in order of increasing environmental hazard), or
- 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.



**Figure 3-2: OCNS ranking scheme**

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, Purple or an OCNS ranking of A, B or C

- chemicals with an OCNS product or substitution warning.

### 3.7.1.1 Further Assessment/ALARP Justification

This includes assessing the ecotoxicity, biodegradation and bioaccumulation of the chemicals in the marine environment in accordance with the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) Hazard assessment and the Department of Mine and Petroleum (DMP) Chemical Assessment Guide: *Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline*.

### 3.7.2 Ecotoxicity

Chemical ecotoxicity is assessed using the criteria used by CEFAS to group chemicals based on ecotoxicity results (**Table 3-6**). 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 3-7: CEFAS OCNS grouping based on ecotoxicity results**

| Initial grouping                        | A   | B       | C         | D            | E       |
|---|-----|---------|-----------|--------------|---------|
| Results for aquatic-toxicity data (ppm) | <1  | >1-10   | >10-100   | >100-1000    | >1000   |
| Result for sediment toxicity data (ppm) | <10 | >10-100 | >100-1000 | >1000-10,000 | >10,000 |

*Note: Aquatic toxicity refers to the Skeletonema costatum EC50, Acartia tonsa lethal concentration 50% (LC50) and Scopthalmus maximus (juvenile turbot) LC50 toxicity tests; sediment toxicity refers to Corophium volutator LC50 test*

#### 3.7.2.1 Biodegradation

The biodegradation of chemicals is assessed using the CEFAS biodegradation criteria, which align with the categorisation outlined in the DMP Chemical Assessment Guide: *Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline*.

CEFAS categorises biodegradation into the following groups:

- Readily biodegradable: results of >60% biodegradation in 28 days to an OSPAR harmonised offshore chemical notification format (HOCNF) accepted ready biodegradation protocol.
- Inherently biodegradable: results >20% and <60% to an OSPAR HOCNF accepted ready biodegradation protocol or result of >20% by OSPAR accepted inherent biodegradation study.
- Not biodegradable: results from OSPAR HOCNF accepted biodegradation protocol or inherent biodegradation protocol are <20%, or half-life values derived from aquatic simulation test indicate persistence.

#### 3.7.2.2 Bioaccumulation

The bioaccumulation of chemicals is assessed using the CEFAS bioaccumulation criteria, which align with the categorisation outlined in the DMP Chemical Assessment Guide: *Environmental Risk Assessment of Chemicals used in WA Petroleum Activities Guideline*.

The following guidance is used by CEFAS:

- Non-bioaccumulative: LogPow <3, or BCF ≤100 and molecular weight is ≥700.
- Bioaccumulative: LogPow ≥3 or BC >100 and molecular weight is <700.
- 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. OR

- Environmental data may be referenced for each separate chemical ingredient (if known) within the product.

### 3.7.2.3 Alternatives

If no environmental data is 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.

If no more environmentally suitable alternatives are available, further risk reduction measures (e.g. controls related to use and discharge) will be considered for the specific context and implemented where relevant to ensure the risk is ALARP and acceptable.

### 3.7.2.4 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.

## 3.7 Project Vessels and Support Activities

### 3.7.3 WIV Operations

The Petroleum Activities Program will be undertaken by a DP WIV. Example specifications for a DP WIV are provided in **Table 3-8**.

**Table 3-8: Example DP WIV specifications**

| Component                 | Specification Range                |
|---------------------------|------------------------------------|
| Rig type / Design / Class | Ship-Shaped Well Intervention Unit |
| Accommodation             | 120 persons                        |
| Station keeping           | Dynamically positioned (DP2)       |
| Fuel oil storage capacity | 1,799 m <sup>3</sup>               |
| Brine storage capacity    | 321 m <sup>3</sup>                 |

### 3.7.4 Vessel Operations

Vessels used during the Petroleum Activities Program may include subsea support vessels, with multiple vessels likely to be used to support WIV. Vessels may mobilise from the nearest Australian port or directly from international waters to the Operational Area, in accordance with biosecurity and marine assurance requirements.

All project vessels are subject to the Marine Offshore Vessel Assurance procedure which is detailed in **Section 7.6.2.2**.

#### 3.7.4.1 Support and Other Vessels

The loading and backloading of equipment is anticipated to take place prior to arrival in the operational area, typically alongside (Dampier). Due to the short duration of the campaign in field loading of backloading of operational equipment or stores is not planned as part of the base case.

As contingency, support vessels may be used to transport equipment and materials between the WIV and port (e.g. Dampier, Onslow, Exmouth) and for emergency operations.

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 WIV and support vessels will be lit to maintain operational safety on a 24-hour basis.

Standby duties may include but are not limited to periods of helicopter operations and working over the side activities while in the field.

Seawater is pumped on board and used as a heat exchange medium for the cooling of machinery engines. It is subsequently discharged from the WIV at the sea surface at potentially a higher temperature.

Potable water, primarily for accommodation and associated domestic areas, may be generated on vessels using a reverse osmosis (RO) plant. This process will produce brine, which is diluted and discharged at the sea surface.

The WIV and support vessels will also discharge deck drainage from open drainage areas, bilge water from closed drainage areas, putrescible waste and treated sewage and grey water. Solid hazardous and non-hazardous wastes generated during the Petroleum Activities Program are disposed of onshore by support vessels, or may be incinerated where permissible.

Support vessels do not anchor within the Operational Area during the activities due to water depth; therefore, vessels will utilise DP.

The support vessels are also available to assist in implementation of the Oil Pollution First Strike Plan (FSP), should an environmental incident occur (e.g. spills).

### 3.7.4.2 Holding Station: Dynamic Positioning

DP uses satellite navigation and radio transponders in conjunction with thrusters to maintain the position of the WIV or vessel at the required location. Information relating to the position of the WIV or vessel is provided via seabed transponders, which emit signals that are detected by receivers on the WIV or vessel and used to calculate position. The transponders are typically deployed in a pentagon array on the seabed, using steel clump weights, for the duration of the intervention activities.

### 3.7.5 Helicopter Operations

During the Petroleum Activities Program, crew changes will be undertaken using helicopters as required. Helicopters are the primary means of transporting passengers and/or urgent freight to/from the activity. They are also the preferred means of evacuating personnel in an emergency.

Helicopter operations within the Operational Area are limited to helicopter take-off and landing on the helideck. Helicopters may be refuelled on the helideck.

### 3.7.6 ROV Operations

The WIV and support vessels may be equipped with a ROV system that is maintained and operated by a specialised contractor aboard the vessel. ROVs may be used during well intervention for activities such as:

- pre and post intervention survey
- transponder deployment
- subsea intervention equipment land-out and recovery
- visual observations at seabed during intervention activities
- pressure testing subsea infrastructure

- xmas tree operations.

An ROV can be fitted with various tools and camera systems that can be used to capture permanent records (both still images and video) of the operations and immediate surrounding environment.

An ROV may also be used in the event of an incident for the deployment of the Subsea First Response Toolkit. This is discussed further in **APPENDIX B**.

### 3.8 Contingent Activities

The next sections present contingencies that may be required, if operational or technical issues occur during the Petroleum Activities Program. 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 drilling fluids and cuttings being operationally discharged.

#### 3.7.7 Emergency Shut Down and Disconnect

An Emergency Shut Down (ESD) may be implemented if the WIV is required to rapidly disengage from the well. The ESD closes WCP valves (i.e. shutting in the well) and disconnects the umbilicals to break the conduit between the Xmas tree and WIV. Common examples of when this system may be initiated include the movement of the WIV outside of its operating circle (e.g. due to a failure of the dynamic positioning system) or the movement of the WIV to avoid a vessel collision (e.g. third-party vessel on collision course with the WIV). ESD aims to leave the wellhead and WCP / PCE in a secure condition but may result in the loss of small volumes of fluids/gases in the umbilical or upper PCE around the disconnection points from the upper PCE (<50L).

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

## 4 DESCRIPTION OF THE EXISTING ENVIRONMENT

### 4.1 Overview

In accordance with Regulations 13(2) and 13(3) of the Environment Regulations, this section describes the existing environment that may be affected by the activity (planned and unplanned, as described in **Section 3**), including details of the particular relevant values and sensitivities of the environment, which were used for the risk assessment. In accordance with Regulation 31 of the Environment Regulations, references to the Master Existing Environment (Appendix C in the [Goodwyn Alpha \(GWA\) Facility Operations EP](#)) are made throughout this section. The Environment that May Be Affected (EMBA) is the largest spatial extent where unplanned events could have an environmental consequence on the surrounding environment. For this EP, the EMBA is the potential spatial extent of surface and in-water hydrocarbons at concentrations above ecological impact thresholds, in the event of the worst-case credible spill. The ecological impact thresholds used to delineate the EMBA are defined in **Table 4-1** and **Section 6.7.1**. The credible spill scenarios for this EP are a loss of well containment from the TPA03 well during well intervention activities, and a vessel collision.

Woodside recognises that hydrocarbons may be visible beyond the EMBA at lower concentrations than the ecological impact thresholds defined in **Table 4-1** and **Section 6.7.1**. 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 Commonwealth and State marine protected areas (MPAs), National and Commonwealth Heritage Listed places, areas of tourism and recreation, and commercial and traditional fisheries. The EMBA and socio-economic 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 or a depiction of a slick or plume at any particular point in time. Rather, the areas are a composite of a large number of theoretical paths, integrated over the full duration of the simulations under various metocean conditions.

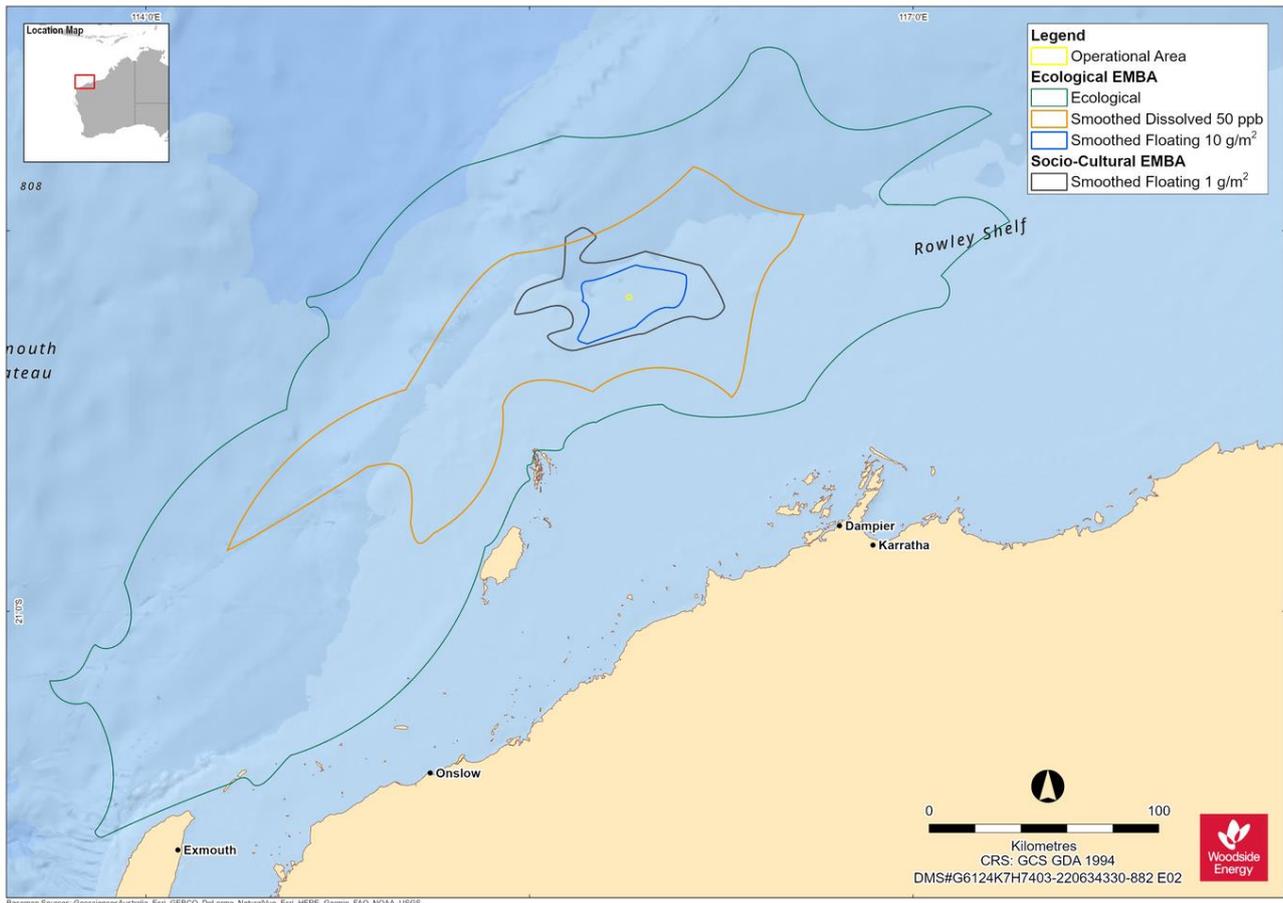
**Table 4-1: Hydrocarbon spill thresholds used to define EMBA for surface and in-water hydrocarbons**

| Hydrocarbon Type | EMBA <sup>1</sup>  | Socio-cultural EMBA <sup>1</sup>   | Planning Area for Scientific Monitoring   |
|------------------|--|--|---|
| Surface          | 10 g/m <sup>2</sup><br>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 <sup>2</sup><br>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.<br><br>This low exposure value also establishes the planning area for scientific monitoring (NOPSEMA guidance note: A652993, April 2019). |   |
| Dissolved        | 50 ppb<br>This represents potential toxic effects, particularly sublethal effects to highly sensitive species (NOPSEMA guidance note: A652993, April 2019). 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. |  | 10 ppb<br>This low exposure value establishes the planning area for scientific monitoring (based on potential for exceedance of water quality triggers) (NOPSEMA guidance note: A652993, April 2019). This area is described further in <b>APPENDIX D: Figure 5-1</b> .<br><br>In the event of a spill, DNP will be notified of AMPs which may be |
| Entrained        | 100 ppb  |  |   |

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| Hydrocarbon Type | EMBA <sup>1</sup>  | Socio-cultural EMBA <sup>1</sup>  | Planning Area for Scientific Monitoring                         |
|------------------|--|---|---|
|                  | This represents potential toxic effects, particularly sublethal effects to highly sensitive species (NOPSEMA guidance note: A652993, April 2019). 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. |   | contacted by hydrocarbons at this threshold <b>Table 6-12</b> . |
| Shoreline        | 100 g/m <sup>2</sup><br>This represents the threshold that could impact the survival and reproductive capacity of benthic epifaunal invertebrates living in intertidal habitat.  | 10 g/m <sup>2</sup><br>This represents the volume where hydrocarbons may be visible on the shoreline but is below concentrations at which ecological impacts are expected to occur. | N/A   |

<sup>1</sup> Further details including the source of the thresholds used to define the EMBA in this table are provided in **Section 6.7.1**

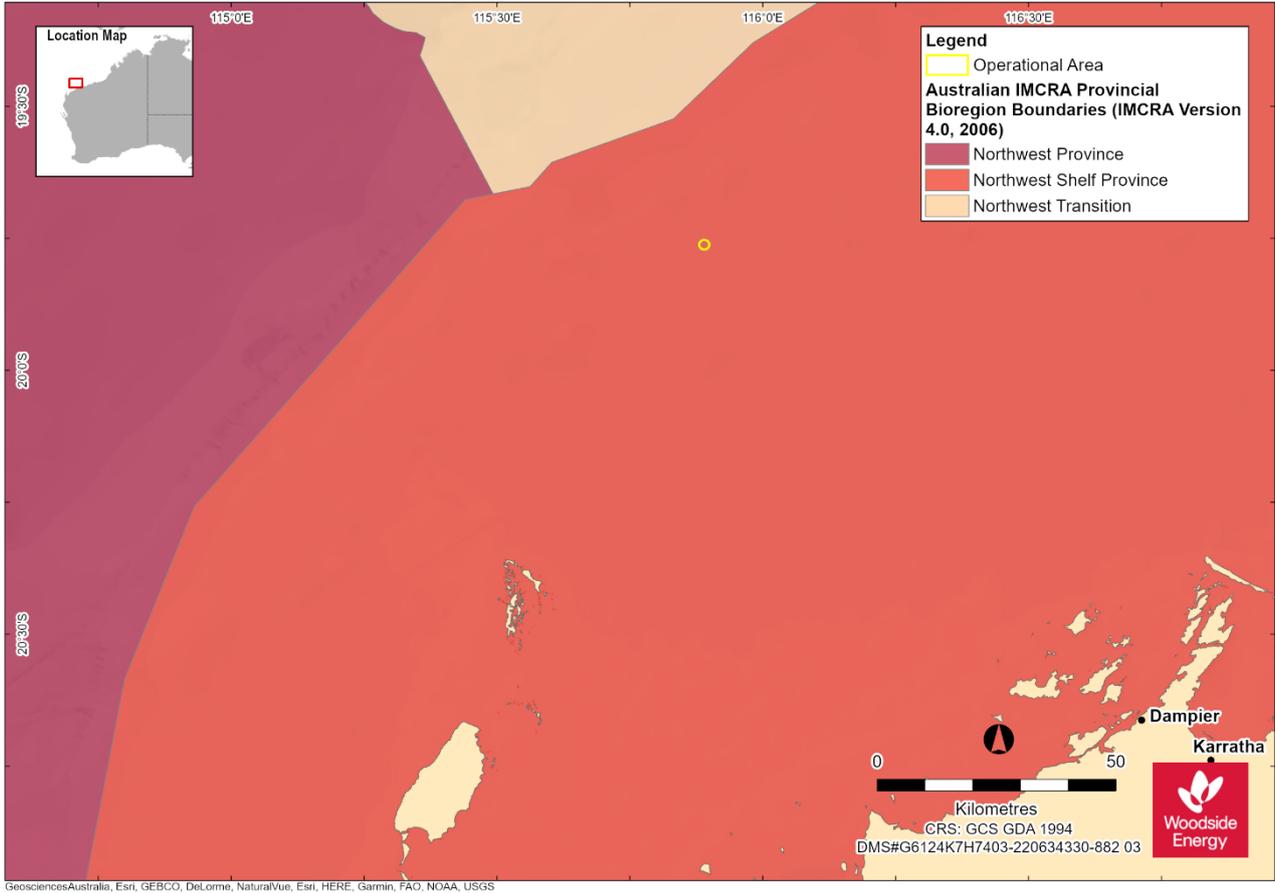


**Figure 4-1: Environment that may be affected by the Petroleum Activities Program**

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## 4.2 Regional Context

The Operational Area is located in Commonwealth waters within the North-west Marine Region (NWMR), as defined under the Integrated Marine and Coastal Regionalisation of Australia (IMCRA v4.0) (Commonwealth of Australia, 2006), in water depths of about 113 m. Within the NWMR, the Operational Area lies within the NWS Province (**Figure 4-2**). The EMBA also overlaps the Southwest Marine Region. Woodside’s Master Existing Environment summarises the characteristics for the relevant marine bio-regions.



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

## 4.3 Matters of National Environmental Significance (EPBC Act)

**Table 4-2** and **Table 4-3** summarise the MNES overlapping the Operational Area and EMBA, respectively, according to Protected Matters Search Tool (PMST) results (**Appendix C**). It should be noted that the EPBC Act PMST is a general database that conservatively identifies areas in which protected species have the potential to occur.

Additional information on these MNES are provided in subsequent sections of this chapter.

**Table 4-2: Summary of MNES identified by the EPBC Act PMST as potentially occurring within the Operational Area**

| MNES                      | Number | Relevant Section        |
|---------------------------|--------|-------------------------|
| World Heritage Properties | None   | <b>Section 4.6.1.10</b> |
| National Heritage Places  | None   | <b>Section 4.6.1.10</b> |

| MNES  | Number | Relevant Section |
|---|--------|------------------|
| Wetlands of International Importance (Ramsar) | None   | Section 4.5.4    |
| Commonwealth Marine Area                      | 1      | Section 4.5.4    |
| Listed Threatened Ecological Communities      | None   | Section 4.5.4    |
| Listed Threatened Species                     | 19     | Section 4.5.2    |
| Listed Migratory Species                      | 33     | Section 4.5.2    |

**Table 4-3: Summary of MNES identified by the EPBC Act Protected Matters Search Tool (PMST) as potentially occurring within the EMBA**

| MNES  | Number | Relevant Section |
|---|--------|------------------|
| World Heritage Properties                     | 1      | Section 4.6.1.10 |
| National Heritage Places                      | 1      | Section 4.6.1.10 |
| Wetlands of International Importance (Ramsar) | None   | Section 4.5.4    |
| Commonwealth Marine Area                      | 1      | Section 4.5.4    |
| Listed Threatened Ecological Communities      | None   | Section 4.5.4    |
| Listed Threatened Species                     | 45     | Section 4.5.2    |
| Listed Migratory Species                      | 60     | Section 4.5.2    |

#### 4.4 Physical Environment

The Operational Area lies on the outer continental shelf in waters approximately 113 m deep (**Figure 4-3**). The bathymetry within the Operational Area is generally flat, which is consistent with the broader NWS Province shelf region (Baker et al. 2008). The seabed has a gentle (0.05°) seaward gradient extending to a steep distal slope occurring between 200 to 300 km offshore in water depths of around 200 m (Dix et al. 2005). The continental slope then descends more rapidly from the shelf edge to depths greater than 1,000 m to the north-west (James et al. 2004).

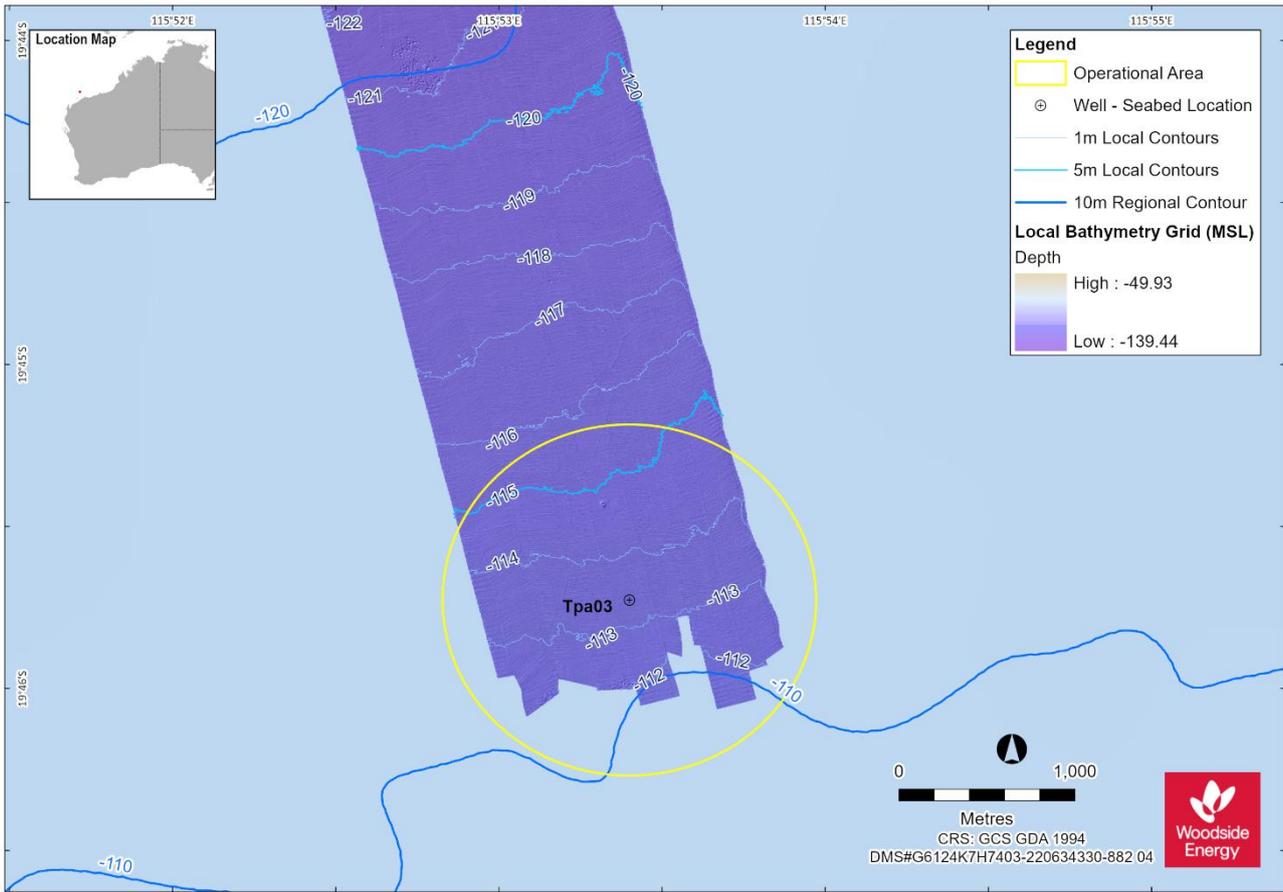


Figure 4-3: Bathymetry of the Operational Area and surrounding waters

## 4.5 Biological Environment

### 4.5.1 Habitats and Biological Communities

Sediments in the Operational Area are broadly consistent with those in the NWS Province, with typically low levels of potential contaminants of geogenic origin (often below laboratory limits of detection), with the exception of localised areas of elevated barium (AIMS 2014b, RPS 2012). Elevated barium has been attributed to contamination from historical drilling activities (AIMS 2014b), as barite (barium sulphate) is commonly used in drilling fluids. Sediments in the outer NWS Province are relatively homogenous and are typically dominated by sands and a small portion of gravel (Baker et al. 2008). Fine sediment size classes (e.g. muds) increase with proximity to the shoreline and the shelf break, but are less prominent in the intervening continental shelf (Baker et al. 2008). Carbonate sediments typically account for the bulk of sediment composition, with both biogenic and precipitated sediments present on the outer shelf (Dix et al. 2005). Beyond the shelf break, the proportion of fine sediments increases along the continental slope towards the Exmouth Plateau and the abyssal plain (Baker et al. 2008).

Sediments in the Operational Area are expected to be comprised primarily of fine sands, very fine sands and silt, with monitoring near the Operational Area indicating these size fractions constitute the majority of sediments (BMT Oceanica 2015).

While hard substrates are not known to occur within the Operational Area, they occur in the region more broadly and can host more diverse benthic communities. Hard substrate may be associated with the Ancient Coastline at 125 m Depth Contour Key Ecological Feature (KEF) (Section 4.7), which overlaps the Operational Area.

Rankin Bank is on the continental shelf, approximately 32 km from the Operational Area at the closest point. While not a KEF, Rankin Bank, along with Glomar Shoal, is the only large, complex bathymetrical feature on the outer western shelf of the West Pilbara and represents habitats that are likely to play an important role in the productivity of the Pilbara region (AIMS 2014a). Rankin Bank consists of three submerged shoals delineated by the 50 m depth contour with water depths of approximately 18–30.5 m (AIMS 2014a).

Rankin Bank represents a diverse marine environment, predominantly composed of consolidated reef and algae habitat (~55% cover), followed by hard corals (~25% cover), unconsolidated sand/silt habitat (~16% cover), and benthic communities composed of macroalgae, soft corals, sponges and other invertebrates (~3% cover) (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 NW Australia (Heyward et al. 2012).

Rankin Bank has been shown to support a diverse fish assemblage (AIMS 2014a). This is consistent with studies showing a strong correlation between habitat diversity and fish assemblage species richness (Gratwicke and Speight 2005; Last et al. 2005).

The habitat surrounding Rankin Bank (<50 m) was mapped by AIMS on behalf of Woodside (2014b) and hosts filter feeding communities in areas of consolidated substrate interspersed by sand.

Glomar Shoal is a shallow sedimentary bank comprised of coarser biogenic material than the surrounding seabed. The shoal is 26 to 70 m below the sea surface (Falkner et al. 2009) and lies approximately 96 km east of the Operational Area. Glomar Shoal has also been identified as a KEF (Falkner et al. 2009). This KEF encompasses a wider area than the shoal feature itself and is located 76 km north-east of the Operational Area.

Key habitats and ecological communities within the EMBA are identified in **Table 4-1** and described below.

**Table 4-4: Habitats and Communities within the EMBA**

| Habitat/community                        | Key locations within the EMBA  |
|--|--|
| <b>Seabed characteristics</b>            |  |
| Glomar Shoal                             | Glomar Shoal is a shallow sedimentary bank comprised of coarser biogenic material than the surrounding seabed. The shoal is 26 to 70 m below the sea surface (Falkner et al. 2009) and lies approximately 60 km east of the Operational Area and 90 km east of the GWA facility. Glomar Shoal has also been identified as a KEF (Falkner et al. 2009). This KEF encompasses a wider area than the shoal feature itself and is located 42 km east of the Operational Area.              |
| Ancient Coastline at 125 m Depth Contour | The Ancient Coastline at 125 m Depth Contour KEF, overlaps part of the Operational Area (DAWE 2021; Section 4.7). Areas of this KEF comprise hard substrate and may occur within the Operational Area. Hard substrate seabed habitats present within the Operational Area are likely to support filter feeding biota such as sponges and gorgonians (sea whip and fans), as reported for hard substrate seabed habitat in similar water depths along this outer shelf area of the NWS. |
| <b>Marine primary producers</b>          |  |
| Coral                                    | <ul style="list-style-type: none"> <li>Rankin Bank (31 km west)</li> <li>Glomar Shoal (96 km north-east)</li> <li>Montebello Islands (77 km south-west)</li> <li>Muiron Islands (265 km south-west)</li> </ul>   |
| Seagrass beds and macroalgae             | <ul style="list-style-type: none"> <li>Montebello Islands (77 km south-west)</li> <li>Muiron Islands (265 km south-west)</li> <li>Exmouth Gulf (266 km south-west)</li> </ul>  |

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| Habitat/community                     | Key locations within the EMBA  |
|---------------------------------------|--|
| Mangroves                             | Montebello Islands (77 km south-west)  |
| <b>Other communities and habitats</b> |  |
| Plankton                              | <p>Plankton within the Operational Area and EMBA are expected to be representative of the wider NWMR, as detailed in <b>Section 4.3</b> of the Master Existing Environment.</p> <p>Peak primary productivity within the EMBA 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 (CALM 2005a), with periodic upwelling throughout the year. Further detail regarding productivity at other notable locations within the EMBA (e.g. North-west Cape) is provided in <b>the Master Existing Environment, Section 4.3.3</b>.</p>   |
| Pelagic and demersal fish populations | <p>Pelagic and demersal fish populations within the Operational Area and EMBA are expected to be representative of the NWMR (described in the Master Existing Environment, Section 5.3).</p> <p>Particular features within the EMBA that are known to support pelagic and demersal fish populations include the Ancient Coastline at 125 m Depth Contour KEF (which is mapped as overlapping the Operational Area), the Continental Slope Demersal Fish Communities KEF, Rankin Bank and Glomar Shoal (including the Glomar Shoal KEF). Detail regarding these features is provided in <b>the Master Existing Environment, Section 9</b>.</p> <p>Notably, the presence of subsea infrastructure associated with the nearby GWA facility has resulted in the development of demersal fish communities that would otherwise not occur in the Operational Area due to the generally featureless, soft substrate that is present (McLean et al. 2017).</p>                                       |
| Epifauna and infauna                  | <p>Filter feeders such as sponges, ascidians, soft corals, and gorgonians are animals that feed by actively filtering suspended matter and food particles from water by passing the water over specialised filtration structures (DEWHA 2008). Filter feeders within the EMBA are expected to be representative of the NWMR, with notable areas of high sponge diversity occurring in the Commonwealth waters of Ningaloo Marine Park and at shoals (such as Glomar Shoal) within the EMBA (see <b>Master Existing Environment, Section 5.4</b>).</p> <p>Discrete areas of hard substrate hosting sessile filter feeding communities may also be associated within the Ancient Coastline at 125 m Depth Contour KEF, which overlaps the Operational Area. Filter feeder communities within the Operational Area are present on the subsea infrastructure and GWA platform, which provides hard substrate for attachment in an otherwise generally featureless, soft and sandy substrate.</p> |

#### 4.5.2 Protected Species

A total of 66 EPBC Act listed species considered to be MNES were identified as potentially occurring within the EMBA, of which a subset of 37 species were identified as potentially occurring within the Operational Area. The full list of marine species identified from the PMST reports is provided in Appendix E, 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.

Species identified as potentially occurring within the Operational Area and EMBA, and Biologically Important Areas (BIAs) or Habitat Critical to their Survival (Habitat Critical) that overlap the Operational Area and EMBA, are listed in **Table 4-5** to **Table 4-13**. A description of species is included in Section 6 to Section 8 of the Master Existing Environment.

**Figure 4-4** to **Figure 4-8** show the spatial overlap with relevant BIAs and Habitat Critical areas and the Operational Area.

### 4.5.2.1 Fish, Sharks and Rays

Table 4-5: Threatened and Migratory fish, shark and ray species predicted to occur within the Operational Area and EMBA

| Species name                                     | Common name            | Threatened status      | Migratory status | Potential for interaction   |   |
|--|------------------------|------------------------|------------------|---|---|
|  |                        |                        |                  | Operational Area  | EMBA  |
| <i>Thunnus maccoyii</i>                          | Southern bluefin tuna  | Conservation Dependent | N/A              | Breeding known to occur within area                               | Breeding known to occur within area                               |
| <i>Carcharias taurus</i> (west coast population) | Grey nurse shark       | Vulnerable             | N/A              | Species or species habitat may occur within area                  | Species or species habitat known to occur within area             |
| <i>Carcharodon carcharias</i>                    | White shark            | Vulnerable             | Migratory        | Species or species habitat may occur within area                  | Species or species habitat known to occur within area             |
| <i>Pristis pristis</i>                           | Freshwater sawfish     | Vulnerable             | Migratory        | Species or species habitat may occur within area                  | Species or species habitat likely to occur within area            |
| <i>Pristis zijsron</i>                           | Green sawfish          | Vulnerable             | Migratory        | Species or species habitat known to occur within area             | Species or species habitat known to occur within area             |
| <i>Rhincodon typus</i>                           | Whale shark            | Vulnerable             | Migratory        | Foraging, feeding or related behaviour known to occur within area | Foraging, feeding or related behaviour known to occur within area |
| <i>Sphyrna lewini</i>                            | Scalloped hammerhead   | Conservation Dependent | N/A              | Species or species habitat likely to occur within area            | Species or species habitat known to occur within area             |
| <i>Anoxypristis cuspidata</i>                    | Narrow sawfish         | N/A                    | Migratory        | Species or species habitat may occur within area                  | Species or species habitat known to occur within area             |
| <i>Carcharhinus longimanus</i>                   | Oceanic whitetip shark | N/A                    | Migratory        | Species or species habitat likely to occur within area            | Species or species habitat likely to occur within area            |

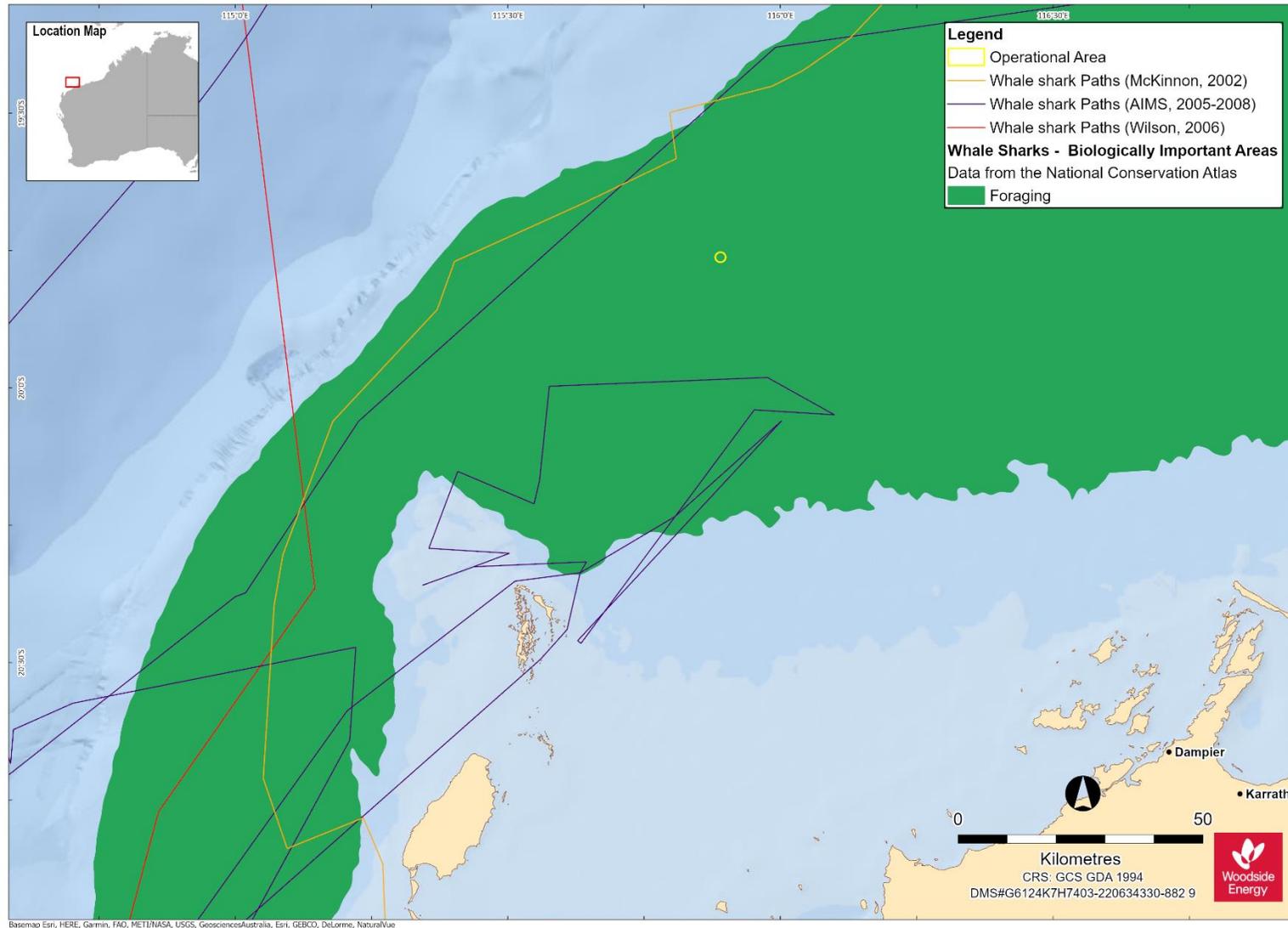
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| Species name             | Common name     | Threatened status | Migratory status | Potential for interaction                              |  |
|--------------------------|-----------------|-------------------|------------------|--|--|
|                          |                 |                   |                  | Operational Area                                       | EMBA   |
| <i>Isurus oxyrinchus</i> | Shortfin mako   | N/A               | Migratory        | Species or species habitat likely to occur within area | Species or species habitat likely to occur within area |
| <i>Isurus paucus</i>     | Longfin mako    | N/A               | Migratory        | Species or species habitat likely to occur within area | Species or species habitat likely to occur within area |
| <i>Manta alfredi</i>     | Reef manta ray  | N/A               | Migratory        | Species or species habitat likely to occur within area | Species or species habitat known to occur within area  |
| <i>Manta birostris</i>   | Giant manta ray | N/A               | Migratory        | Species or species habitat likely to occur within area | Species or species habitat known to occur within area  |
| <i>Pristis clavata</i>   | Dwarf sawfish   | Vulnerable        | Migratory        | N/A  | Species or species habitat known to occur within area  |

**Table 4-6: Fish, shark and ray BIAs within the Operational Area and EMBA**

| Species     | BIA type   | Approximate Distance of BIA from Operational Area (km) |
|-------------|--|--|
| Whale shark | Foraging (northward from Ningaloo along 200 m isobath) | Overlaps   |
|             | Foraging (high density prey) (Ningaloo Marine Park)    | 306 km south-west                                      |

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**Figure 4-4: Whale shark BIA and satellite tracks of whale sharks tagged between 2005 and 2008 (Meekan and Radford, 2010)**

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### 4.5.2.2 Marine Reptiles

Table 4-7: Threatened and Migratory marine reptile species predicted to occur within the Operational Area and EMBA

| Species name                    | Common name          | Threatened status     | Migratory status | Potential for interaction                              |   |
|---------------------------------|----------------------|-----------------------|------------------|--|---|
|                                 |                      |                       |                  | Operational Area                                       | EMBA  |
| <i>Caretta caretta</i>          | Loggerhead turtle    | Endangered            | Migratory        | Species or species habitat likely to occur within area | Breeding known to occur within area                   |
| <i>Chelonia mydas</i>           | Green turtle         | Vulnerable            | Migratory        | Species or species habitat likely to occur within area | Breeding known to occur within area                   |
| <i>Dermochelys coriacea</i>     | Leatherback turtle   | Endangered            | Migratory        | Species or species habitat likely to occur within area | Species or species habitat known to occur within area |
| <i>Eretmochelys imbricata</i>   | Hawksbill turtle     | Vulnerable            | Migratory        | Species or species habitat likely to occur within area | Breeding known to occur within area                   |
| <i>Natator depressus</i>        | Flatback turtle      | Vulnerable            | Migratory        | Congregation or aggregation known to occur within area | Breeding known to occur within area                   |
| <i>Aipysurus apraefrontalis</i> | Short-nosed seasnake | Critically Endangered | N/A              | N/A  | Species or species habitat known to occur within area |
| <i>Aipysurus foliosquama</i>    | Leaf-scaled seasnake | Critically Endangered | N/A              | N/A  | Species or species habitat known to occur within area |

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**Table 4-8: Marine turtle BIAs within the Operational Area and EMBA**

| Species   | BIA type   | Approximate Distance of BIA from Operational Area (km) |
|---|--|--|
| Flatback turtle                                     | Internesting Buffer (Montebello Islands – Hermite Is, NW Is, Trimouille Is)          | Overlaps   |
|   | Internesting (Coral reef habitat west of Montebello)                                 | 86 km south-west                                       |
|   | Internesting Buffer (Dampier Archipelago)  | 31 km south-east                                       |
|   | Internesting Buffer (Legendre Is, Hauy Is)   | 52 km south-east                                       |
|   | Internesting Buffer (Intercourse Is)   | 46 km south-east                                       |
|   | Internesting Buffer (Delambre Is)  | 68 km south-east                                       |
|   | Internesting Buffer (Dixon Is)   | 77 km south-east                                       |
|   | Internesting Buffer (Thevernard Island – South Coast)                                | 104 km south-west                                      |
|   | Nesting (Montebello Is – Hermite Is, NW Is, Trimouille Is)                           | 72 km south-west                                       |
|   | Nesting (Barrow Island)  | 108 km south-west                                      |
|   | Mating (Montebello Is – Hermite Is, NW Is, Trimouille Is)                            | 72 km south-west                                       |
|   | Mating (Coral reef habitat west of Montebello)                                       | 86 km south-west                                       |
|   | Mating (Barrow Island)   | 108 km south-west                                      |
|   | Foraging (Montebello Is – Hermite Is, NW Is, Trimouille Is)                          | 72 km south-west                                       |
|   | Foraging (Coral reef habitat west of Montebello)                                     | 86 km south-west                                       |
|   | Foraging (Barrow Island)   | 108 km south-west                                      |
| Aggregation (Coral reef habitat west of Montebello) | 86 km south-west   |  |
| Green turtle  | Internesting (Montebello Islands)  | 67 km south-west                                       |
|   | Internesting (Coral reef habitat west of Montebello group)                           | 85 km south-west                                       |
|   | Internesting (Barrow Island)   | 108 km south-west                                      |
|   | Internesting Buffer (Montebello Islands)   | 47 km south-west                                       |
|   | Internesting Buffer (Montebello Is – NW Is, Trimouille Is)                           | 52 km south-west                                       |
|   | Internesting Buffer (Middle Is, West Coast Barrow Island West Coast and North Coast) | 89 km south-west                                       |

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| Species | BIA type   | Approximate Distance of BIA from Operational Area (km)      |
|---------|--|---|
|         | Internesting Buffer (North and South Muiron Is)                          | 242 km south-west   |
|         | Internesting Buffer (North West Cape)                                    | 270 km south-west   |
|         | Nesting (Montebello Islands)   | 67 km south-west  |
|         | Nesting (Montebello Is – Hermite Is, NW Is, Trimouille Is)               | 72 km south-west  |
|         | Nesting (Middle Is, West Coast Barrow Island West Coast and North Coast) | 107 km south-west   |
|         | Nesting (North and South Muiron Is)                                      | 264 km south-west   |
|         | Mating (Montebello Islands)  | 67 km south-west  |
|         | Mating (Montebello Is – Hermite Is, NW Is, Trimouille Is)                | 72 km south-west  |
|         | Mating (Coral reef habitat west of Montebello group)                     | 85 km south-west  |
|         | Mating (Middle Is, West Coast Barrow Island West Coast and North Coast)  | 107 km south-west   |
|         | Foraging (Montebello Islands)  | 67 km south-west  |
|         | Foraging (Montebello Is – Hermite Is, NW Is, Trimouille Is)              | 72 km south-west  |
|         | Foraging (Coral reef habitat west of Montebello group)                   | 85 km south-west  |
|         | Foraging (Inshore tidal and shallow subtidal around Barrow Island)       | 108 km south-west   |
|         | Aggregation (Coral reef habitat west of Montebello group)                | 85 km south-west  |
|         | Basking (Middle Is, West Coast Barrow Island West Coast and North Coast) | 107 km south-west   |
|         | Hawksbill turtle   | Foraging (Montebello Is – Hermite Is, NW Is, Trimouille Is) |
|         | Foraging (Inshore tidal and shallow subtidal areas around Barrow Island) | 108 km south-west   |
|         | Nesting (Montebello Is – Hermite Is, NW Is, Trimouille Is)               | 72 km south-west  |
|         | Nesting (Barrow Island)  | 107 km south-west   |
|         | Mating (Montebello Is – Hermite Is, NW Is, Trimouille Is)                | 72 km south-west  |
|         | Mating (Barrow Island)   | 108 km south-west   |
|         | Internesting Buffer (Montebello Is – Hermite Is, NW Is, Trimouille Is)   | 53 km south-west  |
|         | Internesting Buffer (Ah chong and South East Is)                         | 57 km south-west  |

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| Species           | BIA type   | Approximate Distance of BIA from Operational Area (km) |
|-------------------|--|--|
|                   | Internesting Buffer (Montebello Is, Trimouille and NW islands) | 70 km south-west                                       |
|                   | Internesting Buffer (Lowendal Islands Group)                   | 77 km south-west                                       |
|                   | Internesting Buffer (Barrow Island)                            | 89 km south-west                                       |
|                   | Internesting Buffer (Varanus Island)                           | 81 km south-west                                       |
|                   | Internesting Buffer (Thevenard Island)                         | 183 km south-west                                      |
|                   | Internesting Buffer (Ningaloo Coast and Jurabi Coast)          | 272 km south-west                                      |
| Loggerhead turtle | Internesting Buffer (Montebello Islands)                       | 61 km south-west                                       |
|                   | Internesting Buffer (Lowenthal Island)                         | 80 km south-west                                       |
|                   | Internesting Buffer (Muiron Island)                            | 242 km south-west                                      |
|                   | Internesting Buffer (Ningaloo Coast and Jurabi Coast)          | 272 km south-west                                      |
|                   | Nesting (Muiron Island)  | 262 km south-west                                      |

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**Table 4-9: Interesting Habitat Critical to the Survival of Marine Turtle Species predicted to occur within the Operational Area and EMBA**

| Species             | Genetic Stock   | Nesting Locations   | Approximate Distance of Area from Operational Area | Inter-nesting buffer | Nesting period           | Hatching period          |
|---------------------|---|---|--|----------------------|--------------------------|--------------------------|
| Flatback turtle     | Pilbara   | Barrow Island, Montebello Islands, coastal islands from Cape Preston to Locker Island   | 15 km south-west                                   | 40 km                | Oct–Mar (peak: Nov-Jan)  | Feb-Mar                  |
|                     |   | Dampier Archipelago, including Delambre Island and Hauy Island                          | 45 km south-east                                   | 60 km                |                          |                          |
| Green turtle        | North-West Shelf  | Barrow Island, Montebello Islands, Serrier Island and Thevenard Island                  | 56 km south-west                                   | 20 km                | Nov–Mar (peak: Dec-Feb)  | Jan–May (peak: Feb–Mar)  |
|                     |   | Exmouth Gulf and Ningaloo coast   | 269 km south-west                                  | 20 km                |                          |                          |
| Hawksbill turtle    | Western Australia   | Cape Preston to mouth of Exmouth Gulf including Montebello Islands and Lowendal Islands | 56 km south-west                                   | 20 km                | All year (peak: Oct–Jan) | All year (peak: Dec–Feb) |
| Loggerhead turtle   | Western Australia   | Exmouth Gulf and Ningaloo coast   | 269 km south-west                                  | 20 km                | Nov–Mar (peak: Jan)      | Jan–May                  |
| Leatherback turtle  | No overlap – nesting located in Northern Territory and North Queensland |   |  |                      |                          |                          |
| Olive ridley turtle | No overlap – nesting located in Northern Australia and North Queensland |   |  |                      |                          |                          |

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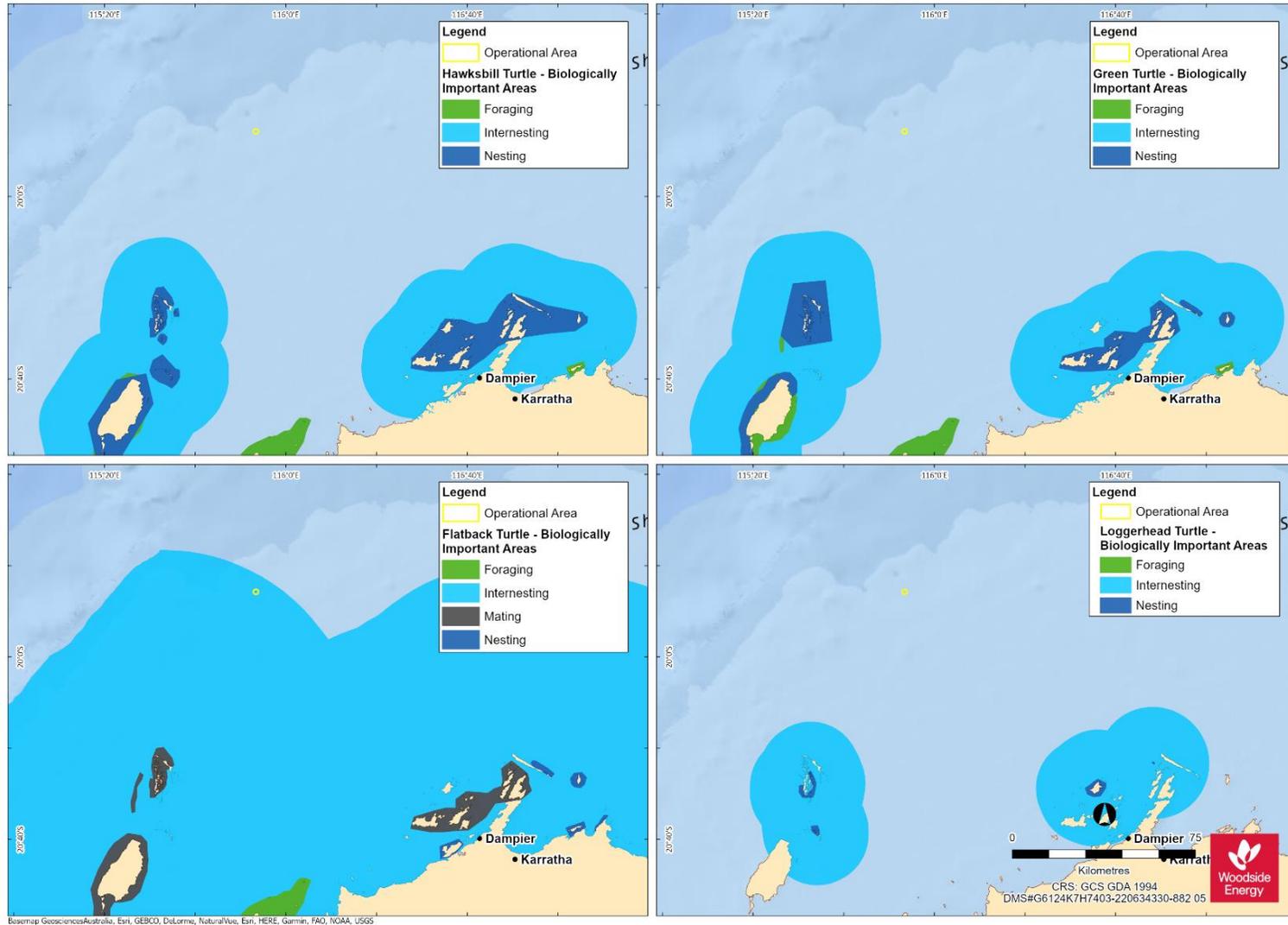


Figure 4-5: Marine turtle BIAs

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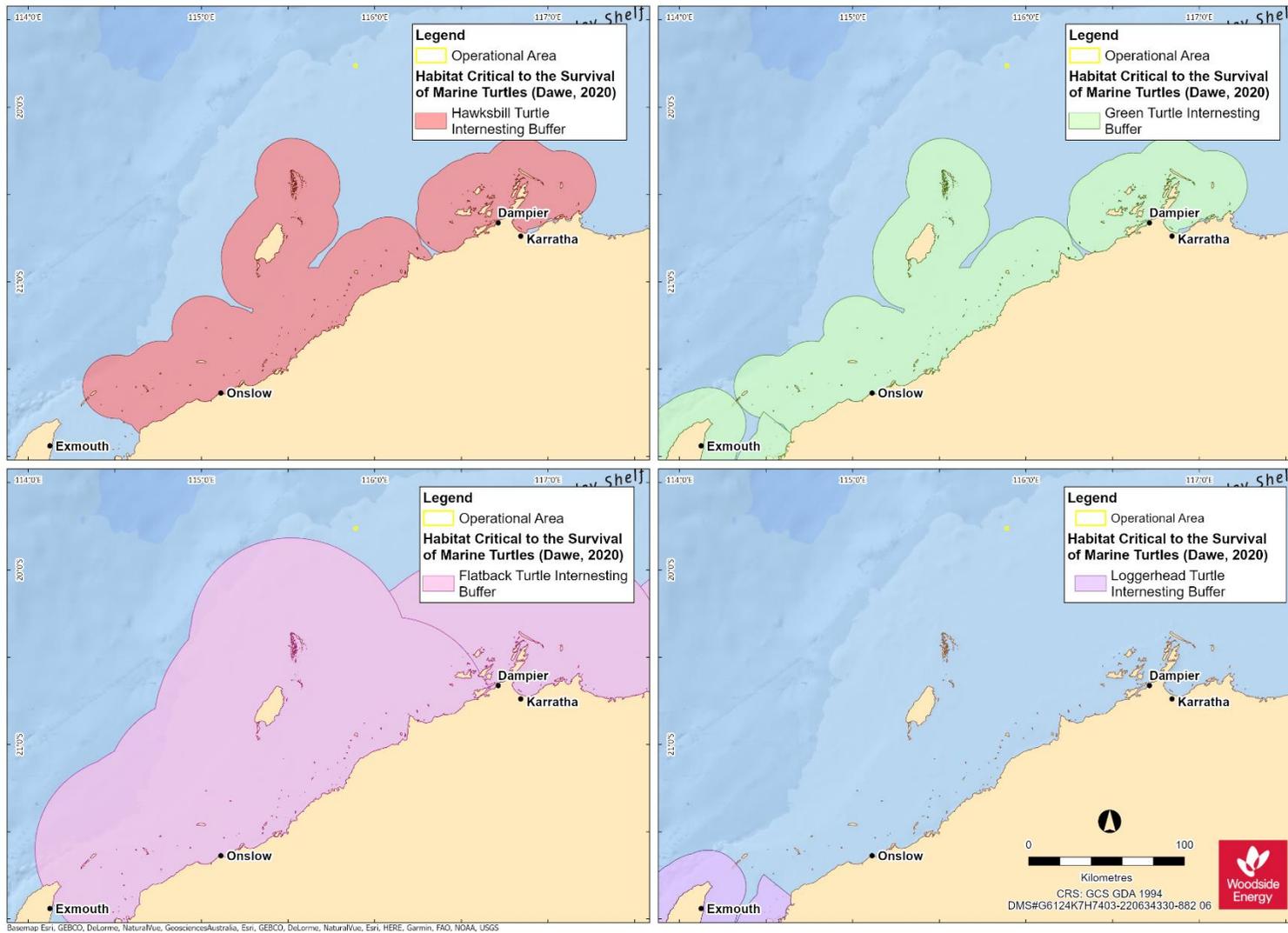


Figure 4-6: Habitat Critical to the Survival of Marine Turtles

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### 4.5.2.3 Marine Mammals

Table 4-10: Threatened and Migratory marine mammal species predicted to occur within the Operational Area and EMBA

| Species name  | Common name   | Threatened status | Migratory status | Potential for interaction                              |  |
|---|---|-------------------|------------------|--|--|
|   |   |                   |                  | Operational Area                                       | EMBA   |
| <i>Balaenoptera musculus</i>                            | Blue whale  | Endangered        | Migratory        | Species or species habitat likely to occur within area | Migration route known to occur within area                         |
| <i>Balaenoptera borealis</i>                            | Sei whale   | Vulnerable        | Migratory        | Species or species habitat likely to occur within area | Foraging, feeding or related behaviour likely to occur within area |
| <i>Balaenoptera physalus</i>                            | Fin whale   | Vulnerable        | Migratory        | Species or species habitat likely to occur within area | Foraging, feeding or related behaviour likely to occur within area |
| <i>Megaptera novaeangliae</i>                           | Humpback whale  | N/A               | Migratory        | Breeding known to occur within the area                | Breeding known to occur within area                                |
| <i>Balaenoptera edeni</i>                               | Bryde's whale   | N/A               | Migratory        | Species or species habitat likely to occur within area | Species or species habitat likely to occur within area             |
| <i>Orcinus orca</i>                                     | Killer whale  | N/A               | Migratory        | Species or species habitat may occur within area       | Species or species habitat may occur within area                   |
| <i>Physeter macrocephalus</i>                           | Sperm whale   | N/A               | Migratory        | Species or species habitat may occur within area       | Species or species habitat may occur within area                   |
| <i>Tursiops aduncus</i> (Arafura/Timor Sea populations) | Spotted bottlenose dolphin                                | N/A               | Migratory        | Species or species habitat may occur within area       | Species or species habitat known to occur within area              |
| <i>Sousa chinensis/Sousa sahalensis</i>                 | Indo-Pacific humpback dolphin/Australian humpback dolphin | N/A               | Migratory        | Species or species habitat may occur within the area   | Species or species habitat known to occur within area              |

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| Species name                            | Common name   | Threatened status | Migratory status | Potential for interaction                            |  |
|---|---|-------------------|------------------|--|--|
|   |   |                   |                  | Operational Area                                     | EMBA   |
| <i>Eubalaena australis</i>              | Southern right whale                                      | Endangered        | Migratory        | N/A  | Species or species habitat likely to occur within area |
| <i>Balaenoptera bonaerensis</i>         | Antarctic minke whale                                     | N/A               | Migratory        | N/A  | Species or species habitat likely to occur within area |
| <i>Dugong dugon</i>                     | Dugong  | N/A               | Migratory        | N/A  | Breeding known to occur within area                    |
| <i>Sousa chinensis/Sousa sahulensis</i> | Indo-Pacific humpback dolphin/Australian humpback dolphin | N/A               | Migratory        | Species or species habitat may occur within the area | Species or species habitat known to occur within area  |

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**Table 4-11: Marine mammal BIAs within the Operational Area and EMBA**

| Species          | BIA type   | Approximate Distance of BIA from Operational Area (km) |
|------------------|--|--|
| Humpback whale   | Migration (north and south - extends from the coast to out to approximately 100 km offshore in the Kimberley region extending south to North-west Cape. From North-west Cape to south of Shark Bay the migration corridor is reduced to approximately 50 km) | 25 km south  |
| Pygmy blue whale | Foraging (Ningaloo)  | 315 km south-west                                      |
|                  | Migration (Augusta to Derby. Tend to pass along the shelf edge at depths of 500 m to 1000 m; appear close to coast in the Exmouth-Montebello Islands area on southern migration)   | 43 km north-west                                       |
| Dugong           | Calving (Exmouth Gulf)   | 259 km south-west                                      |
|                  | Nursing (Exmouth Gulf)   | 259 km south-west                                      |
|                  | Breeding (Exmouth Gulf)  | 259 km south-west                                      |
|                  | Foraging (Exmouth Gulf)  | 259 km south-west                                      |

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## Pygmy Blue Whales

The Operational Area overlaps the pygmy blue whale distribution range, a spatially defined area representing presence certainty and not biologically important behaviour (e.g. breeding, foraging, migration). The distribution range acknowledges the migratory movement of pygmy blue whales to the west of the Migratory BIA, though the majority of the important migration areas for north-west Australia are within the migratory BIA (Thums et al. 2022) and telemetry data also indicates north of the North West Cape pygmy blue whales transit through deeper and further offshore waters (Thums et al., 2022 and Double et al., 2014).

Considering the proximity of the pygmy blue whale migration BIA to the Operational Area (about 39 km) it is likely that individuals may transit in and around the Operational Area during migratory periods; however, only transient individuals or small groups are expected occasionally during the north and south bound migratory seasons (April to July and October to January, respectively) (Gavrilov et al. 2018; Thums et al, 2022). The Exmouth Plateau KEF (refer to Section 4.7) is an area of localised upwelling and may be a source of food for occasional pygmy blue whale foraging. Migrating pygmy blue whales (northbound) display predominately relatively fast, directed travel interspersed with relatively short periods of low move persistence indicative of foraging (Thums et al. 2022) and acoustic detection (McCauley, 2011) indicated a short, sharp pulse of southbound migrating pygmy blue whales.

Thums et al. (2022) acknowledge the majority of important migration areas for north-west Australia were encompassed by the Migration BIA. Furthermore, the analysis identified areas from the shelf edge from Ningaloo Reef to the Rowley Shoals important for foraging (and/or breeding/resting) using the overlay of three modelled metrics (occupancy, number of whales and move persistence) by Thums et al. (2022) include areas within and to the west of the Migration BIA indicating there is some, but most likely low, likelihood of foraging whales being present in the Operational Area.

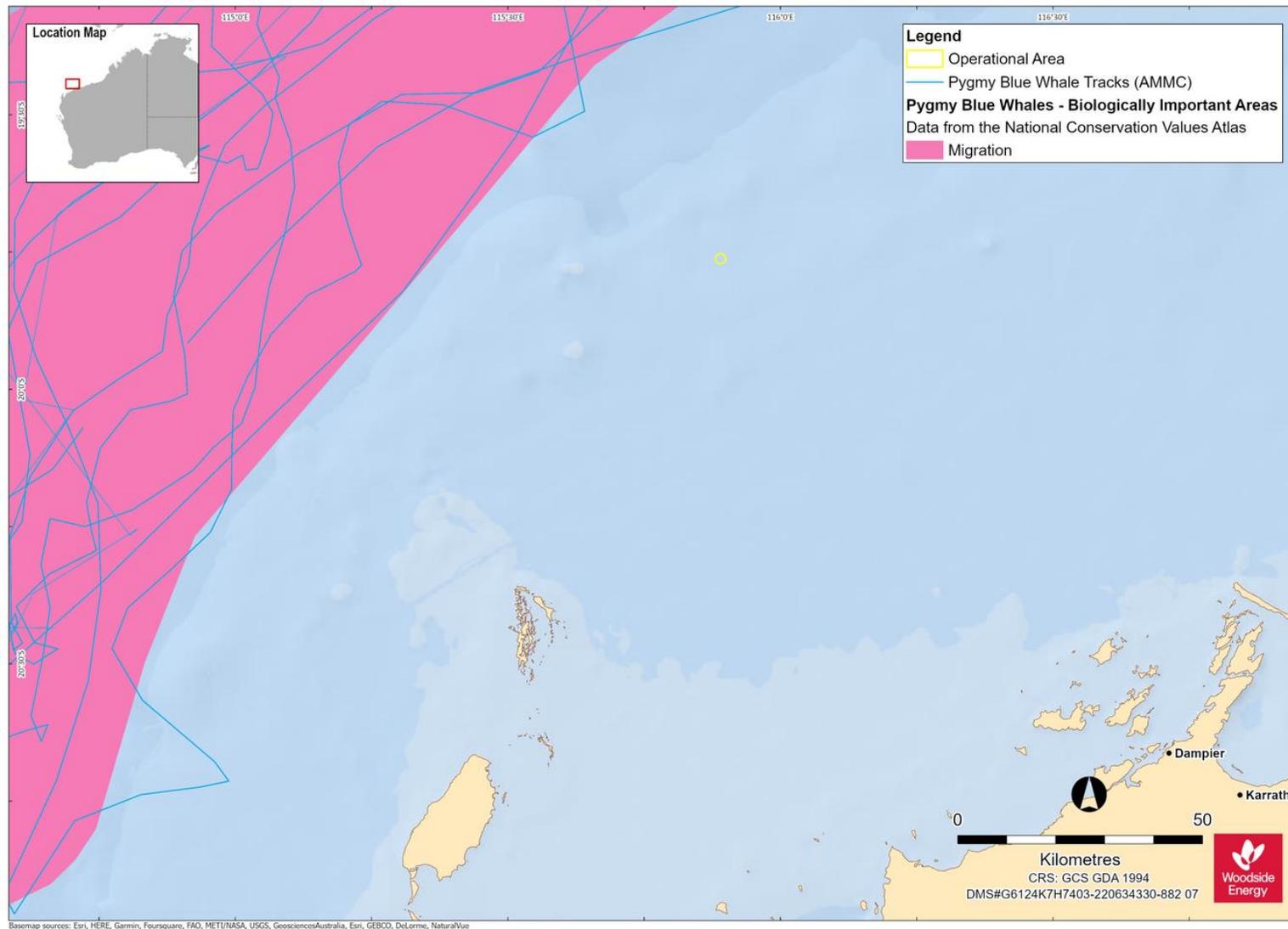
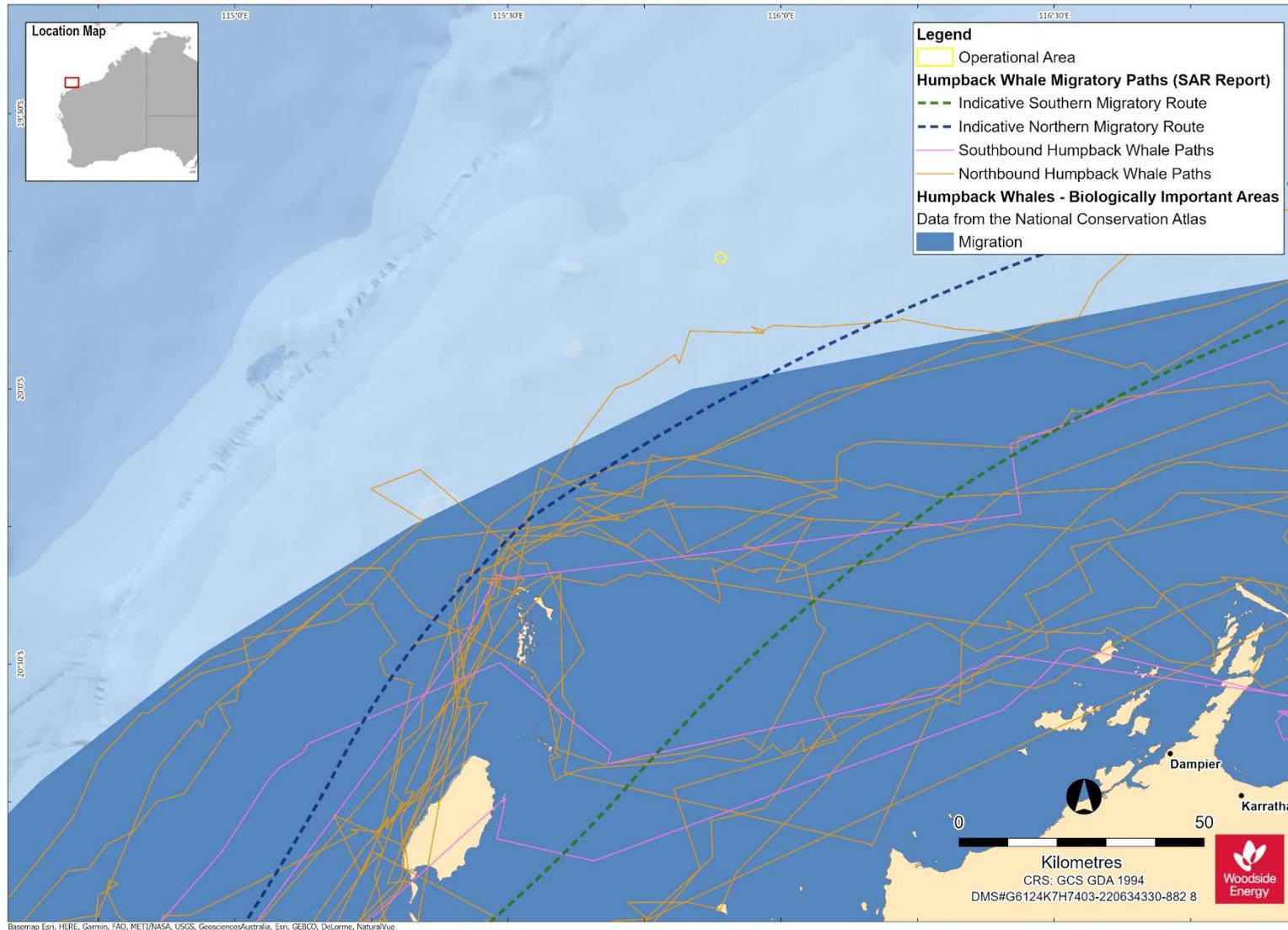


Figure 4-7: Pygmy blue whale BIAs and satellite tracks of tagged whales (Thums et al., 2022)

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**Figure 4-8: Humpback whale BIAs and satellite tracks of whales tagged between 2010 and 2012 (Double et al., 2012, 2010)**

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### 4.5.2.4 Seabirds and Migratory Shorebirds

Table 4-12: Threatened and Migratory seabird and migratory shorebird species predicted to occur within the Operational Area and EMBA

| Species name                     | Common name                              | Threatened status     | Migratory status | Potential for interaction                              |  |
|----------------------------------|--|-----------------------|------------------|--|--|
|                                  |  |                       |                  | Operational Area                                       | EMBA   |
| <i>Calidris canutus</i>          | Red knot                                 | Endangered            | Migratory        | Species or species habitat may occur within area       | Species or species habitat known to occur within area  |
| <i>Numenius madagascariensis</i> | Eastern curlew                           | Critically Endangered | Migratory        | Species or species habitat may occur within area       | Species or species habitat known to occur within area  |
| <i>Phaethon lepturus fulvus</i>  | Christmas Island white-tailed tropicbird | Endangered            | N/A              | Species or species habitat may occur within area       | Species or species habitat may occur within area       |
| <i>Sternula nereis</i>           | Australian fairy tern                    | Vulnerable            | N/A              | Species or species habitat may occur within area       | Breeding known to occur within area                    |
| <i>Fregata minor</i>             | Great frigatebird                        | N/A                   | Migratory        | Species or species habitat may occur within area       | Species or species habitat may occur within area       |
| <i>Anous stolidus</i>            | Common noddy                             | N/A                   | Migratory        | Species or species habitat may occur within area       | Species or species habitat likely to occur within area |
| <i>Calonectris leucomelas</i>    | Streaked shearwater                      | N/A                   | Migratory        | Species or species habitat likely to occur within area | Species or species habitat likely to occur within area |
| <i>Fregata ariel</i>             | Lesser frigatebird                       | N/A                   | Migratory        | Species or species habitat likely occur within area    | Species or species habitat known to occur within area  |
| <i>Calidris acuminata</i>        | Sharp-tailed sandpiper                   | N/A                   | Migratory        | Species or species habitat may occur within the area   | Species or species habitat known to occur within area  |

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| Species name                      | Common name                         | Threatened status     | Migratory status | Potential for interaction                            |  |
|-----------------------------------|-------------------------------------|-----------------------|------------------|--|--|
|                                   |                                     |                       |                  | Operational Area                                     | EMBA   |
| <i>Calidris melanotos</i>         | Pectoral sandpiper                  | N/A                   | Migratory        | Species or species habitat may occur within the area | Species or species habitat may occur within area                   |
| <i>Limosa lapponica menzbieri</i> | Northern Siberian bar-tailed godwit | Critically Endangered | N/A              | N/A  | Species or species habitat known to occur within area              |
| <i>Pterodroma mollis</i>          | Soft-plumaged petrel                | Vulnerable            | N/A              | N/A  | Foraging, feeding or related behaviour likely to occur within area |
| <i>Macronectes giganteus</i>      | Southern giant petrel               | Endangered            | Migratory        | N/A  | Species or species habitat may occur within area                   |
| <i>Ardenna carneipes</i>          | Flesh-footed shearwater             | N/A                   | Migratory        | N/A  | Species or species habitat likely to occur within area             |
| <i>Ardenna pacifica</i>           | Wedge-tailed shearwater             | N/A                   | Migratory        | N/A  | Breeding known to occur within area                                |
| <i>Hydroprogne caspia</i>         | Caspian tern                        | N/A                   | Migratory        | N/A  | Breeding known to occur within area                                |
| <i>Sterna dougallii</i>           | Roseate tern                        | N/A                   | Migratory        | N/A  | Breeding known to occur within area                                |
| <i>Onychoprion anaethetus</i>     | Bridled tern                        | N/A                   | Migratory        | N/A  | Breeding known to occur within area                                |
| <i>Sternula albifrons</i>         | Little tern                         | N/A                   | Migratory        | N/A  | Breeding known to occur within area                                |
| <i>Thalasseus bergii</i>          | Greater crested tern                | N/A                   | Migratory        | N/A  | Breeding known to occur within area                                |
| <i>Apus pacificus</i>             | Fork-tailed swift                   | N/A                   | Migratory        | N/A  | Species or species habitat likely to occur within area             |

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| Species name                    | Common name                   | Threatened status     | Migratory status | Potential for interaction |  |
|---------------------------------|-------------------------------|-----------------------|------------------|---------------------------|--|
|                                 |                               |                       |                  | Operational Area          | EMBA   |
| <i>Calidris ferruginea</i>      | Curlew sandpiper              | Critically Endangered | Migratory        | N/A                       | Species or species habitat known to occur within area  |
| <i>Actitis hypoleucos</i>       | Common sandpiper              | N/A                   | Migratory        | N/A                       | Species or species habitat known to occur within area  |
| <i>Charadrius leschenaultii</i> | Greater sand plover           | Vulnerable            | Migratory        | N/A                       | Species or species habitat likely to occur within area |
| <i>Thalassarche carteri</i>     | Indian yellow-nosed albatross | Vulnerable            | Migratory        | N/A                       | Species or species habitat may occur within area       |
| <i>Rostratula australis</i>     | Australian painted snipe      | Endangered            | N/A              | N/A                       | Species or species habitat likely to occur within area |
| <i>Charadrius veredus</i>       | Oriental plover               | N/A                   | Migratory        | N/A                       | Species or species habitat may occur within area       |
| <i>Glareola maldivarum</i>      | Oriental pratincole           | N/A                   | Migratory        | N/A                       | Species or species habitat may occur within area       |
| <i>Limnodromus semipalmatus</i> | Asian dowitcher               | N/A                   | Migratory        | N/A                       | Species or species habitat known to occur within area  |
| <i>Pandion haliaetus</i>        | Osprey                        | N/A                   | Migratory        | N/A                       | Breeding known to occur within area                    |
| <i>Tringa nebularia</i>         | Common greenshank             | N/A                   | Migratory        | N/A                       | Species or species habitat likely to occur within area |
| <i>Phaethon lepturus</i>        | White-tailed tropicbird       | N/A                   | Migratory        | N/A                       | Species or species habitat known to occur within area  |

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**Table 4-13: Seabird and shorebird BIAs within the Operational Area and EMBA**

| Species                 | BIA type   | Approximate Distance of BIA from Operational Area (km) |
|-------------------------|--|--|
| Fairy tern              | Breeding (Pilbara and Gascoyne coasts and islands)                                   | 68 km south-west                                       |
|                         | Breeding (Pilbara and Gascoyne coasts and islands)                                   | 95 km south-west                                       |
|                         | Breeding (Pilbara and Gascoyne coasts and islands)                                   | 190 km south-west                                      |
|                         | Breeding (Pilbara and Gascoyne coasts and islands)                                   | 305 km south-west                                      |
| Lesser crested tern     | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 72 km south-west                                       |
|                         | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 178 km south-west                                      |
| Roseate tern            | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 65 km south-west                                       |
|                         | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 166 km south-west                                      |
|                         | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 145 km south-west                                      |
| Wedge-tailed shearwater | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | Overlaps   |
|                         | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 0.83 km west   |
|                         | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 80 km east   |
|                         | Breeding (Kimberley, Pilbara and Gascoyne coasts and islands including Ashmore Reef) | 95 km east   |

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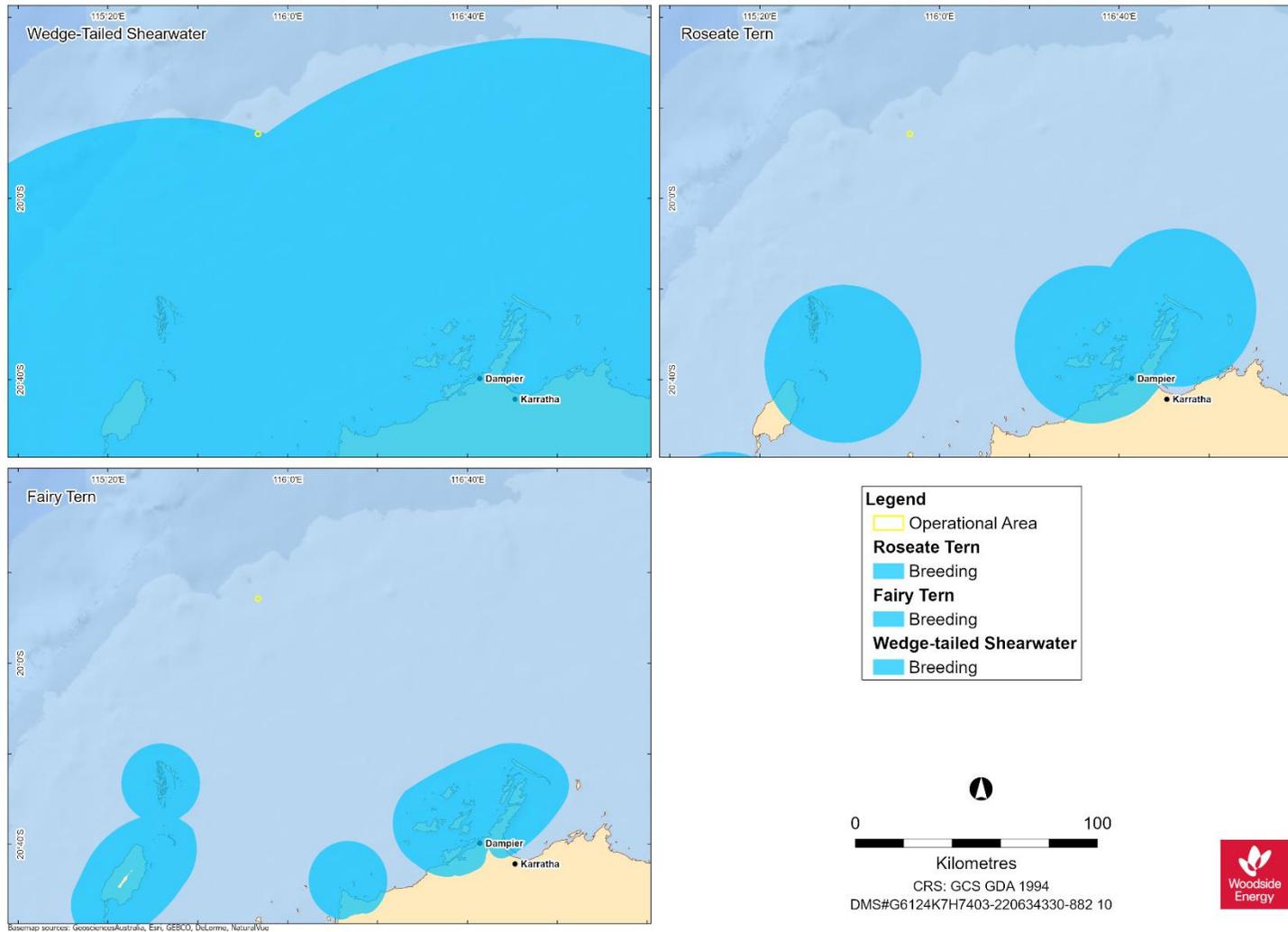


Figure 4-9: Seabird BIAs

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#### 4.5.2.5 Seasonal Sensitivities for Protected Species

Seasonal sensitivities for protected migratory species identified as potentially occurring within the Operational Area are identified in **Table 4-14**.

**Table 4-14: Key seasonal sensitivities for protected migratory species identified as occurring within the Operational Area.**

| Species   | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| <b>Fish, Sharks and Rays</b>  |         |          |       |       |     |      |      |        |           |         |          |          |
| Whale shark – northern and southern migration (NWMR) (TSSC, 2015d)                        |         |          |       |       |     |      |      |        |           |         |          |          |
| Whale shark – foraging/ aggregation (Ningaloo Coast) (TSSC, 2015d)                        |         |          |       |       |     |      |      |        |           |         |          |          |
| Great white shark – northern migration (to North West Cape) (DSEWPaC, 2013a)              |         |          |       |       |     |      |      |        |           |         |          |          |
| <b>Mammals</b>  |         |          |       |       |     |      |      |        |           |         |          |          |
| Fin whale   |         |          |       |       |     |      |      |        |           |         |          |          |
| Humpback whale – northern migration (Double et al. 2010; TSSC, 2015a)                     |         |          |       |       |     |      |      |        |           |         |          |          |
| Humpback whale – southern migration (Double et al. 2010; TSSC, 2015a)                     |         |          |       |       |     |      |      |        |           |         |          |          |
| 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                                       |         |          |       |       |     |      |      |        |           |         |          |          |

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| Species   | January | February | March | April | May | June | July | August | September | October | November | December |
|---|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| migration (Double et al., 2012; 2014)   |         |          |       |       |     |      |      |        |           |         |          |          |
| <b>Marine Reptiles</b>  |         |          |       |       |     |      |      |        |           |         |          |          |
| Flatback turtle Pilbara Coast genetic stock – nesting (Commonwealth of Australia, 2017)       |         |          |       |       |     |      |      |        |           |         |          |          |
| Flatback turtle Pilbara Coast genetic stock – hatching (Commonwealth of Australia, 2017)      |         |          |       |       |     |      |      |        |           |         |          |          |
| Green turtle NWS genetic stock – nesting (Commonwealth of Australia, 2017)                    |         |          |       |       |     |      |      |        |           |         |          |          |
| Green turtle NWS genetic stock – hatching (Commonwealth of Australia, 2017)                   |         |          |       |       |     |      |      |        |           |         |          |          |
| Hawksbill turtle Western Australia genetic stock – nesting (Commonwealth of Australia, 2017)  |         |          |       |       |     |      |      |        |           |         |          |          |
| Hawksbill turtle Western Australia genetic stock – hatching (Commonwealth of Australia, 2017) |         |          |       |       |     |      |      |        |           |         |          |          |
| Loggerhead turtle Western Australia genetic stock – nesting (Commonwealth of Australia, 2017) |         |          |       |       |     |      |      |        |           |         |          |          |
| Loggerhead turtle Western Australia genetic stock – hatching                                  |         |          |       |       |     |      |      |        |           |         |          |          |

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| Species  | January  | February | March | April | May | June | July | August | September | October | November | December |
|--|--|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| (Commonwealth of Australia, 2017)  |  |          |       |       |     |      |      |        |           |         |          |          |
| <b>Seabirds and shorebirds</b>   |  |          |       |       |     |      |      |        |           |         |          |          |
| Red knot – non-breeding season (NWMR) (TSSC, 2016a)  |  |          |       |       |     |      |      |        |           |         |          |          |
| Eastern Curlew – non-breeding (NWMR) (DoE, 2015d)  |  |          |       |       |     |      |      |        |           |         |          |          |
| Wedge-tailed shearwater – various breeding sites (DSEWPaC 2012c, Environment Australia 2002) |  |          |       |       |     |      |      |        |           |         |          |          |
|  | Species may be present in the Operational Area                         |          |       |       |     |      |      |        |           |         |          |          |
|  | Peak period. Presence of animals is reliable and predictable each year |          |       |       |     |      |      |        |           |         |          |          |

References for species seasonal sensitivities:

- Environment Australia, 2002
- CALM, 2005; Environment Australia, 2002
- Commonwealth of Australia, 2017; Chevron, 2015; CALM, 2005; DSEWPaC, 2012a
- Commonwealth of Australia, 2017; Chevron, 2015
- DSEWPaC, 2012a; McCauley and Jenner, 2010; McCauley, 2011
- DSEWPaC, 2012a; McCauley and Jenner, 2010
- CALM, 2005; Environment Australia, 2002; Jenner et al., 2001a; McCauley and Jenner, 2001
- McCauley and Jenner, 2001
- DSEWPaC, 2012b; Environment Australia, 2002

(\*Periods of sensitivity include whale shark foraging off Ningaloo Coast and foraging northward from the Ningaloo Marine Park along the 200 m isobath)

### 4.5.3 Key Ecological Features (KEFs)

KEFs within the Operational Area and EMBA are identified in **Table 4-15**. **Figure 4-10** shows the spatial overlap with KEFs and the Operational Area.

**Table 4-15: KEFs within the Operational Area and EMBA.**

| Key Ecological Feature  | Distance from Operational Area to KEF (km) |
|---|--|
| Ancient Coastline at 125 m Depth Contour                              | Overlaps                                   |
| Continental Slope Demersal Fish Communities                           | 44 km west                                 |
| Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula | 227 km south-west                          |
| Commonwealth Waters adjacent to Ningaloo Reef                         | 273 km south-west                          |
| Glomar Shoal  | 76 km north-east                           |

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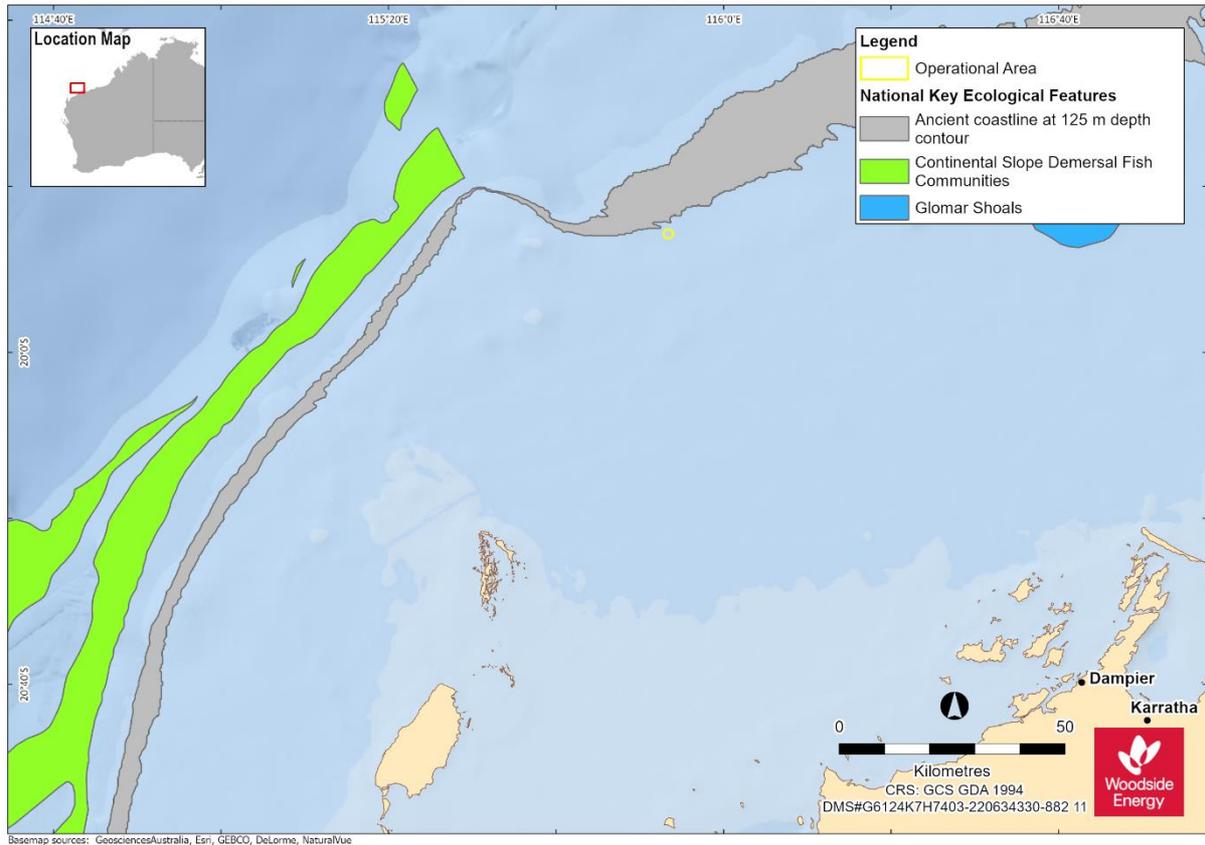


Figure 4-10: KEFs in relation to the Operational Area

#### 4.5.4 Protected Places

No protected places overlap the Operational Area. Protected places within the EMBA are identified in **Table 4-16** and presented in **Figure 4-11**.

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

|   | Distance from Operational Area to protected place or sensitive area (km) | IUCN category* or relevant park zone overlapping the Operational Area and/or EMBA |
|---|--|---|
| <b>Australian Marine Parks (AMPs)</b>         |  |   |
| Montebello AMP                                | 33 km south-west   | Multiple Use Zone (IUCN VI)   |
| Gascoyne AMP                                  | 246 km south-west  | Multiple Use Zone (IUCN VI)   |
| Ningaloo AMP                                  | 273 km south-west  | Recreational Use Zone (IUCN IV)   |
| <b>State Marine Parks and Nature Reserves</b> |  |   |
| <b>Marine Parks</b>                           |  |   |
| Barrow Island Marine Park                     | 121 km south-west  | Sanctuary Zone - Ia   |
| Montebello Islands Marine Park                | 70 km south-west   | Sanctuary Zone – Ia<br>Recreational Use Zone – IV,<br>Special Purpose Zone – VI   |

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|                                       | <b>Distance from Operational Area to protected place or sensitive area (km)</b> | <b>IUCN category* or relevant park zone overlapping the Operational Area and/or EMBA</b> |
|---------------------------------------|---|--|
| Ningaloo Marine Park                  | 273 km south-west   | Sanctuary Zone - IA,<br>Recreational Use Zone - IV,<br>Special Purpose Zone - VI         |
| <b>5(1)(h)</b>                        |   |  |
| Unnamed 41080 5(1)(h) Reserve         | 78 km south-west  | N/A  |
| <b>Marine Management Areas</b>        |   |  |
| Barrow Island Marine Management Area  | 89 km south-west  | Special Purpose Zone - VI  |
| Muiron Islands Marine Management Area | 255 km south-west   | Special Purpose Zone - VI,<br>Sanctuary Zone – IA  |
| <b>Fish Habitat Protection Areas</b>  |   |  |
| None identified                       | N/A   | N/A  |
| <b>Nature Reserves</b>                |   |  |
| Muiron Islands Nature Reserve         | 258 km south-west   | National Park Zone - II  |
| <b>Conservation Parks</b>             |   |  |
| Montebello Islands                    | 75 km south-west  | N/A  |

\*Conservation objectives for IUCN categories include:

Ia: Strict Nature Reserve

Ib: Wilderness Area

II: national Park

III: Natural Monument or Feature

IV: Habitat/Species Management Area

V: Protected Landscape

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

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

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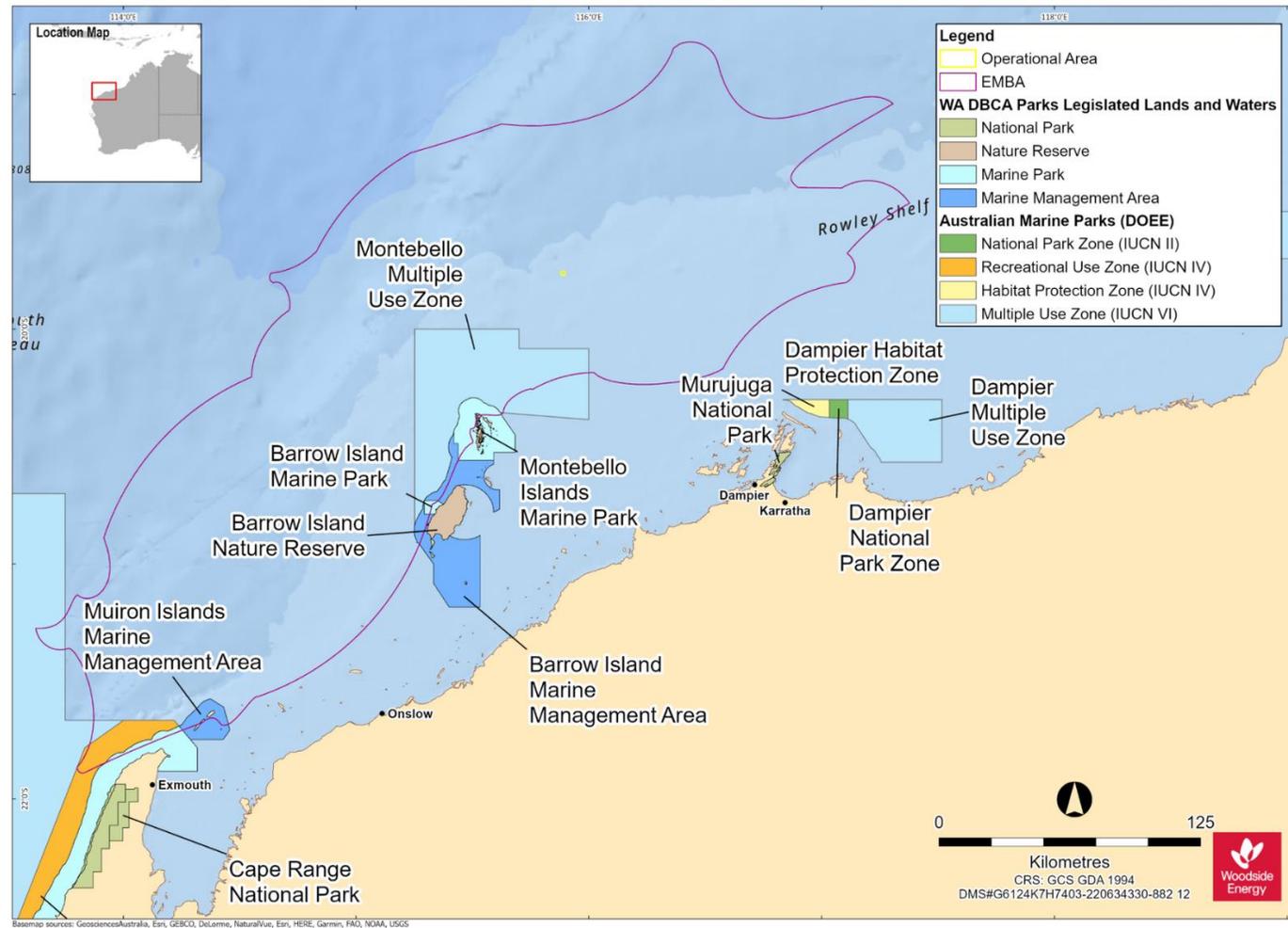
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**Figure 4-11: Protected Areas overlapping the EMBA**

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## 4.6 Socio-Economic Environment

### 4.6.1 Cultural Heritage

#### 4.6.1.1 Background

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

- the heritage value of places; and
- 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 the Operational Area and EMBA are described.

In line with The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance (ICOMOS 2013) (Burra Charter) and associated practice notes, Woodside understands heritage value to refer to the cultural significance of a place to an individual group. A cultural feature, by contrast, is understood to be comparable to the Burra Charter term “fabric” and refer to a place’s elements, fixtures, contents and objects which have cultural values. Although these features are necessarily physical, the place they inhabit or comprise may have tangible or intangible dimensions (ICOMOS 2013).

Through consultation with relevant persons, Woodside recognises the deep spiritual and cultural connection to the environment<sup>3</sup> that First Nations peoples hold.

#### 4.6.1.2 First Nations Peoples

As a starting point for understanding social and cultural features of the environment for Indigenous (First Nations) groups, Woodside uses the existing systems, such as native title, to identify Indigenous groups that may have functions, interests or activities that may be affected. To that end, Woodside identifies native title representative bodies and nominated representative entities (defined in Section 5.5.1), as well as native title claims, determinations and Indigenous Land Use Agreements (ILUAs) which the EMBA overlaps. While acknowledging that cultural features and heritage values may exist outside of the native title framework, Native title claims, determinations and ILUAs are defined under the Native Title Act 1993 (Cth). Woodside considers this to be the broadest extent over which Indigenous groups have claimed native title rights and interests.

Native title claims are applications made to the Federal Court under the Native Title Act for a determination or decision about native title in a particular area. A claim is made by a native title claim group which asserts it holds native title rights and interests in an area of land and/or water, according to its traditional laws and customs. By making a claim, the native title claim group seeks a decision that native title exists so that its native title rights and interests are recognised by the common law of Australia. This is called a native title determination. A determination is a decision by a recognised body, such as the Federal Court or High Court of

<sup>3</sup> Definition of 'Environment' in Regulation 4 of the OPGGS (Environment) Regulations are defined as:

- Ecosystems and their constituent parts, including people and communities; and
- Natural and physical resources; and
- The qualities and characteristics of locations, places and areas; and
- The heritage values of places; and includes
- The social, economic and cultural features of the matters mentioned in paragraphs (a), (b), (c) and (d)

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Australia, that native title either does or does not exist in relation to a particular area (Native Title Tribunal).

A requirement to establishing a positive determination of native title in court is proving that there is an organised society that occupied the land and/or waters at the time of British annexation. The requirement of an 'organised society' is set out by Justice Toohey in the historic judgment of *Mabo v Queensland (No 2)* [1992] HCA 23; (1992) 175 CLR 1 ('Mabo'). Justice Toohey had the following to say (at 187):

*it is inconceivable that indigenous inhabitants in occupation of land did not have a system by which land was utilized in a way determined by that society. There must, of course, be a society sufficiently organized to create and sustain rights and duties...*

Therefore, Woodside understands that native title rights and interests are held communally by an organised society, that native title claims are understood to represent the area over which Indigenous groups are claiming these rights and interests, and that native title determinations provide clarity on where native title rights and interests are found to either exist or not exist. Where native title rights or interests are determined to exist they will be held by a Registered Native Title Body Corporate (section 57, Native Title Act 1993) in trust or as agent for native title holders.

ILUAs are voluntary agreements between native title parties and other people or bodies about the use and management of land and/or waters and are registered by the Native Title Registrar in the Register of ILUAs. An ILUA can be made over areas where:

- native title has been determined to exist in at least part of the area; or
- a native title claim has been made; or
- where no native title claim has been made.

While registered, ILUAs operate as a contract between the parties, including relevant native title holders (Native Title Tribunal).

The Native Title Act provides for a Representative Aboriginal/Torres Strait Islander Body (Native Title Representative Body) to be recognised by the Commonwealth Minister for an area. Native Title Representative Bodies have specialist functions set out in the Native Title Act within the area for which they are the Native Title Representative Body. However, the functions of a Native Title Representative Body are such that they do not hold details on the cultural features or heritage values of an area and therefore do not inform Woodside's understanding of heritage values or cultural features.

For the activity in this EP, there are no native title claims or determinations, ILUAs overlapping the Operational Area and therefore also no native title rights or interests and/or cultural values identified over the Operational Area (**Table 4-17**).

There is one native title claim overlapping the EMBA (**Table 4-17**). There are no ILUAs overlapping the EMBA.

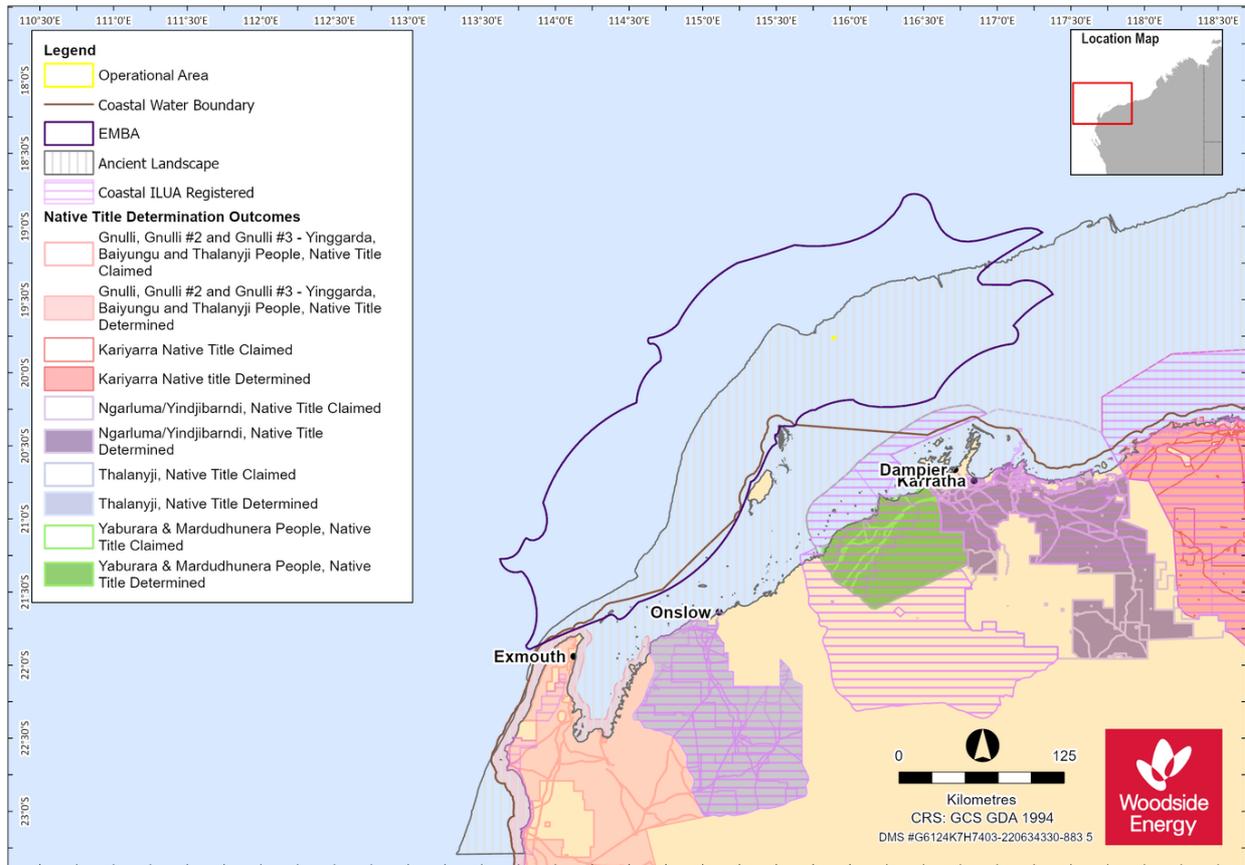
#### 4.6.1.3 Coastally Adjacent First Nations Groups

Woodside understands that Indigenous groups are keenly aware of the extent of their rights, interests and responsibilities for Country, and these are generally discrete, defined areas, including areas of sea (Smyth 2007). To identify cultural features and heritage values which may exist outside of native title claim, determination and ILUA areas, Woodside considers native title claims, determinations and ILUAs coastally adjacent to the EMBA to be an instructive means of identifying potentially relevant Indigenous groups to be consulted (See **Table 5-2**).

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That said, Woodside understands from engagement with relevant persons and/ or organisations, that extending a native title group’s responsibility to areas which those groups have elected to not include in their claims or ILUAs can have significant cultural consequences for Indigenous groups and individuals. This may also, over time, build expectations in the broader Indigenous community that a group is responsible for maintaining environmental values in areas for which they do not hold traditional knowledge. Woodside also acknowledges that an Indigenous group’s relative proximity to any Operational Areas or EMBA is not necessarily a meaningful indicator of the connection of Indigenous groups to the area, and providing advice over such areas can be culturally dangerous. As a result, caution must be used when conducting broader engagement.

A summary of native title claims, determinations and ILUAs overlapping or coastally adjacent to the EMBA is set out in **Table 4-17**. Claims and determinations have not been differentiated in this table, as it is acknowledged that either of these may indicate the existence of rights and interests.



**Figure 4-12: Operational Area and EMBA in relation to native title claims, determinations and ILUAs.**

**Table 4-17: Summary of Native Title Claims, Determinations and ILUAs 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 |
|--|--|-------------------|--------------------------------|
| <b>Claim / Determination</b>   |  |                   |                                |
| Gnulli, Gnulli #2 and Gnulli #3 - Yinggarda, Baiyungu and Thalanyji People | Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC), Yinggarda Aboriginal Corporation (YAC) | Yes               | Yes                            |

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|   |  |    |     |
|---|--|----|-----|
| Kariyarra   | Kariyarra Aboriginal Corporation   | No | Yes |
| Ngarluma/Yindjibarndi People  | Ngarluma Aboriginal Corporation (NAC), Yindjibarndi Aboriginal Corporation | No | Yes |
| Thalanyji   | Buurabalayji Thalanyji Aboriginal Corporation (BTAC)                       | No | Yes |
| Yaburara & Mardudhunera People  | Wirrawandi Aboriginal Corporation (WAC)                                    | No | Yes |
| <b>ILUA</b>   |  |    |     |
| Alinta-Kariyarra Electricity Infrastructure ILUA  | No representative body specified.  | No | Yes |
| Anketell Port, Infrastructure Corridor and Industrial Estates Agreement                 | Ngarluma Aboriginal Corporation  | No | Yes |
| Cape Preston Project Deed (YM Mardie ILUA)  | Wirrawandi Aboriginal Corporation  | No | Yes |
| Cape Preston West Export Facility   | Wirrawandi Aboriginal Corporation  | No | Yes |
| FMG - Kariyarra Land Access ILUA  | No representative body specified.  | No | Yes |
| Kariyarra and State ILUA  | Kariyarra Aboriginal Corporation   | No | Yes |
| KM & YM Indigenous Land Use Agreement 2018  | WAC, Robe River Kuruma Aboriginal Corporation                              | No | Yes |
| Kuruma Marthudunera and Yaburara and Coastal Mardudhunera Indigenous Land Use Agreement | No representative body specified.  | No | Yes |
| Macedon ILUA  | BTAC   | No | Yes |
| Ningaloo Conservation Estate ILUA   | NTGAC  | No | Yes |
| RTIO Kuruma Marthudunera People ILUA  | Robe River Kuruma Aboriginal Corporation                                   | No | Yes |
| RTIO Ngarluma Indigenous Land Use Agreement (Body Corporate Agreement)                  | NAC  | No | Yes |

#### 4.6.1.4 Marine Parks

Woodside acknowledges that Commonwealth and State Marine Park Management Plans have sought to recognise cultural values of Indigenous groups. Australian Marine Parks (AMP) describe this framework in the following way: 'when making decisions about what can occur in marine parks and what action we will take to protect marine parks, we take values into account'. AMP summarises these values as natural values, cultural values, heritage values and socio-economic values. Woodside is triggered to undertake 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 representative bodies referenced to contact regarding potential cultural features and heritage values.

The PAA does not overlap any Commonwealth Marine Parks. The EMBA overlaps with features of the Argo-Rowley Terrace, Gascoyne, Montebello and Ningaloo AMPs managed under the North-West Marine Parks Network Management Plan 2018. The EMBA overlaps a further six State Marine Parks. Where these plans specify identifiable representative bodies who may hold knowledge of heritage values or cultural features—including but not limited to

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Registered Native Title Bodies Corporate—these bodies are consulted (see **Table 5-2**). Consultation with these groups may identify heritage values and cultural features beyond those addressed in the marine park management plans. No identifiable representative bodies were specified for the marine parks overlapped by the EMBA (see **Table 4-18**)

The Marine Park Management Plans note for the Gascoyne, Montebello and Ningaloo MPs that the Yamatji Marlpa Aboriginal Corporation (YMAC) is the relevant Native Title Representative Body. Consultation with YMAC included discussion of the Traditional Custodians who may hold knowledge of heritage values or cultural features (See **Appendix F, Table 1**).

**Table 4-18: Summary of Commonwealth and State Marine Park Management Plan EMBA overlap**

| Marine Park Management Plan                     | PAA Overlap | EMBA Overlap | Specified Bodies                |
|---|-------------|--------------|---------------------------------|
| <b>Commonwealth Marine Park Management Plan</b> |             |              |                                 |
| Argo-Rowley Terrace AMP                         | No          | Yes          | No identifiable body specified. |
| Gascoyne AMP                                    | No          | Yes          | No identifiable body specified. |
| Montebello AMP                                  | No          | Yes          | No identifiable body specified. |
| Ningaloo AMP                                    | No          | Yes          | No identifiable body specified. |
| <b>State Marine Park Management Plan</b>        |             |              |                                 |
| Barrow Island Marine Management Area            | No          | Yes          | No identifiable body specified. |
| Barrow Island Marine Park                       | No          | Yes          | No identifiable body specified. |
| Cape Range National Park                        | No          | Yes          | No identifiable body specified. |
| Montebello Islands Marine Park                  | No          | Yes          | No identifiable body specified. |
| Muiron Islands Marine Management Area           | No          | Yes          | No identifiable body specified. |
| Ningaloo Marine Park                            | No          | Yes          | NTGAC                           |

In the Management Plans for the four AMPs it is noted that “Sea country is valued for Indigenous cultural identity, health and wellbeing.” Cultural identity is understood to refer to the fact that “essence of being a 'Saltwater' person is ontological rather than merely technological. That is, it is about how people relate spiritually to the sea and engage with spiritual forces that created it, the marine flora and fauna and people.” (McDonald and Phillips, 2021) This connection 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 (McDonald and Phillips, 2021) but no impacts of this nature are considered to arise from this activity.

Management plans for the AMPs note shipwrecks within the AMPs and overlap with World, National and Commonwealth heritage lists. These are addressed in **Sections 4.6.1.8 and 4.6.1.9** below.

The Management Plan for the Ningaloo Marine Park and Muiron Islands Marine Management Area 2005 – 2015: Management Plan Number 52 (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

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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.

A number of management plans for the state marine parks also note Indigenous and maritime heritage within the marine parks. These are addressed in **Sections 4.6.1.6 and 4.6.1.9.**

## 4.6.1.5 Marine Ecosystems

### 4.6.1.5.1 General Cultural Values of Marine Ecosystems

Woodside recognises the potential for marine ecosystems to include cultural features as well as environmental values. This is one aspect of the broader concept of “sea country”, which can be defined as the area of sea over which an Indigenous group has interests, cultural value, connection and use. It has been noted that “the saltwater peoples of the north-west are associated with discrete clan estates or tribal areas, often referred to in contemporary Aboriginal English as ‘saltwater country’ or ‘sea country’. ‘Country’ refers to more than just a geographical area: it is shorthand for all the values, places, resources, stories and cultural obligations associated with that geographical area.” (Smyth, 2007). It necessarily follows that an impact to marine ecosystems has the potential to impact cultural values where the impact is detectable within sea country—the seascape which Traditional Custodians view, interact with or hold knowledge of. The link between environmental protection and cultural heritage protection is illustrated in the Australian Government’s Indigenous Protected Areas Program. The Indigenous Protected Areas program provides for “areas of land and sea managed by Indigenous groups as protected areas for biodiversity conservation...IPAs deliver environmental benefits...Managing IPAs also helps Indigenous communities protect the cultural values of their country for future generations...” (DCCEEW, 2023). This intrinsic link is also described in MAC (2021 as cited in Woodside 2023) as it relates to the values of the marine environment that are of cultural importance to MAC based on engagement with their Elders and Murujuga Land and Sea Unit Rangers. Elders were clear that all living things in Mermaid Sound are connected and important. Mermaid Sound and Dampier Archipelago (Murujuga) are considered one place where the entire environment and all ecosystems hold both cultural and environmental value, with these types of values (cultural and environmental) intrinsically linked (MAC, 2021 also cited in Woodside 2023).

McNiven (2004) suggests that “For those mainland groups whose exploitation of the sea was limited to littoral resources, it is likely that seascapes extended no more than c. 20–30km out to sea, out to the horizon and the limit of human visibility. ... However, in some coastal places, clouds that can be seen well over 100km out to sea are imbued with spiritual significance. For those groups with elaborate canoe technology, seascapes extend well over the horizon.” While there is some evidence of traditional watercraft in Australia’s North West, the recorded evidence is limited to travel across inland rivers (e.g. Barber and Jackson 2011) or travel between coastal islands (Paterson et al 2019). The process for identifying Indigenous groups who may have interests and connection in Sea Country are set out in **Section 4.6.1.2, Section 4.6.1.3 and Section 5.3.** The scope of advice Traditional Custodians were encouraged to provide through project consultation was not limited by reference to any particular boundaries or limits of sea country.

Cultural features of coastal areas may include marine species that may travel many thousands of kilometres through areas with similar cultural values to multiple Indigenous language groups. Some species may travel as far as 5,000 km from Antarctica to the Kimberley region of Western Australia (Double et al., 2010, 2012), passing Indigenous language groups along the entire west coast of Australia. For a further description of whale distribution and whale

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migration patterns, see **Section 4.5.2.3**. For a further description of turtles, see **Section 4.5.2.2**.

As set out above, an impact to marine ecosystems has the potential to impact cultural values where the impact is detectable within Sea Country. Woodside considers that impact to cultural values of marine species will be adequately managed in areas of traditional Sea Country, and therefore management of the environmental values will preserve the cultural values of environmental receptors, as assessed in **Section 6**.

Woodside is triggered to consult on cultural values of Sea Country where Traditional Custodians or representative institutions are identified, or self-identify, as relevant persons.

#### **4.6.1.5.2 Other Identified Cultural Values of Marine Ecosystems**

Indigenous 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 marine fauna (See Appendix F, Table 1).

Additional cultural values and broader interests in the environment are known and have been shared with Woodside in the course of consultation on this activity and other Environment Plans. These are identified below:

- Whales
- Turtles
- Dugongs
- Plankton
- Songlines
- Archaeological sites on nearshore islands (Ashburton region of the South-West Pilbara)
- Underwater cultural heritage
- Cultural obligation to care for Sea Country

The marine ecosystem description in **Section 4.6.1.5** encompasses the description of the cultural features and **Sections 4.5.2.2** and **Section 4.5.2.3** provide a description of turtles and marine cetaceans respectively.

Woodside has committed to ongoing engagement to further understand these values. The Program of Ongoing Engagement with Traditional Custodians (**APPENDIX I**), provides a mechanism for ongoing dialogue between Woodside and Traditional Custodians. The program enables Woodside to manage uncertainty on the impacts and risks to cultural values which may be identified at any time during Woodside’s activities via ongoing dialogue with Traditional Custodians. As an example Woodside is developing a framework for ongoing consultation with BTAC (Section 7.5). 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 7.7.1**).

No other cultural features or heritage values related to marine species within the Operational Area or EMBA were raised by Traditional Custodians in the course of preparing the EP.

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#### 4.6.1.6 Intangible Cultural Features

Oral Songlines are often described by Aboriginal people as the law of the land and make up part of the Dreaming (Neale and Kelly, 2020). Songlines are viewed in Western academia as a framework for relating people to land and consist of a series of invisible, interconnected routes across the landscape that mark significant sites for Aboriginal people (Higgins, 2021). Songlines demonstrate Aboriginal peoples' strong connections to land by revealing sacred knowledge that is place-specific (Roberts, 2023). The land's physical features are instrumental in maintaining songlines because this is how ancestral spirits journeyed through, and interacted with, the physical landscape leaving sacred knowledge behind. The interconnection between the physical and spiritual is where songlines become intrinsically tied to significant places across Country. As a result, geographical landforms are recorded within songlines and become sacred places. Such landforms can include inter alia: rocks, mountains, rivers, caves and hills (Higgins, 2021). Songlines can become lost, fragmented or broken when there is a loss of Country or forced removal from Country (Neale and Kelly, 2020) – conversely, songlines are described as “dynamic and are as robust as the country itself” (Neale and Kelly, 2020). Physical sites that have been identified as comprising a component of a songline are important to protect in order to prevent the fragmenting or breaking apart of songlines and loss of sacred cultural knowledge. No specific details of songlines have been provided during consultation for this Activity.

In Australia, songlines can stretch thousands of kilometres, making up a complex and organic network of stories containing cultural knowledge of First Nations communities across the land (Neale and Kelly, 2020). Songlines can also extend out to Sea Country and contain cultural knowledge that is tied to geographic features, atmospheric phenomena and marine plants and animals. Often songlines containing references to a seascape or Sea Country make mention of mythical events occurring around marine life, fishing areas, submerged rocks or coral. Songlines that embody seascapes can reflect how a group may relate to, or value, Sea Country—for example connections to nearby islands that they once inhabited in their songlines (Smyth and Isherwood, 2016). Songlines can also be used as proof of long-standing connection to land and support a legal entitlement to land rights (Higgins, 2021). Examples where songlines contain strong references to Sea Country are more common in Pacific Islander and Torres Strait Islander communities, who often refer to seascapes and skylines in their songlines in order to communicate sacred knowledge that assists in safe navigation of the ocean (Neale and Kelly, 2020).

#### 4.6.1.7 Indigenous Archaeological Heritage Assessment

Woodside understands that communal cultural connection may exist between Traditional Custodians and land and waters. It is understood from the onshore archaeological record that Aboriginal people have occupied the Australian continent for at least 65,000 years (Clarkson et al 2017) and in many places maintain a strong continuing connection that is said to extend back in Indigenous cosmology to the beginning of time.

It is understood that the sea level has risen significantly during the 65,000 years of Indigenous occupation, and areas that were once inhabited are now submerged on the continental shelf (Veth et al 2019; UWA 2021). Woodside also understands that, at its lowest level during Indigenous occupation, sea level was between 125 m (O'Leary et al. 2020, Veth et al. 2019, Williams et al., 2018) and 130 m below current levels (Benjamin et al. 2020, Benjamin et al. 2023, UWA 2021). Archaeological material preserved on the Ancient Landscape has the potential to provide further information about the earliest periods of human occupation (Veth et al. 2019; UWA 2021).

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Recent archaeological discoveries demonstrate that the now submerged landscape was occupied and inhabited, and can retain archaeological material from this time (Benjamin et al, 2020, Benjamin et al. 2020; see Ward et al. 2021 for an opposing view).

In recognition of this, Woodside considers the Ancient Landscape between the mainland and the Ancient Coastline KEF (see **Section 4.5.3**) as an area where potential Indigenous archaeological material may exist on the seabed, as this covers the full extent of this possible Indigenous occupation. 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. However, these Acts only extend protection to Indigenous heritage places specified by declaration or otherwise included on a statutory list. Woodside understands that there is no Indigenous archaeology known to exist anywhere within Commonwealth waters and no areas subject to declarations or prescriptions under these Acts are located within the EMBA.

The Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry system was searched for the EMBA, which indicated no Registered Aboriginal Sites and 2 Other Heritage Places (APPENDIX H). The exact location, access, and traditional practices for a number of these sites may not be disclosed and if required, such as in the event of a major oil spill, would involve prioritising further consultation with key contacts within Western Australian Department of Aboriginal Affairs (DAA) and relevant local Aboriginal communities.

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

The Operational Area intersects part of the Ancient Landscape but also extends beyond the furthest extent of the Ancient Landscape.

Archaeological material on the Ancient Landscape is a relevant matter for the proposed activity as there is overlap between the Operational Area and the Ancient Landscape, and potential for seabed disturbance from planned activities and therefore potential for impacts to archaeological material. Woodside is triggered to undertake desktop assessments of archaeological potential, based on geophysical and bathymetric data, for any seabed disturbance at depths of less than 130 m. In Australia until recently, the consideration of submerged archaeological sites has generally focused on the sub-discipline of maritime archaeology with connection to Australian Indigenous archaeology through studies of Indigenous fish-traps, whaling stations and shipwreck survivor camps. However, with the exception of Indigenous fish traps in intertidal zones, the consideration of Indigenous heritage sites submerged by post-glacial sea-level rise has only recently been considered (Mott, 2019).

There has been long and continuous occupation of the coastal Pilbara region as evidenced by scientific studies (Balme et al., 2009; McDonald et al., 2018; Veth et al., 2017). Petroglyph motifs feature a range of subject matter with many examples depicting extinct fauna and early stylistic techniques (McNickle, 1984; McDonald, 2005; Mulvaney, 2009, 2010, 2013).

The sites considered most likely to survive inundation, based on the review of existing literature, were logically the more robust forms including:

- midden and artefacts within cemented dunes, relict water holes, and beach rock deposits
- quarry outcrops, extraction pits, and associated reduction debris in fine-grained volcanic outcrops
- curvilinear stone structures and standing stones sitting on volcanic pavements and jammed into volcanic rock piles

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- lag deposits of artefacts and possibly midden on hardpan in suitable landscape contexts with good preservation conditions (e.g. shallow declination shorelines in sheltered passages of the inner archipelago or on the leeward side of hard-rock/fringing reef cause-ways adjacent to the outer islands)
- small overhangs and shelters with preserved deposits, facing away from the dominant wave and wind action. (Veth et al., 2019)

Woodside commissioned a maritime archaeologist to undertake a review of existing geomorphological, geotechnical and documented Aboriginal histories to understand the potential for underwater cultural heritage within a 500m radius of the well, where there may be seabed disturbance (Nutley, 2023). This review included side scan sonar data, bathymetric models, including detailed composite models, literature review, Western Australian Heritage Database (shipwrecks and Aboriginal sites/places) and the Commonwealth's Australasian Underwater Cultural Heritage Database, geotechnical data logs.

The review found that the bathymetry surrounding TPA03 and the other existing Goodwyn Platform infrastructure has a flat and featureless topography within and around a 500 m radius of the well. The review notes that, *"the geotechnical data identified the sedimentation substrates as consisting of predominantly loose, light siliceous carbonate, fine to medium sand and occasional small shells (2-40 mm) and shell fragments. Cobbly gravel was also encountered in places as near to the surface of the seabed as 0.7 m. The parameters of the geotechnical sampling did not expressly target indicators of human activities, i.e., anthropogenic indicators. However, an examination of the data logs did not detect any such indicators, for example, significant beds of compacted shell of a size that could represent a midden, lithics that may have been tools or the by-product of tool making or peat beds that may have indicated former lake beds and which may have capped off underlying anthropogenic material."* The review concluded that, *"no items of cultural significance are known or expected to be in or adjacent to the proposed works on TPA03."* When considering potential gap analysis, the review asserted that, *"Given the available geotechnical and geophysical data, the absence of historic records of shipwrecks or other landscape features of potential cultural significance and the limited nature and area of impact of the proposed maintenance work on this facility, the existing bathymetric modelling is sufficient to inform the current assessment."*

Where Indigenous archaeological material is identified within the EMBA, Woodside will discuss the management of this material with appropriate Traditional Custodian group(s), starting with any adjacent Native Title Body Corporate.

#### 4.6.1.8 Historic Sites of Significance

There are no known sites of European cultural historic heritage significance within the Operational Area. The Master Existing Environment describes cultural heritage sites within the EMBA.

#### 4.6.1.9 Historic Underwater Heritage

A search of the Australasian Underwater Cultural Heritage Database, which records all known Maritime Cultural Heritage (shipwrecks, aircraft, relics and other underwater cultural heritage) in Australian waters does not contain records of sites within the Operational Area, nor within 10 km of the Operational Area. The Montebello Marine Park contains two known shipwrecks protected under the Underwater Cultural Heritage Act 2018: the Trial (wrecked in 1622, the earliest known shipwreck in Australian waters) and Tanami (unknown date) (Director of National Parks, 2018). A number of sites were identified in the EMBA (**Table 4-18**).

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**Table 4-18: Historic shipwrecks within 100 km of the Operational Area**

| Shipwreck                            | Approximate Distance from Operational Area to Shipwreck (km) |
|--------------------------------------|--|
| <i>McCormack</i>                     | 42   |
| <i>McDermott Derrick Barge No 20</i> | 42   |
| <i>Trial</i>                         | 81   |
| <i>Tanami</i>                        | 81   |
| <i>Marietta</i>                      | 84   |
| <i>Wild Wave (China)</i>             | 84   |
| <i>Vianen</i>                        | 84   |
| <i>Curlew</i>                        | 84   |

#### 4.6.1.10 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 4-19**.

**Table 4-19: World, National and Commonwealth Heritage Listed Places within the EMBA**

| Listed Place                               | Distance from Operational Area to Listed Place (km) |
|--|---|
| <b>World Heritage Properties (WHP)</b>     |   |
| Ningaloo Coast World Heritage Property     | Located 254 km south-west of the Operational Area.  |
| <b>National Heritage Places (NHP)</b>      |   |
| Ningaloo Coast National Heritage Place     | Located 254 km south-west of the Operational Area.  |
| <b>Commonwealth Heritage Places (CHP)</b>  |   |
| Ningaloo Marine Area – Commonwealth Waters | Located 275 km south-west of the Operational Area.  |

#### 4.6.2 Commercial Fisheries

A number of Commonwealth and State fishery management areas are located within the Operational Area and EMBA. The Annual Fishery Status Reports published by 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 last 5 years. FishCube data were also requested from the WA Department of Primary Industries and Regional Development (DPIRD) for the most recently available 5-year period of fishery catch and effort data (2018-2022) to analyse the potential for interaction with State managed fisheries within the Operational Area and EMBA (DPIRD, 2022). Data was reviewed from the last 5 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 (1 year). In addition, any impacts to fish are expected to be temporary in nature (See Section 6.7 and Section 6.8) and therefore not extending beyond the life of the EP. This information was used to determine relevant fisheries for consultation who may be impacted by the proposed petroleum activities. **Table 4-20** provides an assessment of the potential interaction and **APPENDIX H** provides further detail on the fisheries that have been identified through desk-based assessment and consultation (**Section 6**). **Figure 4-13** shows fisheries identified as having a potential interaction with the Petroleum Activities Program.

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**Table 4-20: Commonwealth and State commercial fisheries management areas overlapping the Operational Area and EMBA. And the potential for interaction during the Petroleum Activities Program.**

| Fishery                               | Potential for interaction During Activity |      |   |
|---------------------------------------|---|------|---|
|                                       | Operational Area                          | EMBA | Description   |
| <b>Commonwealth Managed Fisheries</b> |   |      |   |
| North West Shelf Trawl Fishery        | X   | ✓    | The North West Slope Trawl Fishery management area overlaps the EMBA. Between one to six vessels have been active in the fishery since 2005. Fishery Status Reports indicate most recent activity inside the EMBA occurred in the 2021-2022 season (Patterson et al., 2022). There has been no fishing effort reported within the Operational Area in the last 5 years (Patterson et al., 2022). Accordingly, Woodside considers it a possibility that interactions with the fishery may occur in the EMBA. |
| Western Deepwater Trawl Fishery       | X   | ✓    | The Western Deepwater Trawl Fishery management area overlaps the EMBA. Fishery Status Reports indicate most recent activity overlapping the EMBA occurred in the 2020-2021 season (Patterson et al., 2021). There has been no fishing effort reported within the Operational Area in the last 5 years (Patterson et al., 2022). Woodside considers it a possibility that interactions with the fishery may occur in the EMBA.   |
| Southern Bluefin Tuna Fishery         | X   | X    | The Southern Bluefin Tuna Fishery management area overlaps the EMBA and Operational Area. The Southern Bluefin Tuna Fishery spans the Australian Fishing Zone, however since 1992, the majority of the Australian catch has concentrated in south-eastern Australia. (Patterson et al., 2022). Accordingly, Woodside considers there to be no potential for interaction with this fishery and the Petroleum Activities Program.   |
| Western Skipjack Tuna Fishery         | X   | X    | The Western Skipjack Tuna Fishery management area overlaps the Operational Area and the EMBA. The Western Skipjack Tuna 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). Accordingly, Woodside considers there to be no potential for interaction with this fishery and the Petroleum Activities Program.   |

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| Fishery                                      | Potential for interaction During Activity |      |   |
|--|---|------|---|
|  | Operational Area                          | EMBA | Description   |
| Western Tuna and Billfish Fishery            | X   | X    | Whilst the Western Tuna and Billfish Fishery management area overlaps the Operational Area and the EMBA, Woodside considers there to be no potential for interaction with this fishery within the Operational Area and EMBA given the current distribution of fishing effort is concentrated south of Carnarvon (Patterson et al., 2022).   |
| <b>State Managed Fisheries</b>               |   |      |   |
| Pilbara Line Fishery                         | ✓   | ✓    | The Pilbara Line Fishery licensees are permitted to operate anywhere within Pilbara waters (Newman et al., 2021), overlapping the Operational Area and EMBA. The fishery is active in the Operational Area and the EMBA, with eight 60 NM Catch and Effort System (CAES) blocks reporting up to five vessels across the 2017 – 2022 seasons (DPIRD, 2022). The Operational Area overlaps 60 NM CAES block at 19150.<br><br>FishCube data for the Pilbara Line Fishery is not provided at the 10 NM scale, therefore it is uncertain if the effort reported in the 60 NM CAES block 19150 overlaps with the Operational Area. However, Woodside considers it a possibility that interactions with the fishery may occur. |
| Pilbara Crab Managed Fishery                 | X   | ✓    | The Pilbara Crab Managed Fishery management area overlaps the EMBA and Operational Area. FishCube data reports fishing effort occurs within the EMBA across one 60 NM CAES blocks reporting less than three vessels across 2017 – 2022 seasons (DPIRD, 2022). The FishCube data reported no active fisheries at 10 NM overlapping the Operational Area (DPIRD, 2022). Woodside considers it a possibility that interactions with the fishery may occur in the EMBA.   |
| Pilbara Fish Trawl (Interim) Managed Fishery | X   | ✓    | The Pilbara Fish Trawl (Interim) Managed Fishery management area overlaps the EMBA and the Operational Area. The fishery has remained consistently active in the EMBA over the last 5 years, with three 60 NM CAES blocks reporting up to four vessels across each season between 2017 – 2022 (DPIRD, 2022). No fishing effort has been reported in the 10 nm CAES blocks overlapping the Operational Area within the last 5 years (DPIRD, 2022). Accordingly, Woodside considers there to be potential for interaction with this fishery and the Petroleum Activities Program within the EMBA.   |

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| Fishery  | Potential for interaction During Activity |      |  |
|--|---|------|--|
|  | Operational Area                          | EMBA | Description  |
| West Coast Deep Sea Crustacean Managed Fishery | X   | ✓    | The West Coast Deep Sea Crustacean Managed Fishery is permitted to fish in waters deeper than the 150 m isobath overlapping the Operational Area and EMBA. The fishery has remained active in the EMBA between the 2021 – 2022 season with three 60 NM CAES blocks overlapping the EMBA reported less than three vessels with active fishing effort (DPIRD, 2022). The FishCube data reported no active fisheries at 10 NM overlapping the Operational Area (DPIRD, 2022). Woodside considers it a possibility that interactions with the fishery may occur in the EMBA.   |
| West Australian Sea Cucumber Fishery           | X   | ✓    | The Western Australian Sea Cucumber Fishery management area overlaps the EMBA. The fishery is permitted to operate throughout all WA waters. The target species typically inhabit nearshore waters and no effort occurs within the Operational Area.<br><br>FishCube data reports fishing effort occurs within the EMBA across two 60 NM CAES blocks reporting less than three licenses across 2017 – 2019 seasons (DPIRD, 2022). FishCube data reported no active fisheries at 10 NM CAES blocks overlapping the Operational Area (DPIRD, 2022). Woodside considers there to be potential for interaction with this fishery and the Petroleum Activities Program within the EMBA. |
| Mackerel Managed Fishery (Area 2 and 3)        | X   | ✓    | The Mackerel Managed Fishery (Area 2 and 3) management area overlaps the EMBA and Area 2 overlaps the Operational Area. The fishery has remained consistently active in the EMBA over the last 5 years, with seven 60 NM CAES blocks reporting up to six vessels across each season between 2017 – 2022 (DPIRD, 2022). The FishCube data reported no active fisheries at 10 NM overlapping the Operational Area (DPIRD, 2022). Woodside considers it a possibility that interactions with the fishery may occur in the EMBA.   |
| Marine Aquarium Managed Fishery                | X   | ✓    | The Marine Aquarium Managed Fishery management area overlaps the EMBA and Operational Area. The fishery has remained consistently active in the EMBA between the 2017 – 2022 seasons with five 60 NM CAES blocks overlapping the EMBA reported up to six licences with active fishing effort (DPIRD, 2022). The FishCube data reported no active fisheries at 10 NM overlapping the Operational Area (DPIRD, 2022). Woodside considers it a possibility that interactions with the fishery may occur in the EMBA.  |

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| Fishery                            | Potential for interaction During Activity |      |  |
|------------------------------------|---|------|--|
|                                    | Operational Area                          | EMBA | Description  |
| Pilbara Trap Managed Fishery       | ✓   | ✓    | The Pilbara Trap Managed Fishery management area overlaps the EMBA and Operational Area. FishCube data reports fishing effort occurs within the EMBA across eight 60 NM CAES blocks reporting up to three vessels across 2017 – 2022 seasons (DPIRD, 2022). FishCube data reported active fisheries at 10 NM CAES blocks overlapping the Operational Area (DPIRD, 2022). Woodside considers there to be potential for interaction with this fishery and the Petroleum Activities Program within the EMBA and Operational Area. |
| Specimen Shell Managed Fishery     | X   | ✓    | The Specimen Shell Managed Fishery management area overlaps the EMBA and Operational Area. The fishery has remained consistently active in the EMBA between the 2017 – 2022 seasons with four 60 NM CAES blocks overlapping the EMBA reported up to six licences with active fishing effort (DPIRD, 2022). The FishCube data reported no active fisheries at 10 NM overlapping the Operational Area (DPIRD, 2022). Woodside considers it a possibility that interactions with the fishery may occur in the EMBA.               |
| Exmouth Gulf Prawn Managed Fishery | X   | ✓    | The Exmouth Gulf Prawn Managed Fishery management area overlaps the EMBA. The fishery has remained consistently active over the last 5 years, with two 60 NM CAES blocks reporting up to six vessels across each season between 2017 – 2022 (DPIRD, 2022). No fishing effort has been reported in the 10 nm CAES blocks overlapping the Operational Area within the last 5 years (DPIRD, 2022). Accordingly, Woodside considers there to be potential for interaction with this fishery within the EMBA.                       |
| Nickol Bay Prawn Managed Fishery   | X   | ✓    | The Nickol Bay Prawn Managed Fishery management area overlaps the EMBA. The fishery has remained consistently active over the last 5 years, with three 60 NM CAES blocks reporting up to eight vessels across each season between 2017 – 2022 (DPIRD, 2022). No fishing effort has been reported in the 10 nm CAES blocks overlapping the Operational Area within the last 5 years (DPIRD, 2022). Accordingly, Woodside considers there to be potential for interaction with this fishery within the EMBA.                     |

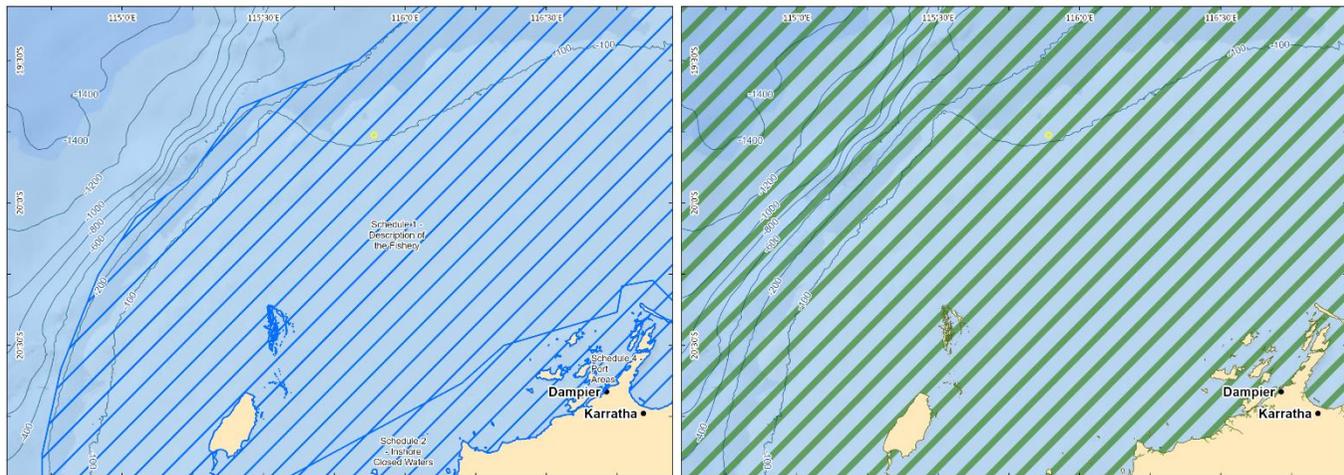
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| Fishery                                     | Potential for interaction During Activity |      |   |
|---|---|------|---|
|   | Operational Area                          | EMBA | Description   |
| Onslow Prawn Managed Fishery (Area 2 and 3) | X   | ✓    | The Onslow Prawn Managed Fishery (Area 2 and 3) management area overlaps the EMBA and Area 3 management area overlaps the Operational Area. The boundaries of the Onslow Prawn Managed Fishery are all in Western Australian waters between the Exmouth Prawn Fishery and the Nickol Bay Prawn fishery east of 114°39." on the landward side of the 200 m depth isobath (Sporer et al., 2012). Area 2 incorporates the Mangrove Island and Weld Island size management fish grounds and Coolgra Point Nursery (Sporer et al., 2012).<br>FishCube data reports fishing effort occurs within the EMBA across five 60 NM CAES blocks reporting less than three licenses across 2018 – 2022 seasons (DPIRD, 2022). FishCube data reported no active fisheries at 10 NM CAES blocks overlapping the Operational Area (DPIRD, 2022). Woodside considers there to be potential for interaction with this fishery and the Petroleum Activities Program within the EMBA. |
| Land Hermit Crab Fishery                    | X   | X    | The Land Hermit Crab Management Area management area overlaps the EMBA where shoreline contact is predicted. FishCube data reports fishing effort occurs within the EMBA from one CAES block in the 2017 – 2018 season (DPIRD, 2022). However, the EMBA does not make shoreline contact within the active CAES block and therefore, Woodside considers there to be no potential for interaction with this fishery within the EMBA.  |
| Pearl Oyster Managed Fishery (Zone 1)       | X   | X    | The Pearl Oyster Managed Fishery management area overlaps the EMBA and the Operational Area. No fishing has occurred in Zone 1 from 2017 to 2020 with only 4594 culture hells taken in 2016 (Hart et al., 2021). FishCube reported no fishing effort within the Operational Area and EMBA and Woodside considers there to be no potential for interaction with this fishery and the Petroleum Activities Program.   |
| Abalone Managed Fishery                     | X   | X    | The Western Australian Abalone Managed Fishery management area overlaps the EMBA and the Operational Area. The Western Australian Abalone Fishery includes all coastal waters from the Western Australian and South Australian border to the Western Australian and Northern Territory border. No commercial fishing has occurred north of Moore River since 2011-2012 (Strain et al., 2021). In addition, abalone is harvested by hand using an abalone iron from reefs and rock shelves within Western Australian waters (Strain et al., 2021), limiting the fishery to shallow waters. Accordingly, Woodside considers there to be no potential for interaction with this fishery.   |

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| Fishery                                 | Potential for interaction During Activity |      |  |
|---|---|------|--|
|   | Operational Area                          | EMBA | Description  |
| South West Coast Salmon Managed Fishery | X   | X    | The South West Coast Salmon Managed Fishery management area overlaps the EMBA and the Operational Area. No fishing occurs north of the Perth Metropolitan Area. Therefore, no effort occurs within the EMBA and Woodside considers there to be no potential for interaction with this fishery.   |
| West Coast Rock Lobster Fishery         | X   | X    | The West Coast Rock Lobster Managed Fishery management area overlaps the EMBA. FishCube reported no fishing effort within the EMBA and Woodside considers there to be no potential for interaction with this fishery and the Petroleum Activities Program.   |
| WA North Coast Shark Fishery            | X   | X    | The WA North Coast Shark Fishery management area overlaps the EMBA. FishCube reported no fishing effort within the EMBA and Woodside considers there to be no potential for interaction with this fishery and the Petroleum Activities Program.  |
| <b>Commercial Tour Operators</b>        |   |      |  |
| Tour Operators                          | X   | ✓    | <p>Fishing Tour Operators are permitted to operate across WA state waters and are required to report monthly logbook records of client fish catches. FishCube data indicate tour operator fishing effort highest around Ningaloo and Muiron Islands, at Barrow Island and the Montebello Islands. FishCube data reports consistent fishing effort across seven 60 NM CAES blocks that overlap the EMBA (DPIRD, 2022). Fishing effort was reported by up to 20 licenses across the 2017 – 2022 seasons (DPIRD, 2022).</p> <p>FishCube data reported no active fisheries at 10 NM CAES blocks overlapping the Operational Area (DPIRD, 2022). Accordingly, Woodside considers it a possibility that interactions with tour operators will occur within the EMBA.</p> |

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Basemap: Esri, GEBCO, DeLorme, NaturalVue, GeoscienceAustralia, Esri, GEBCO, DeLorme, NaturalVue

**Figure 4-13: Commercial fisheries overlapping the Operational Area with a potential for interaction with the Petroleum Activities Program**

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### 4.6.3 Traditional Fisheries

There are no traditional, or customary, fisheries within the Operational Area, as these are typically restricted to shallow coastal waters and/or areas with structures such as reef. However, it is recognised that Barrow Island, Montebello Islands, Exmouth, Ningaloo Reef and the adjacent foreshores, all within the wider EMBA, have a known history of fishing when areas were occupied (as from historical records) (CALM 2005, DEC 2007). Areas that are covered by registered native title claims are likely to practice Aboriginal fishing techniques at various sections of the Western Australia coastline.

### 4.6.4 Tourism and Recreation

Current FishCube data (2017 – 2022) indicates that no tour operators use the waters within or surrounding the Operational Area (DPIRD, 2021). The Operational Area is considered too far offshore for recreational fishing or tourism activities to occur. It is acknowledged that there are growing tourism and recreational sectors in Western Australia. These sectors have expanded in area over the last couple of decades. Potential for growth and further expansion in tourism and recreational activities in the Pilbara and Gascoyne regions is recognised, particularly with the development of regional centres and a workforce associated with the resources sector (Gascoyne Development Commission, 2012).

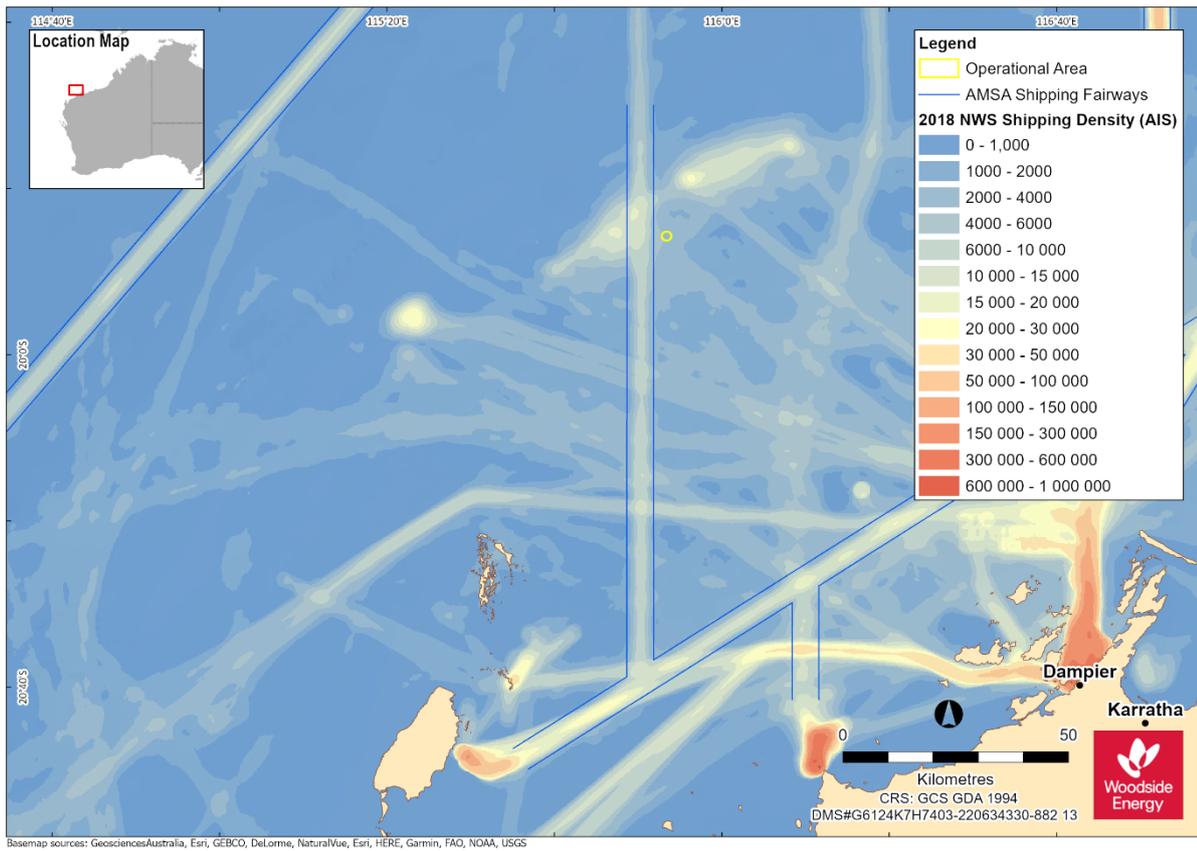
Within the EMBA, tourism is one of the major industries of the Gascoyne region and contributes significantly to the local economy in terms of both income and employment. The main marine nature-based tourist activities are concentrated around and within the Ningaloo Marine Park and North West Cape area. Activities include recreational fishing, snorkelling and scuba diving, whale shark encounters (April to August) and manta rays (September to November), whale watching (July to October) and turtle watching (all year round) (Shire of Exmouth). Recreational use of the Ningaloo Marine Park varies in intensity throughout the year, depending on school holidays and seasonal peaks of marine fauna being observed. Coral Bay is documented as one of the most heavily used areas (MPRA, 2005).

The Montebello Islands (76 km from the Operational Area) are the next closest location for tourism, with some charter boat operators taking visitors to these remote islands.

Recreational and charter fishing in the North West Shelf Province is mainly concentrated around the coastal waters and islands (including Dampier Archipelago, Ningaloo Marine Park, North West Cape area, the Montebello Islands, and other islands and reefs in the region) (DoF, 2011). It has grown exponentially with the expanding regional centres and increasing residential and fly in/fly out work force, particularly in the Pilbara region. Occasional recreational and charter fishing occurs at Rankin Bank and Glomar Shoals (located about 31 km west and 103 km east of the Operational Area, respectively).

### 4.6.5 Commercial Shipping

The Australian Maritime Safety Authority (AMSA) has introduced a network of shipping fairways across the NWMR off WA to reduce the risk of vessel collisions with offshore infrastructure. It is noted that none of these fairways intersect with the Operational Area; however, the nearest fairway is directly adjacent to the Operational Area approximately 0.18 km west of Operational Area (**Figure 4-14**). Vessel tracking data suggest shipping is concentrated to the south-east of the Operational Area, which is associated with vessels transiting between ports.



**Figure 4-14: Vessel density in relation to the Operational Area, derived from AMSA satellite tracking system data (vessels include cargo, LNG tanker, passenger vessels, support vessels, and others/unnamed vessels)**

#### 4.6.6 Oil and Gas

The Operational Area is situated within an area of established oil and gas operations, with additional infrastructure in the broader North West Shelf region. The Operational Area for the activity overlaps with the GWF-1 pipeline, TPA01, TPA02, Tidepole East-1 and TPA03a wells. **Table 4-21** details other oil and gas facilities located within 50 km of the Operational Area (**Figure 4-15**).

**Table 4-21: Other Oil and Gas Facilities located within 50 km of the Operational Area**

| Facility Name and Operator      | Distance from Operational Area to Listed Place (km) |
|---------------------------------|---|
| North Rankin Complex (Woodside) | 31 km north-east                                    |
| Goodwyn Platform (Woodside)     | 12 km north-east                                    |

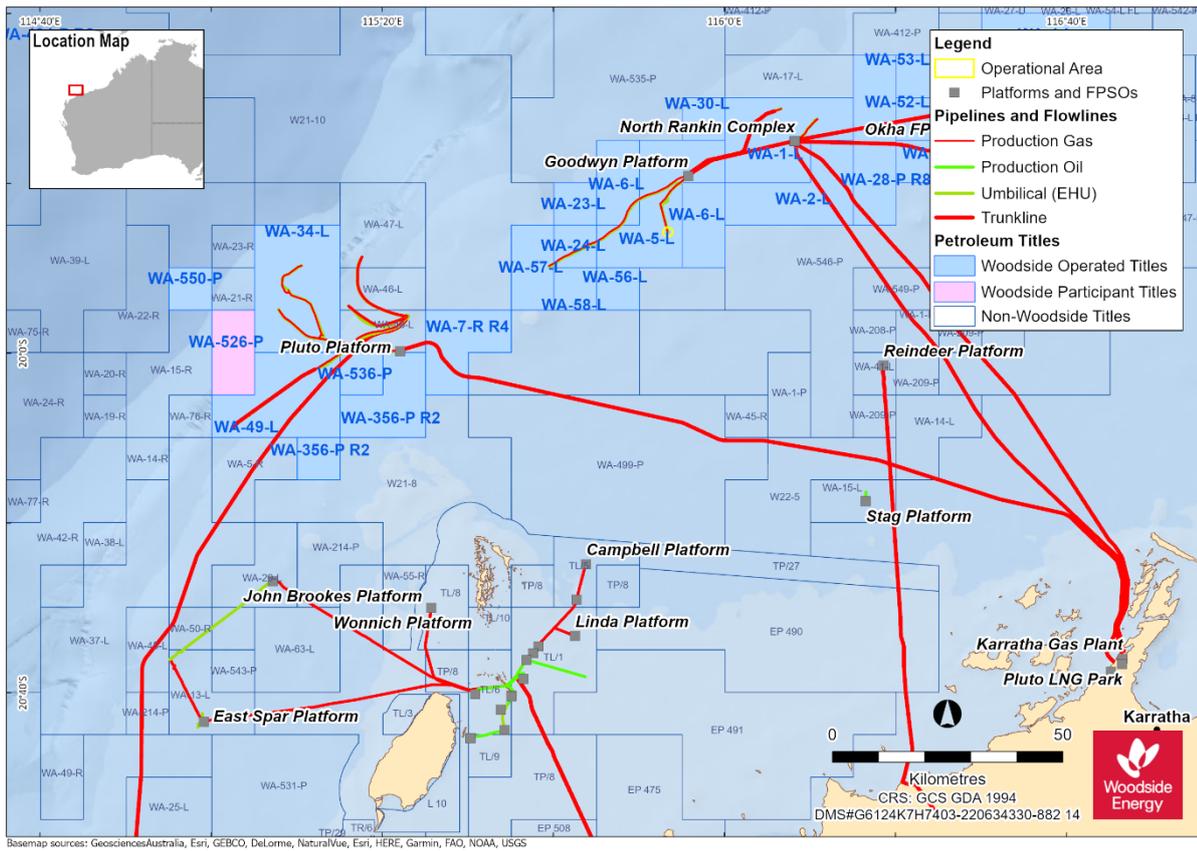


Figure 4-15: Oil and gas Infrastructure within the Operational Area and region

4.6.7 Defence

There are no designated defence practice areas overlapping the Operational Area. Designated defence practice areas occur within the offshore marine waters off Ningaloo and the North West Cape in the broader EMBA (Figure 4-16). The closest site where unexploded ordinance is known to occur is 8 km east of Trimouille Island in depths of about 40 m, located approximately 70 km south-east of the Operational Area and outside the EMBA. Defence areas in relation to the Operational Area are presented in Figure 4-16.

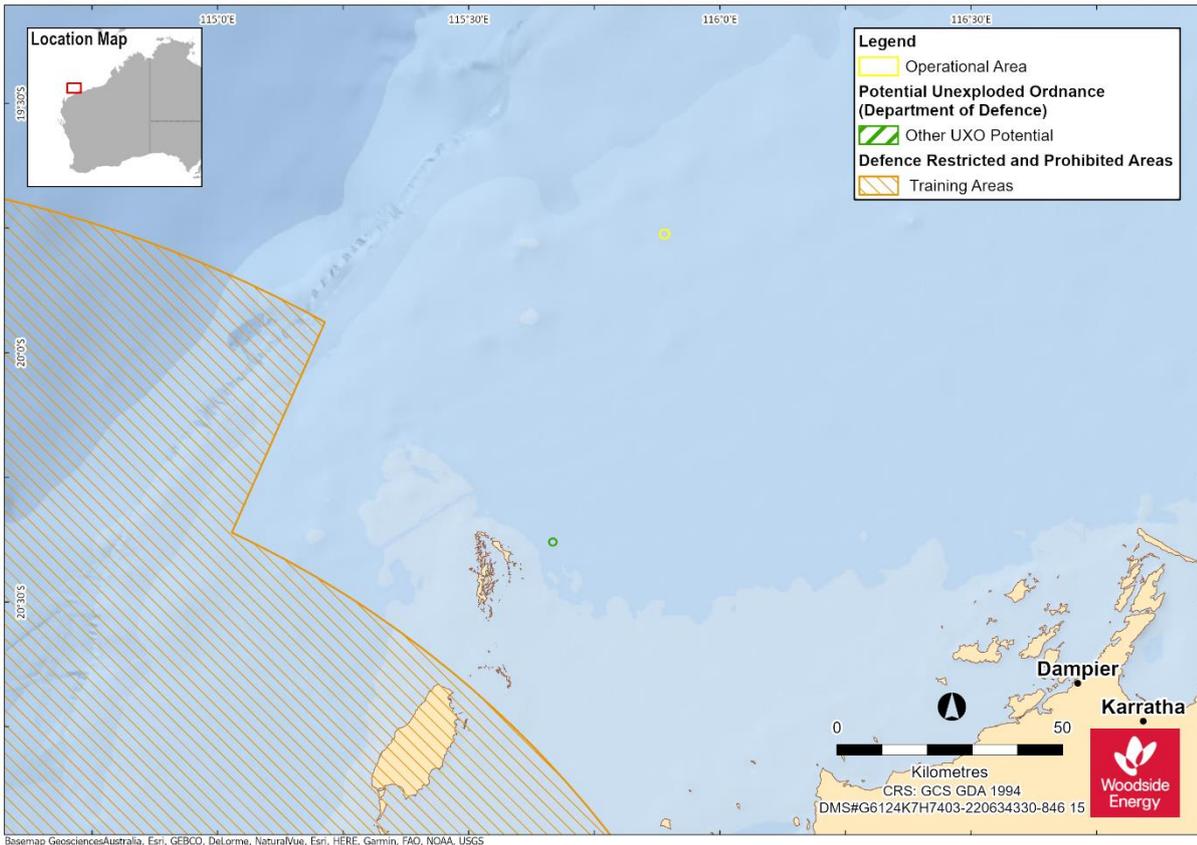


Figure 4-16: Defence areas relative to the Operational Area

## 5 CONSULTATION

### 5.1 Summary

Woodside consults relevant persons in the course of preparing an EP in accordance with regulation 11A of the Environment Regulations. Woodside acknowledges that consultation is designed to ensure that relevant persons are identified and given sufficient information and a reasonable period to allow them to make an informed assessment of the possible consequences of the proposed activity on them and, to ensure that Titeholders can consider and adopt appropriate measures in response to the matters raised by relevant persons. Consistent with regulation 3 of the Environment Regulations, consultation also supports Woodside's objective to ensure that the environmental impacts and risks of the activity are reduced to ALARP and an acceptable level.

Woodside acknowledges that a titleholder's approach to consultation must be informed by both the Environment Regulations and the findings of 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**) delivered on 2 December 2022.

For this PAP, Woodside has considered both the Operation 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 the PAP (see **Section 4**).

Woodside's consultation methodology is divided into three parts:

- The first section (Section 5.2 to 5.7) provides an overview of Woodside's consultation methodology for its EPs, including how we apply regulation 11A(1) of the Environment Regulations to identify relevant persons.
- The second section (Section 5.8) explains Woodside's application of the consultation methodology and Woodside's assessment of relevant persons for this EP.
- The third section (Section 5.9) details the:
  - Opportunities provided to persons or organisations to be aware of Woodside's proposed EP and participate in consultation, including individual Traditional Custodians.
  - Consultation information provided to relevant persons, feedback received and Woodside's assessment of the merits of objections or claims.
  - Engagement with persons or organisations that Woodside chose to contact who are not relevant persons for the purposes of regulation 11A(1) of the Environment Regulations (see Section 5.3.4).

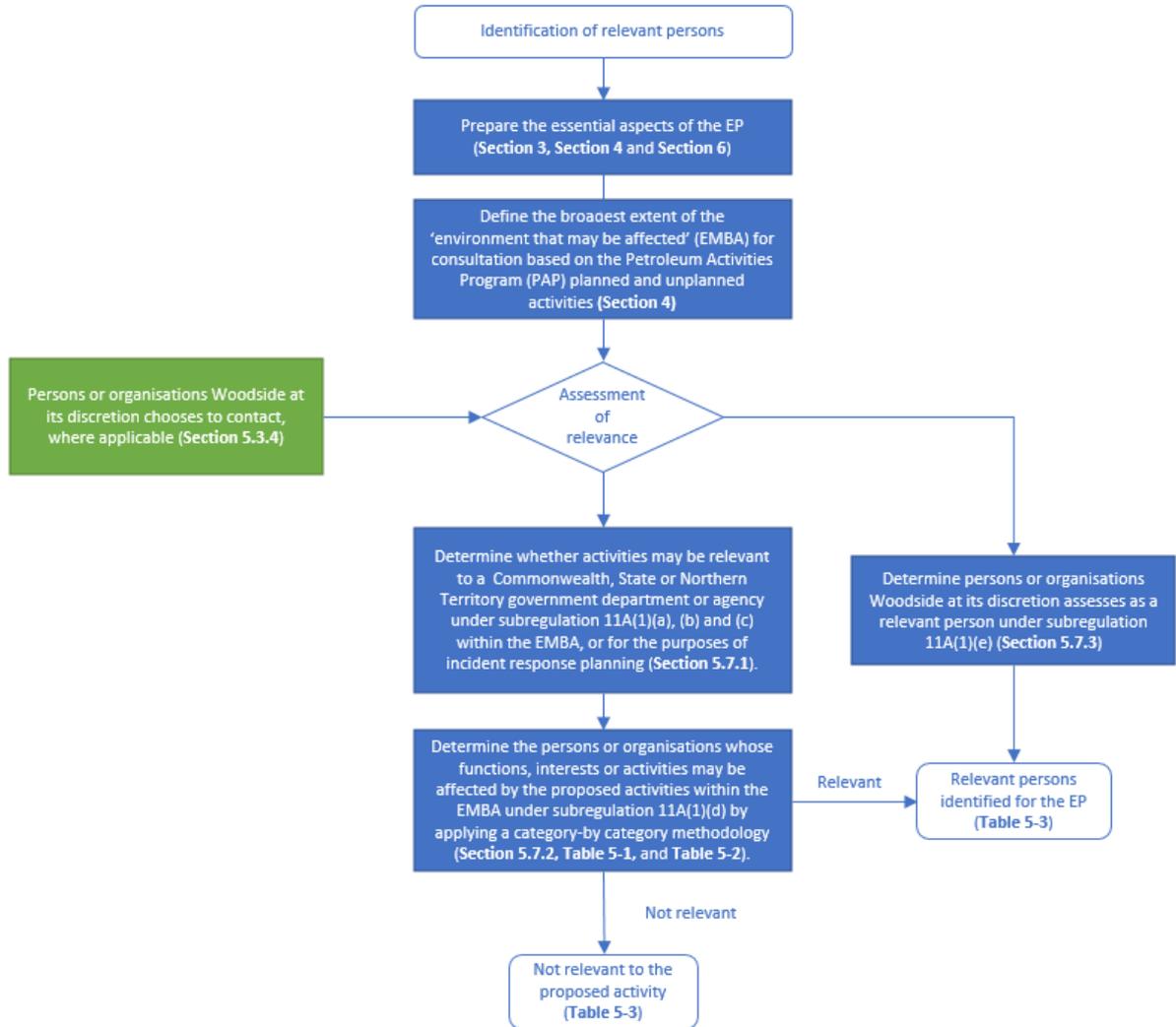


Figure 5-1: Overview of Woodside’s methodology to identify relevant persons

5.2 Consultation – General Context

Woodside has a portfolio of quality oil and gas assets and more than 30 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 understand the potential risks and impacts from 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 proposed 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 periodically reviewed and updated.

Woodside acknowledges NOPSEMA’s Guideline on *Consultation in the course of preparing an environment plan* (12 May 2023) as well as recent 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 has also been further considered in the context of specific methods for consultation with First Nations relevant persons (**Section 5.5.1**).

In order to undertake consultation, Woodside has developed a methodology for identifying relevant persons, in accordance with regulation 11A(1) of the Environment Regulations. This methodology reflects NOPSEMA's recent guideline and demonstrates that, in order to meet the requirements of regulation 10A (criteria for EP acceptance) when preparing the EP, Woodside understands:

- our planned activities in the Operational Area, being the area in which our planned activities are proposed to occur (see **Section 3.3.2**); and
- 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 11A of the Environment Regulations, which requires a titleholder to:

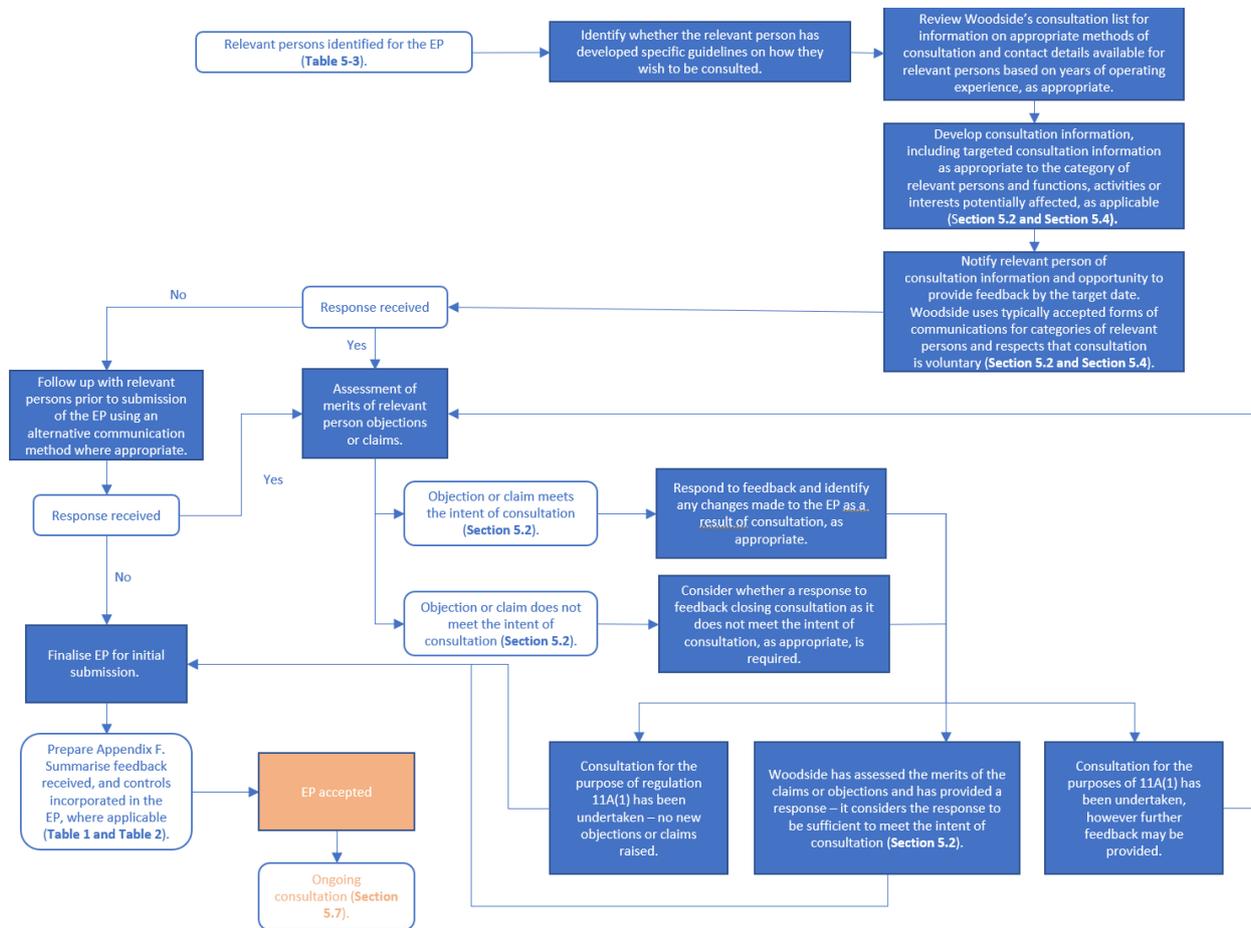
- consult with each of the following (a relevant person) in the course of preparing an environment plan:
- each Department or agency of the Commonwealth to which the activities to be carried out under the environment plan, or the revision of the environment plan, may be relevant;
- each Department or agency of a State or the Northern Territory to which the activities to be carried out under the EP, or the revision of the EP, may be relevant;
- the Department of the responsible State Minister, or 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, or the revision of the EP; and
- any other person or organisation that the titleholder considers relevant (regulation 11A(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 the their functions, interests or activities (regulation 11A(1)(2));
- allow a relevant person a reasonable period for the consultation (regulation 11A(1)(3)); and
- 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 11A(1)(4)).

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

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- is consistent with the principles of ecologically sustainable development (ESD) set out in section 3A of the EPBC Act – see **Section 2**;
- is intended to reduce the environmental impacts and risks from the activity to ALARP and an acceptable level;
- seeks to ensure that the environmental impacts and risks of the activity will be of an acceptable level;
- 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 that the petroleum activity may otherwise cause;
- is collaborative; Woodside respects that for a relevant person, consultation is voluntary. Where the relevant person seeks to engage, Woodside collaborates with the relevant person with the aim of seeking genuine and meaningful two-way dialogue; and
- 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 7.8.2.1**).

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:

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- [Santos NA Barossa Pty Ltd v Tipakalippa \[2022\] FCAFC 193](#)

NOPSEMA:

- [GL2086 – Consultation in the course of preparing an environment plan – May 2023](#)  
[GN1847 - Responding to public comment on environment plans - July 2022](#)
- [GN1344 - Environment plan content requirements - September 2020](#)
- [GL1721 - Environment Plan Decision Making Guideline - December 2022](#)  
[GN1488 - Oil pollution risk management - July 2021](#)
- [GN1785 – Petroleum activities and Australian Marine Parks – June 2020](#)
- [GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2023](#)
- [PL2098 – Draft Policy for managing gender-restricted information](#)
- [Consultation on offshore petroleum environment plans – Information for the community](#)

Department of Climate Change, Energy, the Environment and Water:

- [Sea Countries of the North-West; Literature review on Indigenous connection to and uses of the North West Marine Region](#)

Australian Fisheries Management Authority:

- [Petroleum industry consultation with the commercial fishing industry](#)

Commonwealth Department of Agriculture and Water Resources:

- [Fisheries and the Environment – Offshore Petroleum and Greenhouse Gas Act 2006](#)
- [Offshore Installations Biosecurity Guide](#)

WA Department of Primary Industries and Regional Development:

- [Guidance statement for oil and gas industry consultation with the Department of Fisheries](#)

WA Department of Transport:

- [Offshore Petroleum Industry Guidance Note](#)

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 11A(1)(a), (b) and (c)

The relevant inquiry for determining relevant persons within the description of regulations 11A(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. These government departments and agencies relevant to the EP are listed in **Table 5-3** below. In accordance with regulation 11A(1)(c), Woodside consults with the department of the relevant State Minister.

### 5.3.2 Regulation 11A(1)(d)

In order to identify a relevant person for the purposes of regulation 11A(1)(d), the meaning of “functions, interests or activities” needs to be understood. In regulation 11A(1)(d), the phrase “functions, interests or activities” should be construed broadly and consistently with the objects of the Environment Regulations (regulation 3) and the objects of the EPBC Act (section 3A).

In developing its methodology for consultation, Woodside acknowledges that the guidance on the definition of functions, interests and activities is as follows in accordance with NOPSEMA’s *GL2086 – Consultation in the course of preparing an environment plan* guideline (May 2023):

|                   |  |
|-------------------|--|
| <b>Functions</b>  | Refers to a power or duty to do something.   |
| <b>Interests</b>  | 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. |
| <b>Activities</b> | Broader than the definition of ‘activity’ in Regulation 4 of the Environment Regulations and is likely be directed to what the relevant person is already doing.   |

As discussed in **Section 5.1** and **Section 5.2**, Woodside’s methodology for determining ‘relevant persons’ for the purpose of regulation 11A(1)(d) of the Environment Regulations includes consideration of:

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

### 5.3.3 Regulation 11A(1)(e)

In addition to assessing relevance under regulation 11A(1)(d), Woodside has discretion to categorise any other person or organisation as a relevant person under regulation 11A(1)(e).

### 5.3.4 Persons or organisations Woodside chooses to contact

In addition to undertaking consultation with relevant persons under regulation 11A(1) there are persons or organisations that Woodside chooses to contact, from time to time, in relation to a proposed activity. For example, these are persons or organisations:

- that are ‘not relevant’ pursuant to regulation 11A(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 11A(1) but have been contacted as a result of consultation requirements changing or updated guidance from the Regulator; and
- 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 required to inform relevance under Woodside’s methodology. Woodside follows the same methodology for assessing a person or organisations relevance as it does during its initial assessment (as described in Figure 5-1 and Section 5.8). The result of Woodside’s assessment of relevance during the development of the EP is outlined at Table 5-3.

Engagement undertaken with persons or organisations Woodside assessed as not relevant but chose to contact are summarised at Appendix F, Table 2.

## 5.4 Consultation Material and Timing

Regulation 11A(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 11A(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 (for the relevant person) and collaborates on a consultation approach where further engagement is sought by the relevant person. Woodside understands that the consultation process should be appropriate for the category of relevant persons and that 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 PAP. Woodside recognises published guidance for good practice consultation relevant to different sectors and disciplines (see Section 5.2). 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 (Appendix F, reference 1.15 and 4.1). 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 as well as a summary of relevant risks and mitigation and/or management control measures relevant to the proposed petroleum activity. It also sets out contact details to provide feedback to Woodside.

Woodside recognises that the level of information necessary to assist a person or organisation to understand the impacts of the proposed activity on their functions, interests or activities may vary and, also 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, for example as a result of temporary displacement due to exclusion zones, may require more targeted information relevant to their functions, interests or activities. Woodside also acknowledges NOPSEMA's brochure entitled Consultation on offshore petroleum environment plans information for the community, which advises consultees 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 a selected local, state and national newspaper. This typically includes the name of the EP Woodside is seeking feedback on, an overview of the activity, the consultation feedback date and 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 for native title applications. Woodside typically aligns advertisement feedback timeframes with the timing described below. Feedback received is assessed in accordance with Section 5.8 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 (Appendix F, reference 1.15 and 4.1);
- Bespoke Consultation Information Sheet, presentations or summaries specific to a particular relevant person group (Appendix F, reference 4.2);
- Subscription available on Woodside's website to receive notification of new Consultation Information Sheets for Woodside EPs;

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- Emails;
- Letters;
- Phone calls;
- Face-to-face meetings (virtual or in person) with presentation slides or handouts as appropriate;
- Maps outlining a persons or organisations defined area of responsibility in relation to the proposed activity, for example a fisheries management area or defence training area; and
- Community meetings, as appropriate.

Woodside recognises that information may need to be provided to relevant persons in an iterative manner during the consultation process. Woodside considers that in line with the intent of consultation (see **Section 5.2**), the threshold for genuine two-way engagement is met via information on incorporation of controls, where applicable, being provided to the relevant person to ensure the relevant persons understands 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 an alternative form of communication is expressed by a person or organisation. Woodside acknowledges that there might be limitations in how it can consult with relevant persons.

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

| Category of relevant person                                     | Typically accepted form of communication   |
|---|--|
| <b>Government departments / agencies – marine</b>               | Woodside applies NOPSEMA’s guideline for engagement with Commonwealth government departments or agencies in line with <i>GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2023</i> by using email for its consultation unless another form of communication is requested.   |
| <b>Government departments / agencies – environment</b>          |  |
| <b>Government departments / agencies – industry</b>             | Other forms of communication, such as phone calls, and meetings and/or presentation briefings are used where requested.  |
| <b>Commercial fisheries and peak representative bodies</b>      | <p><b>Commonwealth commercial fisheries:</b> 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 where requested.</p> <p><b>State commercial fisheries and recreational marine users:</b> The Western Australian Department of Primary Industries and Regional Development (DPIRD) has responsibility for managing the <i>Fish Resources Management Act 1994</i> and <i>Aquatic Resources Management Act 2016</i>, 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 where requested.</p> <p><b>Peak representative bodies:</b> 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 where requested t.</p> |
| <b>Recreational marine users and peak representative bodies</b> |  |
| <b>Titleholders and Operators</b>                               | 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 where requested.  |
| <b>Peak industry representative bodies</b>                      | 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   |

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|   |   |
|---|---|
|   | phone calls, and meetings and/or presentation briefings are used where requested.   |
| <b>Traditional Custodians and nominated representative corporations</b>                         | 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 where requested.  |
| <b>Native Title Representative Bodies</b>   | 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 where requested.  |
| <b>Historical heritage groups or organisations</b>  | NOPSEMA's guideline ( <i>GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2023</i> ) 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 where requested.   |
| <b>Local government and recognised local community reference/liason groups or organisations</b> | <b>Local government:</b> NOPSEMA's guideline ( <i>GL1887 – Consultation with Commonwealth agencies with responsibilities in the marine area – January 2023</i> ) for engagement with local government is used as a reference for Woodside's approach for communicating with historical heritage groups or organisations.<br><b>Community reference/liason groups and chambers of commerce:</b> Email is used as the primary form of communication with local community reference/liason 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 where requested. |
| <b>Other non-government groups or organisations</b>   | 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 where requested.   |
| <b>Research Institutes and Local conservation groups or organisations</b>                       | 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 where requested.   |

Information which is provided to relevant persons for the purposes of consultation on this EP is summarised at Appendix F, Table 1.

Appendix F, Table 2 sets out the information which is provided to persons or organisations that are not relevant for the purposes of regulation 11A but which Woodside has chosen to contact (see **Section 5.3.4**).

When engaging in consultation, Woodside notifies relevant persons that, in accordance with regulation 11A(4), the relevant person may request 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.

#### 5.4.2 Sufficient time 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 in line with the intent of consultation (see **Section 5.2**), the threshold for genuine two-way engagement is met via engagement on incorporation of controls, where applicable, being provided to the relevant person so that the relevant person understand how their input has been considered in the development of the EP.

Woodside considers its methodology allows relevant persons a reasonable period for the consultation (regulation 11A(3)). A reasonable period for all relevant persons, including Traditional Custodian relevant persons, 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:

- Consultation under regulation 11B of the Regulations sets out a public consultation period of 30 days
- The Department of Mines and Petroleum “Guidelines for Consultation with Indigenous People by Mineral Explorers” directs a period of 21- 30 days of consultation with traditional owners
- 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 of time 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 11A(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...”<sup>4</sup>*

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 enable a reasonable period for consultation is as follows:

- advertising in a selected local, state and national newspapers (see Appendix F, reference 4.3) 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 (see **Section 5.3.4**), 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; and
- engaging in two-way dialogue with relevant persons or organisations where feedback is received.

Appendix F, Table 1 and Table 2 sets out a history of consultation and demonstrates that a reasonable period of consultation has been afforded for each relevant person. Woodside considers that the “reasonable period” of consultation for this EP has been provided and the consultation under regulation 11A is complete.

<sup>4</sup> Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193 at paragraph [136].

As detailed in **Section 5.6** and **Section 7.8.2**, if comments and feedback are received after the EP has been submitted, Woodside will consider those comments and update controls as appropriate, at all stages during the life of the EP, as per Woodside’s ongoing consultation approach.

### 5.4.3 Discharge of Regulation 11A

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**). Consultation is a “real world activity” and must be capable of reasonable discharge. 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.

When the titleholder demonstrates that it has provided sufficient information and a reasonable period for consultation, the regulation 11A consultation requirements are met. Meeting these requirements is the evaluative judgment 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.

The titleholder is not required to obtain consent from a consultee to engage in the activity or confirmation from a consultee that consultation is complete. A titleholder is required to provide an opportunity to consult.

The Federal Court has commented that a “reasonable opportunity” for consultation must be afforded to relevant persons. A reasonable opportunity may not be every opportunity requested and is limited to reasonable opportunities to consult.

Woodside has completed all practicable and reasonable steps 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 impacts and risks of the activity on their functions, interests or activities, and sufficient time to provide relevant feedback for Woodside to assess relevant persons' claims and action the assessment and response. Woodside has also provided a reasonable opportunity for relevant persons to engage in genuine two-way dialogue on environmental impacts and concerns.

Woodside has discharged its duty under regulation 11A. Woodside considers that consultation under regulation 11A is complete.

Appendix F, Table 1 and Table 2 of this EP sets out the history of consultation under regulation 11A. To the extent a relevant person says that it has further information to share or claims that consultation under regulation 11A has not completed, Appendix F, Table 1 and Table 2 provide reasons specifically why Woodside considers consultation under regulation 11A has been met in relation to that relevant person.

## 5.5 Context of Consultation Approach with First Nations

To comply with regulation 11A, 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

Woodside has implemented a consultation methodology consistent with regulation 11A 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 and activities may be affected by the activity described in this EP (Section 5.5.2.1 to 5.5.2.3).

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Woodside notes the Full Federal Court discussed several Native Title Act 1993 (Cth) (NTA) cases in response to a submission made in that case that a requirement under regulation 11A to consult “each and every” relevant person would be “unworkable”. The reference to native title cases dealt with how decision-making processes under the NTA requiring “all” members of a group to be contacted for communal approval are interpreted by courts in a “reasonable”, “pragmatic” and “not so literal” way, and how obligations to consult “each and every” person under regulation 11A should be interpreted in a similarly pragmatic way so that consultation is workable. The reference to NTA authorities was made by analogy:

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

*“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” (emphasis added).*

*“there is no definition of what constitutes “consultation for the purpose of ref 11A... 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” (emphasis added).*

It is clear from the Court's statement in relation to consultation with organisations that a Titleholder will have some decisional choice in identifying which natural 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. Woodside takes this to mean that consultation is not fixed to a rigid process, and indeed, will need to be adapted so that it is informed by the relevant person or group. Woodside has met its regulation 11A requirements through its consultation methodology (**Section 5.2**).

Consistent with the Tipakalippa Appeal, Woodside considers NTA-style “full group” meetings are not the only way for there to be compliance with regulation 11A in relation to Traditional Custodian relevant persons. Nominated representative corporations (such as Prescribed Bodies Corporates (PBCs) established under the NTA) have a designated role of representing the views of their member Traditional Custodians. They have established methods for engaging with their own members. Woodside will not undermine the purpose and authority of nominated representative corporations by requiring full group meetings where the nominated representative corporations have not requested engagement of members via full group meetings. We do not consider it 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 First Nations team has extensive expertise in engaging and working with First Nations organisations and individuals, including having worked within the Commonwealth native title and cultural heritage systems and state and territory cultural heritage and land rights systems, for several decades. The team understands the complexities of making information accessible to groups and

individuals and engaging in accordance with First Nations groups' established channels of communication and methods of consultation. The First Nations team exercises its professional judgement and is deeply respectful of long-standing relationships (where in place) when considering consultation with First Nations groups. The First Nations team's approach is also informed by the established systems of recognition for First Nations groups and their nominated representative corporations within particular jurisdictions.

For example, the methodology for engaging with First Nations groups in the Northern Territory (not relevant for this EP) tends to centre around engagement through Aboriginal land councils (under the Aboriginal Land Rights (Northern Territory) Act 1976 (Cth)) as well as community meetings that target clan groups where they do not have PBCs or other nominated representative corporations to represent them. By contrast, recognition for First Nations 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 also help Woodside to identify Traditional Custodian persons and groups asserting Traditional Custodianship. The Full Court in the Tipakalippa Appeal explicitly endorsed methods of consultation with groups of relevant persons that are appropriate and adapted to the characteristics of groups. 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 First Nations communities. Woodside follows these processes for the appropriate broad capture of individuals' awareness of our activities, to self-identify (**Section 5.5.2.2**), and to provide feedback to inform the management of environmental impacts and risks.

Using these tools, Woodside communicates information about EP by:

- Advertising in relevant 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 Consultation Summary Sheets with information developed by an Indigenous member of the First Nations Team to remove jargon and provide relevant information for people to have informed understandings about the activities;
- Direct contact through nominated representative corporations;
- Utilising social media (i.e. Facebook/Instagram), texts 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. First Nations 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));
- For ongoing consultation post regulation 11A consultation, Woodside introduced a Program of Ongoing Engagement with Traditional Custodians which sets out Woodside's commitment to ongoing engagement and support to care for and manage country, including Sea Country. The program was developed in response to Traditional Custodian feedback;
- Woodside has members of its First Nations team who are based in Karratha and Roebourne and who serve as on-Country points of contact for First Nations organisations and individuals.

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These team members have broad local knowledge and established, on-the-ground relationships within communities. This helps contribute to positive outcomes including encouraging First Nations attendance and involvement at Woodside's information sessions and Community roadshows. Team members on the ground engage in a great deal of preparatory work including by distributing information and providing notice to the community to support First Nations attendance at information sessions and Community roadshows;

- 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 whom to appropriately consult with (such as elders).
- Holding meetings on country at a place and time agreed with the Traditional Custodians and offering and providing financial assistance for meeting expenses (as appropriate); and
- 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.

### 5.5.2.1 Identification of Relevant Persons

In order to undertake consultation, Woodside has developed a methodology for identifying relevant persons, in accordance with regulation 11A(1) of the Regulations (**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 5.5.2.3 and 5.9.1). 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 corporations. 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 5.5.2.3 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 aims

to seek, from members, authorisation of agreements and native title/compensation claims under the Native Title Act 1993 (Cth) .

In this consultation, Woodside requested nominated representative corporations to identify any potential individual relevant persons for consultation, and 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.

### 5.5.2.2 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 (as described in Section 5.9.1) 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 5.5.2.1). 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 Owners' 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. Most nominated representative corporations to date 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.

### 5.5.2.2.1 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 also may depend on the degree to which a relevant person is potentially affected.

Woodside produces a Consultation Information Sheet for each EP which is provided to relevant persons and organisations to provide the opportunity for feedback on the activity (Section 5.4.1). In response to Traditional Custodians' feedback, Woodside has tailored effective consultation methods for its activities, specifically designed for Traditional Custodians, so that information is provided in a form that is readily accessible and appropriate. The targeted Consultation Summary Sheet (as described in Section 5.9.1) developed and reviewed by Indigenous representatives so that content is appropriate to the intended recipients, 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. Key project personnel, environmental and First Nations relations 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.

Woodside has sought to provide sufficient information to individual members of nominated representative corporations (such as PBCs) by providing information to representative bodies and suggesting 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.

### 5.5.2.3 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).

### 5.5.2.4 Discharge of Regulation 11A

In relation to Traditional Custodian relevant persons (and all relevant persons), Woodside has discharged its duty under regulation 11A. Woodside considers that consultation under regulation 11A is complete (**Section 5.4.3**).

## 5.6 Providing Feedback and Assessment of Merit or 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.

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 environment plan and approval process, for example, statements of fundamental objection to offshore petroleum activities or information containing personal threats or profanities.

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

Woodside considers feedback during consultation from relevant persons and other persons Woodside chose to contact (see Section 5.3.4). 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 9(8) of the Environment Regulations, sensitive information (if any) in an EP, and the full text of any response by a relevant person to consultation under regulation 11A, 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 7.8.2.1), 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 (as set out in Section 5.2).

Should consultation feedback be received following the acceptance of an EP that identifies a measure or control that requires implementation or updates to meet the intended outcome of consultation (see Section 5.2), Woodside will apply its Management of Change and Review process as appropriate (see Section 7.6).

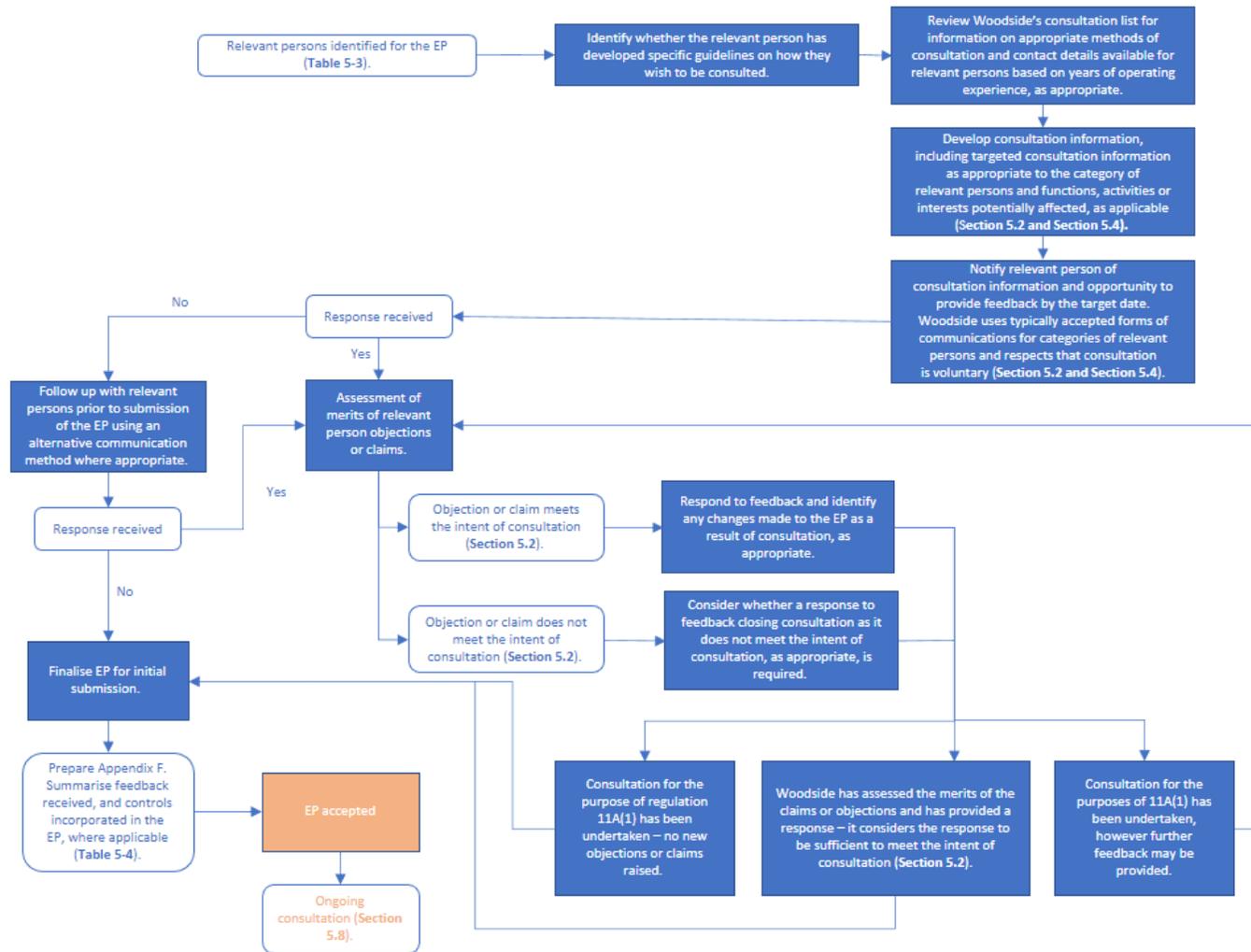


Figure 5-3: Overview of Woodside's consultation approach

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## 5.8 Woodside’s Methodology to Identify Relevant Persons

### 5.8.1 Identification of relevant persons under regulation 11A(1)(a), (b) and (c)

Woodside’s methodology for identifying relevant persons under regulations 11A(1)(a), (b) and (c) is as follows:

- Woodside considers the defined responsibilities of each of the departments and agencies to which the activities in the EMBA to be carried out under the EP may be relevant. This list of relevant department 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 2023), 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 in relation to the departments and agencies which Woodside has historically consulted over the years. This list is revised from time to time, for example, for the purposes of to 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:

|  |   |
|--|---|
| <b>Government departments / agencies – marine</b>      | Agencies with legislated responsibilities for use of the marine environment.                                  |
| <b>Government departments / agencies – environment</b> | Agencies with legislated responsibilities for the protection of the marine environment.                       |
| <b>Government departments / agencies – industry</b>    | 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 and determines whether those responsibilities overlap with potential risks and impacts specific to the proposed petroleum activity in the EMBA. The assessment is both activity and location based.
- Woodside acknowledges the roles and responsibilities of government departments and agencies acting on behalf of various industry participants. For example, AMSA – Marine Safety is responsible for the safety of vessels and the seafarers who are operating in the domestic commercial shipping industry and AHO is responsible for maritime safety and Notices to Mariners. To undertake the PAP 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 PAP. Feedback received, if any, is assessed in accordance with the intended outcome of consultation (as set out in Section 5.2).
- The list of those government departments and agencies assessed as relevant is set out in Table 5-3.
- Feedback received, if any, is assessed in accordance with the intended outcome of consultation (as set out in Section 5.2) and summarised at Appendix F, Table 1 and Table 2 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 proposed petroleum activity in the EMBA or would not be involved in incident response planning. For instance, in this EP, Woodside has not consulted with the department for the Minister of the Northern Territory because there is no overlap given that the proposed activities are in Commonwealth waters offshore of Western Australia.

### 5.8.2 Identification of relevant persons under regulation 11A(1)(d)

Relevant persons under regulation 11A (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, or a revision of the EP. In identifying relevant persons, Woodside considers:

- the planned activities to be carried out under this EP (described in Section 3); and
- the EMBA by unplanned activities (identified in Section 4 and assessed in Section 6).

To identify relevant persons who fall within regulation 11A(1)(d), Woodside adopts the following methodology, and then undertakes consultation with relevant persons which is set out further in **Section 5.8**.

- 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 or that overlap with the PAA and EMBA; and
  - whether a person or organisation's functions, interests or activities may be affected by Woodside's proposed planned or unplanned activities.
- This assessment will include applying professional judgement, knowledge and current literature.
- Further, 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. For this EP, the broad categories are identified in Table 5-1 below and identification methodology applied as set out in Table 5-2.
- The list of those persons or organisations assessed as relevant and persons or organisations Woodside chose to contact is set out in Table 5-3.
- Feedback received, if any, is assessed in accordance with the intended outcome of consultation (as set out in Section 5.2) 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 1. Feedback from persons assessed as not relevant but whom Woodside chooses to contact is summarised at Appendix F, Table 2.

**Table 5-1: Categories of relevant persons**

| Category  | Explanation  |
|---|--|
| Commercial fisheries and peak representative bodies                                       | <p>Commonwealth or State Commercial Fishery with a fishery management plan recognised under the Commonwealth <i>Fisheries Management Act 1991</i> (Cth) and Western Australian <i>Fish Resources Management Act 1994</i> (WA), which may be amended from time to time.</p> <p>Commonwealth peak fishery representative bodies are identified by AFMA. WAFIC is the peak representative body for state fishers in Western Australia.</p>  |
| Recreational marine users and peak representative bodies                                  | <p>Charter boat, tourism and dive operators identified by DPIRD specific to the location of the proposed activity.</p> <p>Representative bodies are the recognised peak organisation(s) for recreational marine users.</p>   |
| Titleholders and Operators  | Registered holder of an offshore petroleum title or GHG title governed by the <i>OPGGS Act</i> and associated regulations.   |
| Peak industry representative bodies   | Recognised peak organisation(s) for the oil and gas sector.  |
| Traditional Custodians (individuals and/or groups/ entity)                                | <p>Traditional Custodians are First Nations Australians who hold cultural rights and interests, or have cultural functions or perform cultural activities over particular lands and waters.</p> <p>Where a First Nations person, group or entity self-identifies and/ or asserts cultural rights, interests, functions or activities they will be included in the definition of Traditional Custodian for the purpose of this EP.</p>  |
| Nominated Representative Corporations   | <p>Nominated representative corporations are Traditional Custodians' nominated representative institutions such as Prescribed Body Corporates (PBC).</p> <p>PBCs are established under the Native Title Act 1993 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.</p> |
| Native Title Representative Bodies  | A Representative Aboriginal/Torres Strait Islander Bodies (RATSIB) is a regional organisation appointed under the Native Title Act 1993 (NTA) 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.  |
| Historical heritage groups or organisations   | Legislated or government enlisted groups or organisations responsible for the management of marine heritage.   |
| Local government and recognised local community reference/liaison groups or organisations | Local government governed by the <i>Local Government Act 1995</i> (WA) which is responsible for representing the local community. Recognised local community reference/liaison group or organisation in relation to oil and gas matters.   |
| Other non-government groups or organisations  | Non-government organisation with public website material targeting the proposed activity.  |
| Research Institutes and local conservation groups or organisations                        | <p>Research institutes are government or private institutions that conduct marine or terrestrial research.</p> <p>Local conservation groups are local non-government organisation that regularly conduct conservation activities focused on the local environment or wildlife.</p>   |

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**Table 5-2: Methodology for identifying relevant persons within the EMBA undertaken under subcategory 11A(1)(d) – by category**

| Category  | Relevant person identification methodology  |
|---|---|
| <p>Commercial fisheries (Commonwealth and State) and peak representative bodies</p> | <ul style="list-style-type: none"> <li>• Woodside assesses relevance for commercial fisheries (Commonwealth and State) and their representative bodies using the following next steps in its methodology:</li> <li>• Defining the parameters having regard to timing, location and duration of the proposed petroleum activity.</li> <li>• Confirming whether the EMBA overlaps with the fisheries management area (i.e. the spatial area the fishery is legally permitted to fish in) (see <b>Section 4.6.2</b>).</li> <li>• Woodside acknowledges WAFIC’s consultation guidance<sup>5</sup> (accessed on 2 February 2023), that titleholders develop separate consultation strategies for significant unplanned events (for example oil spill) where titleholders can demonstrate the likelihood of such events occurring is extremely low. WAFIC’s guidance is that consultation on unplanned events resulting in an emergency scenario should only be undertaken if an incident occurs (see <b>Appendix H</b>).</li> <li>• 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 <b>Section 4.6.2</b>).</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>• State commercial fisheries that have been assessed as having a potential for interaction within the Operational Area or EMBA (see <b>Section 4.6.2</b>) are assessed as relevant to the proposed activity. Woodside acknowledges WAFIC’s consultation guidance<sup>1</sup> (see above) and applies this by: <ul style="list-style-type: none"> <li>- directly consulting fishery licence holders that are assessed as having a potential for interaction in the Operational Area; and</li> <li>- consulting fisheries that are assessed as having a potential for interaction in the EMBA via WAFIC.</li> </ul> </li> <li>• Commonwealth commercial fisheries that have been assessed as having a potential for interaction within the Operational Area or EMBA (see <b>Section 4.6.2</b>) are assessed as relevant to the proposed activity.</li> <li>• If Woodside has identified that a Commonwealth or State fishery is a relevant person, then Woodside also consults the fisheries relevant representative body. For example, WAFIC represents the interests of State fisheries in Western Australia. If a state fishery is identified as relevant, Woodside would also identify WAFIC as relevant. Recognised Commonwealth fishery representative bodies are identified by AFMA via its website. WAFIC is the only recognised state fishery representative body.</li> </ul> |
| <p>Recreational marine users and peak representative bodies</p>                     | <p>Woodside assesses relevance for recreational marine users and peak representative bodies using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>• From Woodside knowledge and operating experience, knowledge of recreational marine users in the area. This assessment is both activity and location based.</li> <li>• Defining the parameters having regard to timing, location and duration of the proposed petroleum activity.</li> <li>• 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.</li> </ul> <p>Assessment of relevance:</p>   |

5 [Consultation Approach for Unplanned Events - WAFIC](#)

| Category  | Relevant person identification methodology  |
|---|---|
|   | <ul style="list-style-type: none"> <li>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.</li> <li>If Woodside has identified recreational marine users as relevant persons, then Woodside also consults identified peak recreational marine user representative bodies. For example, Recfishwest represents the interests of recreational fishers. These representative bodies are identified via Woodside's existing consultation list, which is updated as appropriate via advice from known groups and DPIRD.</li> </ul>  |
| Titleholders and Operators  | <p>Woodside assesses relevance for other titleholders and operators using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>Using WA Petroleum Titles (DMIRS-011) to determine overlap with other Titleholders or Operators permit areas within the EMBA.</li> <li>From Woodside knowledge and operating experience, knowledge of other operators in the area.</li> <li>Woodside produces a map showing the outcome of this assessment.</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>Titleholders and Operators whose permit areas are identified as having an overlap within the EMBA are assessed as relevant.</li> </ul>  |
| Peak industry representative bodies   | <p>Woodside assesses relevance for peak industry representative bodies using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>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.</li> <li>Review of Woodside's existing consultation list.</li> <li>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.</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>Peak industry representative bodies whose responsibilities are identified as having an overlap with Woodside's proposed activities within the EMBA are assessed as relevant.</li> </ul>  |
| Traditional Custodians (individuals and/ or groups/ entity) and nominated representative corporations | <p>Consistent with its understanding of the matters discussed in <b>Section 4.6.1</b> and <b>5.5</b>, to identify Traditional Custodian groups or individuals, Woodside:</p> <ul style="list-style-type: none"> <li>Uses existing systems of recognition to identify First Nations 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 First Nations groups or entities) (<b>Section 4.6.1</b>).</li> <li>Notifies and invites consultation with First Nations people through their nominated representative corporation (for example PBCs); or, in the case of native title, and where appropriate, the Native Title Representative Body (<b>Section 5.5.2.1</b>).</li> <li>Requests the nominated representative body to forward the notifications and invitations to consult to their members (members are individual communal rights holders) (<b>Section 5.5.2.1</b>);</li> <li>Requests advice as to other First Nations groups or individuals that should be consulted (<b>Section 5.5.2.1</b>);</li> <li>Requests the nominated representative body to provide consultation materials to its members (<b>Section 5.5.2.1</b>);</li> <li>Advertises widely so as to invite self-identification and consultation by First Nations groups and/ or individuals.</li> </ul> |

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| Category                                  | Relevant person identification methodology   |
|---|--|
|   | <p>Further detail to Woodside’s methodology is as follows:</p> <p>Woodside uses the databases of the National Native Title Tribunal (<b>Section 4.6.1</b>):</p> <ul style="list-style-type: none"> <li>• To understand whether there are any Native Title Claims (historical or current) or determinations overlapping or coastally adjacent to the EMBA;</li> <li>• 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.</li> </ul> <p>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.</p> <p>Where appropriate, contacting the relevant Native title Representative Body to request a list of any First Nations groups asserting Traditional Custodianship over an area of coastline adjacent to the EMBA.</p> <p>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.</p> <p>In the WA context, any Aboriginal Corporation appointed as a Local Aboriginal Cultural Heritage Service (LACHS) under the Aboriginal Cultural Heritage Act 2021 for an area that overlaps the EMBA.</p> <p>First Nations groups or individuals identified by a Traditional Custodian, nominated representative corporation, Native Title Representative Body.</p> <p>Request to the PBC to distribute Woodside consultation materials through its membership. Woodside is unable to contact this membership through any other means.</p> <p>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.</p> <p>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, interest and activities may be affected by other activities where EMBA’s 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 any risks and impacts to their values, and enable individuals to self-identify.</p> <p>Assessment of relevance:</p> <p>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.</p> |
| <p>Native Title Representative Bodies</p> | <p>Woodside assesses relevance for Native Title Representative Bodies using the following steps in its methodology (<b>Section 4.6.1</b>):</p> <ul style="list-style-type: none"> <li>• A Representative Aboriginal/Torres Strait Islander Bodies (RATSIB) is a regional organisation appointed under the Native Title Act 1993 (NTA) 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.</li> <li>• Review of National Native Title Tribunal RATSIB areas that overlap or are coastally adjacent to the EMBA.</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>• 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</li> </ul>  |

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| Category   | Relevant person identification methodology   |
|--|--|
|  | <p>to the EMBA, Woodside will assess the Native Title Representative Body as relevant.</p>   |
| <p>Historical heritage groups or organisations</p>   | <p>Woodside assesses relevance for groups or organisations whose responsibilities are focused on historical heritage using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>• Using the Australasian Underwater Cultural Heritage Database to assess any known records Maritime Cultural Heritage sites (shipwrecks, aircraft and relics) within the EMBA (see Section 4.9.1).</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>   |
| <p>Local government and recognised local community reference/liaison groups or organisations</p> | <p>Woodside assesses relevance for local government and recognised local community reference/liaison groups or organisations using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>• 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 any overlap between the local government’s defined area of responsibility and the EMBA.</li> <li>• 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.</li> <li>• Woodside reviews the community reference/liaison group’s terms of reference to determine its area of responsibility and any 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).</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>• The local government whose defined area of responsibility overlaps the EMBA is assessed as relevant.</li> <li>• 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.</li> </ul> |
| <p>Other non-government groups or organisations</p>  | <p>Woodside assesses relevance for other non-government groups or organisations using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>• Review of Woodside’s existing consultation list.</li> <li>• 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 material specific to the proposed activity at the time of development of the EP.</li> <li>• Organisation has a publicly available mission statement (or purpose) that clearly describes their collective functions, interests or activities.</li> <li>• Review of current website material to identify targeted information which demonstrates functions, interests or activities relevant to the potential risks and impacts associated with planned activities.</li> </ul> <p>Assessment of relevance:</p>  |

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| Category  | Relevant person identification methodology  |
|---|---|
|   | <ul style="list-style-type: none"> <li>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 (as set out in <b>Section 5.2</b>) will be assessed as relevant.</li> </ul>   |
| <p>Research institutes and local conservation groups or organisations</p> | <p>Woodside assesses relevance for research institutes and local conservation groups or organisations using the following next steps in its methodology:</p> <ul style="list-style-type: none"> <li>Review of Woodside’s existing consultation list.</li> <li>Website search for research institutes that may operate within the EMBA. This assessment is both activity and location based.</li> <li>Website search for local conservation groups or organisations that regularly conduct conservation activities within the EMBA.</li> </ul> <p>Assessment of relevance:</p> <ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul> |

**5.8.3 Identification of relevant persons under regulation 11A(1)(e)**

Woodside adopts a case-by-case approach for each EP to assess relevance under regulation 11A(1)(e).

**5.8.4 Assessment of Relevant Persons for the Proposed Activity**

The result of Woodside’s assessment of relevant persons in accordance with regulation 11A(1) is outlined at **Table 5-3** and **Appendix F, Table 1**.

Persons or organisations that Woodside assessed as not relevant but nonetheless 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 **Table 5-3** and **Appendix F, Table 2**.

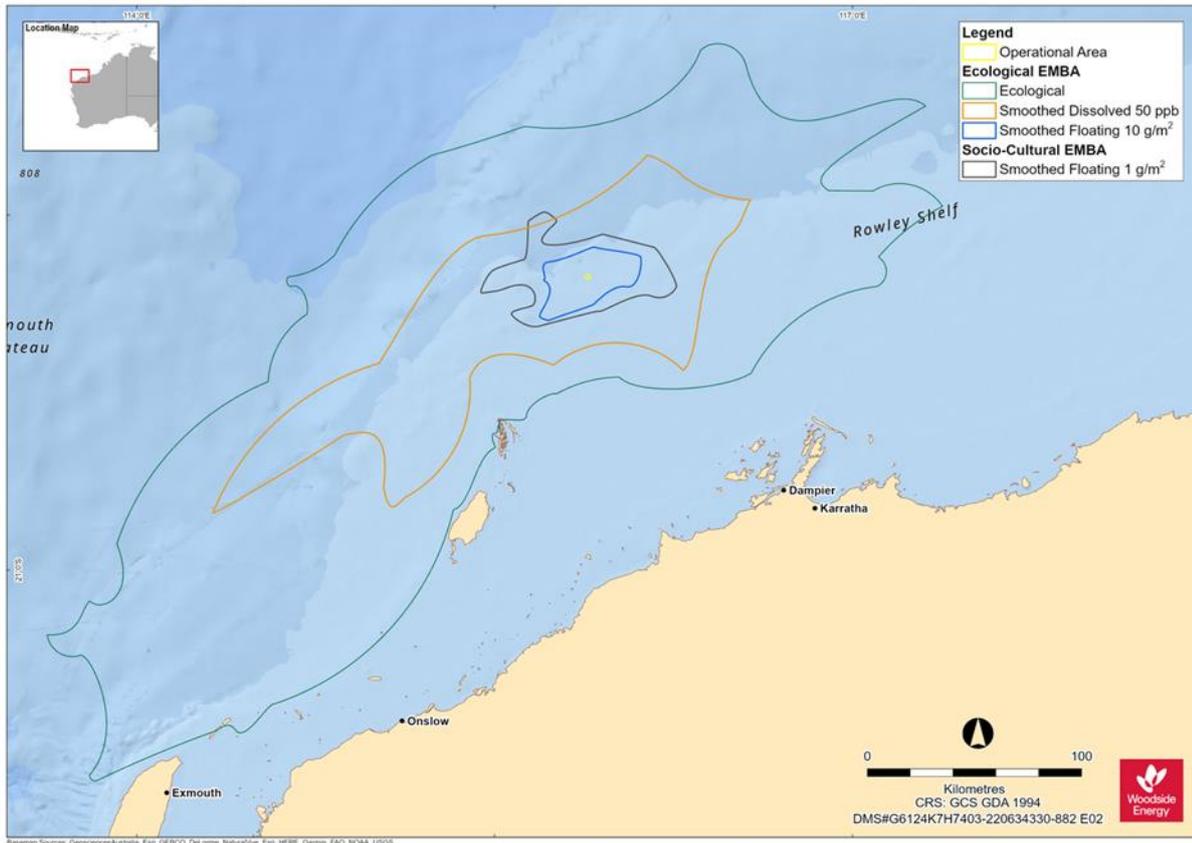


Figure 5-4: Operational Area and EMBA for this EP.

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Table 5-3: Assessment of relevance

| Person or Organisation   | Summary of responsibilities and/or functions, interests or activities   | Assessment of relevance   | Relevant person |
|--|---|---|-----------------|
| <b>Commonwealth and WA State Government Departments or Agencies – Marine</b>         |   |   |                 |
| Australian Border Force (ABF)  | Responsible for coordinating maritime security  | Woodside has applied its methodology for ‘Government departments / agencies – marine’ under regulation 11A(1)(a).<br>ABF’s functions may be relevant to the activity as there are proposed vessel activities.   | Yes             |
| Australian Fisheries Management Authority (AFMA)                                     | Responsible for managing Commonwealth fisheries   | Woodside has applied its methodology for ‘Government departments / agencies – marine’ under regulation 11A(1)(a).<br>The Western Deepwater Trawl Fishery and North West Slope and Trawl Fishery are active in the EMBA.<br>AFMA’s functions may be relevant to the activity as the Western Deepwater Trawl Fishery and North West Slope and Trawl 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 11A(1)(a).<br>AHO’s functions may be relevant to the activity as there are proposed vessel activities.   | Yes             |
| 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 11A(1)(a).<br>AMSA – Marine Safety’s functions 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 11A(1)(a).<br>AMSA – Marine Pollution’s functions may be relevant to the activity as the proposed activity has a hydrocarbon spill risk which may require AMSA response in Commonwealth waters.  | Yes             |
| Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries (formerly DAWE) | 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 11A(1)(a).<br>The Western Deepwater Trawl Fishery and North West Slope and Trawl Fishery are active in the EMBA.<br>DAFF - Fisheries functions may be relevant to the activity as the Western Deepwater Trawl Fishery and North West Slope and Trawl 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 11A(1)(a).   | Yes             |

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| Person or Organisation  | Summary of responsibilities and/or functions, interests or activities   | Assessment of relevance  | Relevant person |
|---|---|--|-----------------|
|   |   | DoD's functions may be relevant to the activity as defence training areas lie within the EMBA.   |                 |
| Department of Primary Industries and Regional Development (DPIRD)                 | Responsible for managing State fisheries  | <p>Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(b).</p> <p>The Pilbara Line Fishery and Pilbara Trap Fishery have been active in the Operational Area within the last 5 years.</p> <p>The Marine Aquarium Managed Fishery, Mackerel Managed Fishery (Area 2 and 3), Pilbara Crab Managed Fishery, West Coast Deep Sea Crustacean Managed Fishery, Specimen Shell Managed Fishery, Onslow Prawn Managed Fishery, Western Australian Sea Cucumber Managed Fishery, Exmouth Gulf Prawn Managed Fishery, Nickol Bay Prawn Managed Fishery, Pilbara Trawl Fishery, Pilbara Trap Fishery and Pilbara Line Fishery have been active in the EMBA within the last 5 years.</p> <p>DPIRD's functions may be relevant to the activity as the government department responsible for State fisheries.</p> | Yes             |
| Department of Transport (DoT)   | Legislated responsibility for oil pollution response in State waters  | <p>Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(b).</p> <p>The proposed activity has a hydrocarbon spill risk, which may require DoT response in State waters.</p>   | 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. | <p>Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(b).</p> <p>There are known Maritime Cultural Heritage overlapping the EMBA.</p>  | Yes             |
| Pilbara Ports Authority   | Responsible for the operation of the Port of Dampier.   | <p>Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(b).</p> <p>The proposed activity does not have the potential to impact Pilbara Ports Authority's functions, interests or activities as the Operational Area and EMBA do not overlap the Pilbara Ports Authority's area of responsibility.</p>  | No              |
| <b>Commonwealth and WA State Government Departments or Agencies – Environment</b> |   |  |                 |
| Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity            | DCCEEW administers, implements and enforces the Biosecurity Act 2015. The Department requests to be consulted where an activity has     | <p>Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(a).</p> <p>DAFF – Biosecurity's (formerly DAWE) functions may be relevant to the proposed activities in the EMBA in the prevention of introduced marine species.</p>   | Yes             |

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|---|---|---|-----------------|
| (marine pests, vessels, aircraft and personnel)<br>(formerly DAWE)                                      | <p>the potential to transfer marine pests.</p> <p>DCCEEW also has inspection and reporting requirements to ensure that all conveyances (vessels, installations and aircraft) arriving in Australian territory comply with international health regulations and that any biosecurity risk is managed.</p> <p>The Department 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.</p> |   |                 |
| Department of Climate Change, Energy, the Environment and Water Agriculture (DCCEEW)<br>(formerly DAWE) | <p>Responsible for implementing Commonwealth policies and programs to support climate change, sustainable energy use, water resources, the environment and our heritage.</p> <p>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.</p>                                   | <p>Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(a).</p> <p>DCCEEW's (formerly DAWE) functions may be relevant to the proposed activities in the EMBA as there are potential environmental impacts from the proposed activity.</p> <p>There are known Maritime Cultural Heritage overlapping the EMBA.</p> | Yes             |
| 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 11A(1)(a).  | Yes             |

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|---|--|---|-----------------|
|   |  | DNP's functions may be relevant to the activity as DNP requires an awareness of activities that occur within 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). |                 |
| 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 11A(1)(a).<br>The NCWHAC's functions may be relevant to the activity as the EMBA overlaps the Ningaloo Marine Park.   | Yes             |
| Department of Biodiversity, Conservation and Attractions'(DBCA)             | Responsible for managing WA's parks, forests and reserves to achieve wildlife conservation and provide sustainable recreation and tourism opportunities. | Woodside has applied its methodology for 'Government departments / agencies – environment' under regulation 11A(1)(b).<br>The DBCA's functions may be relevant to the activity as EMBA overlaps WA parks, forests or reserves.<br>Activities have the potential to impact marine tourism in the EMBA.   | Yes             |
| <b>Commonwealth and State Government Departments or Agencies – Industry</b> |  |   |                 |
| Department of Industry, Science and Resources (DISR)<br>(formerly DISER)    | Department of relevant Commonwealth Minister.  | Required to be consulted under regulation 11A(1)(a).  | Yes             |
| Department of Mines, Industry Regulation and Safety (DMIRS)                 | Department of relevant State Minister  | Required to be consulted under regulation 11A(1)(c).  | Yes             |
| <b>Commonwealth Commercial fisheries and representative bodies</b>          |  |   |                 |
| North West Slope and Trawl Fishery  | Commonwealth commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the last 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 11A(1)(d).   | No              |

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|--|---|---|-----------------|
|  |   | Although the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the last 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).    |                 |
| Western Deepwater Trawl Fishery          | Commonwealth commercial fishery   | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>The fishery does not overlap the Operational Area. The fishery overlaps EMBA and has been active in the EMBA within the last 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 11A(1)(d).<br>Although the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the last 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 11A(1)(d).<br>Although the fishery overlaps the Operational Area and EMBA, it has not been active in the Operational Area or EMBA within the last 5 years. Woodside does not consider that the activity will present a risk to licence holders, given fishing methods for species fished by licence holders. Future interactions are not expected given the species' pelagic distribution.   | No              |
| 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 11A(1)(d).<br>The Western Deepwater Trawl Fishery and North West Slope and Trawl Fishery are active in the EMBA.<br>CFA's functions may be relevant to the activity as the Western Deepwater Trawl Fishery and North West Slope and Trawl Fishery are active in the EMBA.  | Yes             |

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|--|--|--|-----------------|
| Australian Southern Bluefin Tuna Industry Association (ASBTIA) | Represents the interests of the Southern Bluefin Tuna Fishery and Western Skipjack Fishery   | <p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).</p> <p>The Southern Bluefin Tuna Fishery has been assessed as not relevant to the proposed activity. As the peak representative body for the Southern Bluefin Tuna Fishery, the ASBTIA has also been assessed as not relevant.</p> <p>Woodside has provided information to the ASBTIA at its discretion in line with Section 3.4 on AFMA advice that it expects all Commonwealth fishers who have entitlements to fish within the proposed area to be consulted, which can be through the relevant fishing industry associations.</p>                   | No              |
| Tuna Australia   | Represents the interests of the Western Tuna and Billfish Fishery  | <p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).</p> <p>The Western Tuna and Billfish Fishery has been assessed as not relevant to the proposed activity. As the peak representative body for the Western Tuna and Billfish Fishery, Tuna Australia has also been assessed as not relevant.</p> <p>Woodside has provided information to Tuna Australia at its discretion in line with Section 5.3.4 on AFMA advice that it expects all Commonwealth fishers who have entitlements to fish within the proposed area to be consulted, which can be through the relevant fishing industry associations.</p> | No              |
| Pearl Producers Association (PPA)                              | Peak representative organisation of The Australian South Sea Pearling Industry, with members in Western Australia and the Northern Territory | <p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).</p> <p>The Pearl Oyster Managed Fishery has been assessed as not relevant to the proposed activity. As the peak representative body for the Pearl Oyster Managed Fishery, the PPA has also been assessed as not relevant.</p> <p>Woodside chose to contact PPA at its discretion in line with Section 4.</p>  | No              |
| <b>State Commercial fisheries and representative bodies</b>    |  |  |                 |
| Marine Aquarium Managed Fishery                                | State commercial fishery   | <p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).</p> <p>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. The fishery has been active in the EMBA within the last 5 years.</p>   | Yes             |
| South West Coast Salmon Managed Fishery                        | State commercial fishery   | <p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).</p> <p>Although the fishery overlaps the Operational Area and EMBA, the fishery has not been active in the Operational Area or EMBA within the last 5 years.</p>  | 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.   |                 |
| Mackerel Managed Fishery (Area 2 and 3)        | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although Area 2 of the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years.<br>Area 2 and 3 of the fishery overlap the EMBA and have been active in the EMBA within the last 5 years.  | Yes             |
| Pilbara Crab Managed Fishery                   | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. The fishery has been active in the EMBA within the last 5 years.   | 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 11A(1)(d).<br>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. The fishery has been active in the EMBA within the last 5 years.   | Yes             |
| Specimen Shell Managed Fishery                 | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. The fishery has been active in the EMBA within the last 5 years.   | Yes             |
| Abalone Managed Fishery                        | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although the fishery overlaps the Operational Area and EMBA, the fishery has not been active in the Operational Area or EMBA within the last 5 years.<br>Woodside does not consider that the activity will present a risk to licence holders given it is a dive and wade fishery with activities generally restricted to waters less than 40 m deep (DOF, 2011). | No              |
| Pearl Oyster Managed Fishery                   | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although the fishery overlaps the Operational Area and EMBA, the fishery has not been active in the Operational Area or EMBA within the last 5 years.  | No              |

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|---|---|---|-----------------|
|   |   | Woodside does not consider that the activity will present a risk to licence holders given fishing methods and location for species fished by licence holders (fishing effort is mostly focussed in shallow coastal waters of 10-15 m depth, with a maximum depth of 35 m) (Lulofs et al. 2002).   |                 |
| Land Hermit Crab Fishery                    | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>The fishery does not overlap the Operational Area. FishCube data reports fishing effort occurs within the EMBA from one CAES block in the 2017 – 2018 season (DPIRD, 2022). However, the EMBA does not make shoreline contact within the active CAES block and therefore, Woodside considers there to be no potential for interaction with this fishery within the EMBA.<br>Woodside chose to contact Land Hermit Crab Fishery at its discretion in line with <b>Section 5.3.4</b> . | No              |
| Onslow Prawn Managed Fishery (Area 2 and 3) | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although Area 3 of the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years.<br>Area 2 and 3 of the fishery overlap the EMBA and have been active in the EMBA within the last 5 years.  | Yes             |
| 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 11A(1)(d).<br>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. The fishery has been active in the EMBA within the last 5 years.   | Yes             |
| 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 11A(1)(d).<br>The fishery does not overlap the Operational Area. Although the fishery overlaps the EMBA, the fishery has not been active in the EMBA within the last 5 years.  | No              |
| Exmouth Gulf Prawn Fishery                  | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the last 5 years.  | 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 11A(1)(d).<br>The fishery does not overlap the Operational Area. The fishery overlaps the EMBA and has been active in the EMBA within the last 5 years.  | Yes             |

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|--|---|--|-----------------|
| Demersal Scaefish Fishery:<br>Pilbara Trawl Fishery        | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. The fishery has been active in the EMBA within the last 5 years.  | Yes             |
| Pilbara Trap Fishery                                       | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA within the last 5 years.  | Yes             |
| Pilbara Line Fishery                                       | State commercial fishery  | Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under regulation 11A(1)(d).<br>The fishery overlaps the Operational Area and EMBA and has been active in the Operational Area and EMBA within the last 5 years.  | Yes             |
| 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 11A(1)(d).<br>The Pilbara Line Fishery and Pilbara Trap Fishery have been active in the Operational Area within the last 5 years.<br>The Marine Aquarium Managed Fishery, Mackerel Managed Fishery (Area 2 and 3), Pilbara Crab Managed Fishery, West Coast Deep Sea Crustacean Managed Fishery, Specimen Shell Managed Fishery, Onslow Prawn Managed Fishery, WA Sea Cucumber Managed Fishery, Exmouth Gulf Prawn Managed Fishery, Nickol Bay Prawn Managed Fishery, Pilbara Trawl Fishery, Pilbara Trap Fishery and Pilbara Line Fishery have been active in the EMBA within the last 5 years.<br>Woodside acknowledges WAFIC's consultation guidance <sup>1</sup> and has applied this by consulting fisheries that are assessed as having a potential for interaction in the Operational Area directly and consulting fisheries assessed as having a potential for interaction in the EMBA via WAFIC. | Yes             |
| <b>Recreational marine users and representative bodies</b> |   |  |                 |
| Exmouth recreational marine users                          | Exmouth-based dive, tourism and charter operators                             | Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 11A(1)(d).   | Yes             |

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|---|---|---|-----------------|
|   |   | <p>Andro Maritime Services Australia, Aquatic Adventure Exmouth, Birds Eye View, Blue Horizon Charters, Blue Lightning Charters,<br/>                     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, Exmouth Fly Fishing, Exmouth Game Fishing Club, Indian Chief Charters, Innkeeper Sport Fishing Charter, Kings Ningaloo Reef Tours, Live Ningaloo, 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, On Strike Charters, Peak Sportfishing Charters, Pelican Charters, Sail Ningaloo, Sea Force Charters, Set the Hook, The Mobile Observatory, Three Islands, Top Gun Charters, Ultimate WaterSports, Venture Ningaloo, View Ningaloo, Warrior Princess Charters, Yardi Creek Boat Tours.</p> <p>Activities have the potential to impact Exmouth-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.</p> |                 |
| Gascoyne Recreational Marine Users          | Gascoyne-based dive, tourism and charter operators                    | <p>Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 11A(1)(d).</p> <p>Silverado Charters Pty Ltd, Reel Force Charters Pty Ltd, D &amp; N Nominees Pty Ltd, Lyons Family Super Pty Ltd, Seafresh Holdings Pty Ltd, Eco-Abrolhos Pty Ltd, C Emery Fishing Pty Ltd, On Strike Charters (Wa) Pty Ltd, Melkit Pty Ltd, Maritime Engineering Services Pty Ltd, G. C. Bass Nominees Pty Ltd, Brefjen Nominees Pty Ltd, W.A Maritime Investments Pty Ltd, Blue Juice Tours Pty Ltd, Surefire Marine Services Pty Ltd, Makalee Pty Ltd, L &amp; S Family Holdings Pty Ltd, Bondall Pty Ltd, Kw Marine Pty Ltd, Sharkbay Charters Pty Ltd, Bluecity Enterprises Pty Ltd, Jostan Holdings Pty Ltd, Monkey Mia Yacht Charters Pty Ltd, On Strike Charters (Wa) Pty Ltd, Rainfield Pty Ltd, Monster Sportfishing Adventures Pty Ltd, Lulamanzi Investments Pty Ltd, Millennial Charters Pty Ltd, Chapel Nominees Pty Ltd, Regalchoice Holdings Pty Ltd, Fawesome Expeditions Pty Ltd, On Strike Charters (Wa) Pty Ltd, The Great Escape Charter Company Pty Ltd, Aoa International Pty Ltd, Fire Tiger Pty Ltd.</p> <p>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.</p>                                       | Yes             |
| Pilbara/Kimberley Recreational Marine Users | Pilbara/Kimberley-based dive, tourism and charter operators           | <p>Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 11A(1)(d).</p>   | Yes             |

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|------------------------------------|---|---|-----------------|
|                                    |   | <p>Willie Creek Pearl Farm Pty Ltd, Super Yachts Perth Pty Ltd, Silverado Charters Pty Ltd, Bloor Street Investments Pty Ltd, Lugger Enterprises Pty Ltd, Eco-Abrolhos Pty Ltd, C Emery Fishing Pty Ltd, Discovery Holiday Parks Pty Limited, Kimberley Marine Pty Ltd, Coral Princess Cruises (Nq) Pty Ltd, Marine Agents Australia Pty Ltd, Maritime Engineering Services Pty Ltd, G. C. Bass Nominees Pty Ltd, Coastway Investments Pty Ltd, Kcc Group Pty Ltd, Cm Ventures Pty Ltd, Lombadina Aboriginal Corporation, Australian Port And Marine Services Pty Ltd, Hartley Motorcycles Pty Ltd, Humbug Fishing Pty Ltd, Brefjen Nominees Pty Ltd, Melkit Pty Ltd, W.A Maritime Investments Pty Ltd, Blue Juice Tours Pty Ltd, Kw Marine Pty Ltd, L &amp; S Family Holdings Pty Ltd, Bondall Pty Ltd, Lake Argyle Cruises Pty Ltd, Sealife Charters Pty Ltd, Mal Miles Adventures Pty Ltd, Mackerel Islands Pty Ltd, Diversity Charter Company Wa Pty Ltd, Split Tide Pty Ltd, Broome Tours Pty Ltd, North Star Cruises Australia Pty Ltd, Charter Express Pty Ltd, Sea 2 Pty Ltd, Hotel And Resort Investments Pty Ltd, L &amp; S Family Holdings Pty Ltd, Down The Line Charters Pty Ltd, Kingfisher Island Resort Pty Ltd, Rstg Pty Limited, Sealife Charters Pty Ltd, Coral Princess Cruises (Nq) Pty Ltd, Kimberley Quest Adventures Pty Ltd, Monster Sportfishing Adventures Pty Ltd, Ocean Charters Pty Ltd, Lulamanzi Investments Pty Ltd, Millennial Charters Pty Ltd, Chapel Nominees Pty Ltd, Fawesome Expeditions Pty Ltd, The Great Escape Charter Company Pty Ltd, Aoa International Pty Ltd, Kimberley Getaway Cruises Pty Ltd, King Sound Resort Hotel Pty.</p> <p>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.</p> |                 |
| Karratha Recreational Marine Users | Karratha-based dive, tourism and charter operators                    | <p>Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 11A(1)(d).</p> <p>Nickol Bay Sport Fishing Club, Archipelago Adventures, Hampton Harbour Boat &amp; Sailing Club, King Bay Game Fishing Club, Marine Rescue Dampier, Port Walcott Volunteer Marine Rescue, Port Walcott Yacht Club, Reef Seeker Charters, West Pilbara Volunteer Sea Search and Rescue Group.</p> <p>Activities have the potential to impact Karratha-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.</p>  | Yes             |
| Recfishwest                        | Represents the interests of recreational fishers in WA.               | <p>Woodside has applied its methodology for 'Recreational marine users and representative bodies' under regulation 11A(1)(d).</p> <p>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.</p>  | Yes             |

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|---|---|---|-----------------|
| 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 11A(1)(d).<br>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 11A(1)(d).<br>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             |
| <b>Titleholders and Operators</b>       |   |   |                 |
| Chevron Australia                       | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.  | Yes             |
| Exxon Mobil Australia Resources Company | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.  | Yes             |
| Shell Australia                         | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.  | Yes             |
| BP Developments Australia               | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.  | Yes             |
| Carnarvon Energy                        | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.  | Yes             |
| Osaka Gas Gorgon                        | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.  | Yes             |
| Tokyo Gas Gorgon                        | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).   | Yes             |

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| Person or Organisation  | Summary of responsibilities and/or functions, interests or activities | Assessment of relevance  | Relevant person |
|---|---|--|-----------------|
|   |   | Titleholder or Operator's permit areas overlaps the EMBA.  |                 |
| JERA Gorgon   | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |
| PE Wheatstone   | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |
| Kyushu Electric Wheatstone  | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |
| Eni Australia   | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |
| Fugro Exploration   | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |
| Finder No 9 /10/16/17   | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |
| KUFPEC  | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps 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 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA. | Yes             |

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|--|---|--|-----------------|
| Vermillion Oil & Gas Australia   | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.   | Yes             |
| OMV Australia / Sapura OMV Upstream  | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps 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 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.   | Yes             |
| Lightmark Enterprises  | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.   | Yes             |
| INPEX Alpha  | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.   | Yes             |
| JX Nippon O&G Exploration (Australia)  | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.   | Yes             |
| National Energy Resource Australia (NERA) Collaborative Seismic Environment Plan Project (CSEP) acting for a consortium of operators | Titleholder or Operator   | Woodside has applied its methodology for 'Titleholders and Operators' under regulation 11A(1)(d).<br>Titleholder or Operator's permit areas overlaps the EMBA.   | Yes             |
| <b>Peak Industry Representative bodies</b>   |   |  |                 |
| APPEA  | Represents the interests of oil and gas explorers and producers in Australia. | Woodside has applied its methodology for 'Peak Industry Representative bodies' under regulation 11A(1)(d).<br>APPEA's responsibilities are identified as having an intersect with Woodside's planned activities in the EMBA. | Yes             |

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|---|---|--|-----------------|
| <b>Traditional Custodians</b>                             |   |  |                 |
| Murujuga Aboriginal Corporation (MAC)                     | Representative Aboriginal Corporation                                 | <p>Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).</p> <p>MAC is the Nominated Representative Corporation under the Burrup and Maitland Industrial Estates Agreement (BMIEA), which is coastally adjacent to the EMBA. The EMBA does not overlap the Murujuga National Park.</p> <p>MAC was established to represent the members of competing Native Title claims over Murujuga, collectively known as the Ngarda Ngarli and comprising Mardudhunera, Ngarluma, Yaburara, Yindjibarndi and Wong-Goo-Tt-Oo people. The determination of the competing Native Title claims resulted in no native title being found over the lands subject to the BMIEA or below the low water mark.</p> <p>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.</p>  | Yes             |
| Nghanhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) | Representative Aboriginal Corporation                                 | <p>Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).</p> <p>The EMBA overlaps the Gnulli, Gnulli #2 and Gnulli #3 - Yinggarda, Baiyungu and Thalanyji People native title claim/determination area, which the Baiyungu, Thalanyji and Yinggarda people are party to. The NTGAC and YAC are the Registered Native Title Body Corporates holding native title on behalf of the Baiyungu, Thalanyji and Yinggarda people.</p> <p>The NTGAC is also party, with the WA State Government, to the Ningaloo Conservation Estate Indigenous Land Use Agreement (the ILUA) which is coastally adjacent to the EMBA. The NTGAC is responsible for the joint management of the inner Ningaloo Marine Park (State Waters), the Cape Range National Park and new conservation areas extending along the Ningaloo Coast, which runs in parallel to the outer Ningaloo Marine Park in Commonwealth waters.</p> <p>The NTGAC's nominated representative is the Yamatji Marlpa Aboriginal Corporation (YMAC) and the NTGAC executive officer and contact officer pursuant to the Corporations (Aboriginal and Torres Strait Islander) Act 2006 is employed by YMAC. Woodside has therefore consulted the NTGAC, via YMAC.</p> | Yes             |
| Buurabalayji Thalanyji Aboriginal Corporation (BTAC)      | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).  | Yes             |

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|--|---|--|-----------------|
|  |   | The Thalanyji native title claim does not overlap the EMBA. The claim is coastally adjacent to the EMBA, which BTAC is the Registered Native Title Body Corporate for.<br>BTAC is also party to the Macedon ILUA which is coastally adjacent to the EMBA.  |                 |
| Yinggarda Aboriginal Corporation (YAC)   | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).<br>The EMBA overlaps the Gnulli, Gnulli #2 and Gnulli #3 - Yinggarda, Baiyungu and Thalanyji People native title claim area, which the Baiyungu, Thalanyji and Yinggarda people are party to. YAC and the NTGAC are the Registered Native Title Body Corporates for the Gnulli claim and YAC specifically for the Yinggarda people.<br>The Yinggarda Aboriginal Corporations nominated representative is the YMAC and the YAC executive officer and contact officer pursuant to the Corporations (Aboriginal and Torres Strait Islander) Act 2006 is employed by YMAC. Woodside has therefore consulted YAC, via YMAC. | Yes             |
| Kariyarra Aboriginal Corporation         | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).<br>The Kariyarra claim is coastally adjacent to the EMBA, which the Kariyarra Aboriginal Corporation is the Registered Native Title Body Corporate for.<br>The Kariyarra Aboriginal Corporation is also party to the Kariyarra and State ILUA which is coastally adjacent to the EMBA.   | Yes             |
| Wirrawandi Aboriginal Corporation (WAC)  | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).<br>The Yaburara & Mardudhunera People claim is coastally adjacent to the EMBA, which WAC is the Registered Native Title Body Corporate for.<br>WAC is party to the Cape Preston Project Deed (YM Mardie ILUA), Cape Preston West Export Facility ILUA and KM & YM ILUA, which are coastally adjacent to the EMBA.  | Yes             |
| Robe River Kuruma Aboriginal Corporation | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).<br>The Robe River Kuruma Aboriginal Corporation is party to the RTIO Kuruma Marthudunera People ILUA and KM & YM ILUA, which are coastally adjacent to the EMBA.   | Yes             |
| Ngarluma Aboriginal Corporation (NAC)    | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).<br>The Ngarluma/Yindjibarndi People claim is coastally adjacent to the EMBA, which NAC and the Yindjibarndi Aboriginal Corporation are the Registered Native Title Body Corporates for.  | Yes             |

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|--|---|---|-----------------|
|  |   | The RTIO Ngarluma Indigenous Land Use Agreement (Body Corporate Agreement) and Anketell Port, Infrastructure Corridor and Industrial Estates Agreement are also adjacent to the EMBA, which NAC is party to.  |                 |
| Yindjibarndi Aboriginal Corporation          | Representative Aboriginal Corporation                                 | Woodside has applied its methodology for 'Traditional Custodians and Nominated Representative Corporations' under regulation 11A(1)(d).<br>The Ngarluma/Yindjibarndi People claim is coastally adjacent to the EMBA, which NAC and the Yindjibarndi Aboriginal Corporation are the Registered Native Title Body Corporates for.   | Yes             |
| <b>Native Title Representative Bodies</b>    |   |   |                 |
| Yamatji Marlpa Aboriginal Corporation (YMAC) | Native Title Representative Body                                      | Woodside has applied its methodology for 'Native Title Representative Bodies' under regulation 11A(1)(d).<br>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.<br>The NTGAC's nominated representative is YMAC. Woodside has therefore consulted the NTGAC via YMAC.<br>YMAC was also the nominated representative for YAC. Woodside was advised that as of late April 2023, the nominated representative for YAC is now Gumala Aboriginal Corporation.<br>Woodside contacted YMAC to seek guidance with respect to the appropriate Traditional Custodian group(s) to engage with respect to the proposed activity where this was not clear.<br>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. | Yes             |
| <b>Self-identified First Nations groups</b>  |   |   |                 |
| Ngarluma Yindjibarndi Foundation Ltd (NYFL)  | Traditional Custodian - entity  | Woodside has applied its methodology for 'Traditional Custodians' under regulation 11A(1)(d).<br>Prior to the resolution of the Ngarluma and Yindjibarndi Native Title claim, the Ngarluma and Yindjibarndi registered Native Title claimants, the NWS JVs and Woodside entered into the Northwest Shelf Agreement 1998. In 1999 the Ngarluma and Yindjibarndi Native Title claim was settled with the Court appointing, at the request of the common law Native Title holders, the Ngarluma Aboriginal Corporation (NAC) as PBC to represent the Ngarluma people and Yindjibarndi Aboriginal Corporation (YAC) as PBC to appoint Yindjibarndi people.<br>Both NAC and YAC are relevant people.<br>NYFL was subsequently created to act as Trustee for the Trust under the Agreement and to carry on the business of enterprise development, investment and social welfare.   | Yes             |

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|--|---|--|-----------------|
|  |   | NYFL self-identified and has advised it is relevant for this EP.   |                 |
| <b>Historical cultural heritage groups or organisations</b>                  |   |  |                 |
| Western Australian Museum  | 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 11A(1)(d).<br>There are known shipwrecks overlapping the EMBA which the Western Australian Museum may be responsible for. | Yes             |
| <b>Local government and community representative groups or organisations</b> |   |  |                 |
| 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 11A(1)(d).<br>The Shire of Exmouth's area of responsibility overlaps the EMBA.                           | Yes             |
| Shire of Ashburton   | Local government governed by the Local Government Act 1995 representing the suburbs and localities of Onslow, Pannawonica, Paraburdoo and Tom Price.  | Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 11A(1)(d).<br>The Shire of Ashburton's area of responsibility overlaps the EMBA.                         | 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 11A(1)(d).<br>The City of Karratha's area of responsibility overlaps the EMBA.                           | Yes             |
| Exmouth Liaison Reference Group (CRG)<br>Base Marine<br>Bgahwan Marine       | The Exmouth CRG represents the interests of a range of local government, industry and community organisations in  | Woodside has applied its methodology for 'Local government and community representative groups or organisations' under regulation 11A(1)(d).<br>The Exmouth CRG's area of responsibility under its terms of reference overlaps the EMBA.   | Yes             |

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| Person or Organisation  | Summary of responsibilities and/or functions, interests or activities | Assessment of relevance | Relevant person |
|---|---|-------------------------|-----------------|
| Cape Conservation Group Inc.<br>DBCA<br>Department of Defence<br>Department of Transport<br>Exmouth Bus Charter<br>Exmouth Chamber of Commerce and Industry<br>Exmouth District High School<br>Exmouth Freight and Logistics<br>Exmouth Game Fishing Club<br>Exmouth Tackle and Camping Supplies<br>Exmouth Visitors Centre<br>Exmouth Volunteer Marine Rescue<br>Fat Marine<br>Gascoyne Development Commission<br>Gun Marine Services<br>Ningaloo Lodge<br>Offshore Unlimited<br>Shire of Exmouth<br>BHP Petroleum<br>Santos<br>Community Member | relation to oil and gas matters in the Exmouth region.                |                         |                 |

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|--|--|--|-----------------|
| Karratha Community Liaison Group<br>WA Police<br>Karratha Health Care Development WA<br>Ngarluma Yindjibarndi Foundation Ltd (NYFL)<br>Department of Education<br>Pilbara Ports Authority<br>Regional Development Australia<br>Pilbara Development Commission<br>Dampier Community Association<br>City of Karratha<br>Karratha & Districts Chamber of Commerce and Industry<br>Horizon Power<br>Murujuga Aboriginal Corporation (MAC)*<br>Department of Local Government, Sport and Cultural Industries<br>*MAC was consulted directly as described above. | The KLG 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 11A(1)(d).<br>The KLG's area of responsibility under its terms of reference does not overlap the EMBA.<br>Under subregulation 11 A 1 (e), Woodside, at its discretion, chose to assess the KLG as a relevant person. | Yes             |

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| Person or Organisation                              | Summary of responsibilities and/or functions, interests or activities   | Assessment of relevance   | Relevant person |
|---|---|---|-----------------|
| Onslow Chamber of Commerce and Industry             | 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 11A(1)(d).<br>The Onslow Chamber of Commerce and Industry's interests have the potential to be impacted by the proposed activities.   | Yes             |
| <b>Other non-government groups or organisations</b> |   |   |                 |
| 350 Australia (350A)                                | Non-government organisation   | Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 11A(1)(d) to determine 350A's relevance for the proposed activity.<br>Woodside has assessed that 350A's public website material does not demonstrate an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.2).<br>Woodside chose to contact 350A at its discretion in line with Section 5.3.4 | No              |
| Australian Conservation Foundation (ACF)            | Non-government organisation   | Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 11A(1)(d) to determine ACF's relevance for the proposed activity.<br>Woodside has assessed that ACF's public website material does not demonstrate an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.2).<br>Woodside chose to contact ACF at its discretion in line with Section 5.3.4.   | No              |
| Australian Marine Conservation Society (AMCS)       | Non-government organisation   | Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 11A(1)(d) to determine AMCS's relevance for the proposed activity.<br>Woodside has assessed that AMCS's public website material does not demonstrate an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.2).<br>Woodside chose to contact AMCS at its discretion in line with Section 5.3.4 | No              |
| Conservation Council of Western Australia (CCWA)    | Non-government organisation   | Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 11A(1)(d) to determine CCWA's relevance for the proposed activity.<br>Woodside has assessed that CCWA's public website material does not demonstrate an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.2).<br>Woodside chose to contact CCWA at its discretion in line with Section 5.3.4 | No              |

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| Person or Organisation  | Summary of responsibilities and/or functions, interests or activities  | Assessment of relevance   | Relevant person |
|---|--|---|-----------------|
| Greenpeace Australia Pacific (GAP)  | Non-government organisation  | <p>Woodside has applied its methodology for 'Other non-government groups or organisations' under regulation 11A(1)(d) to determine GAP's relevance for the proposed activity.</p> <p>Woodside has assessed that GAP's public website material does not demonstrate an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out in Section 5.2).</p> <p>Woodside chose to contact GAP at its discretion in line with Section 5.3.4</p> | No              |
| <b>Research institutes and local conservation groups or organisations</b> |  |   |                 |
| Cape Conservation Group (CCG)   | Local conservation group focused on protecting the terrestrial and marine environment of the North West Cape | <p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 11A(1)(d) to determine CCG's relevance for the proposed activity.</p> <p>CCG's conservation activities have the potential to intersect with the EMBA as the EMBA overlaps North West Cape.</p>  | Yes             |
| Protect Ningaloo  | Local conservation group focused on protecting the Exmouth Gulf and Ningaloo Reef and Cape Range             | <p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 11A(1)(d) to determine CCG's relevance for the proposed activity.</p> <p>Protect Ningaloo's conservation activities have the potential to intersect with the EMBA as the EMBA overlaps North West Cape and Ningaloo Reef.</p>   | Yes             |
| University of Western Australia (UWA)                                     | Research institute   | <p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 11A(1)(d) to determine UWA Ocean Institute's relevance for the proposed activity.</p> <p>There is no known research being undertaken by the UWA that intersects within the EMBA.</p> <p>Woodside chose to contact UWA at its discretion in line with Section 5.3.4.</p>   | No              |
| Western Australian Marine Science Institution (WAMSI)                     | Research institute   | <p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 11A(1)(d) to determine WAMSI's relevance for the proposed activity.</p> <p>There is no known research being undertaken by WAMSI that intersects within the EMBA.</p> <p>Woodside chose to contact WAMSI at its discretion in line with Section 5.3.4.</p>   | No              |
| Commonwealth Scientific and Industrial Research Organisation (CSIRO)      | Research institute   | <p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 11A(1)(d) to determine CSIRO's relevance for the proposed activity.</p> <p>There is no known research being undertaken by CSIRO that intersects within the EMBA.</p>  | No              |

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|--|---|---|-----------------|
|  |   | Woodside chose to contact CSIRO at its discretion in line with Section 5.3.4.   |                 |
| Australian Institute of Marine Science (AIMS)                      | Research institute  | Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' under regulation 11A(1)(d) to determine AIMS's relevance for the proposed activity.<br>There is no known research being undertaken by AIMS that intersects within the EMBA.<br>Woodside chose to contact AIMS at its discretion in line with Section 5.3.4.   | No              |
| <b>Other</b>   |   |   |                 |
| Save Our Songlines and/ or [name redacted] and/ or [name redacted] | Representatives of non-government organisation Save Our Songlines and/ or individuals [name redacted] and/ or [name redacted] | Woodside has applied its methodology for 'Traditional Custodians and nominated representative corporations' and 'Other non-government groups or organisations' under regulation 11A(1)(d) to determine Save Our Songlines (SOS) and/ or [name redacted] and/ or [name redacted] relevance for the proposed activity.<br>Save Our Songlines and/ or [name redacted] and/ or [name redacted] 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. The scope of the activity under this EP does not fall within their stated interests (see <b>Section 6.5.6</b> ).<br>Save Our Songlines and/ or [name redacted] and/ or [name redacted] have not identified for this activity despite opportunity to do so. | No              |

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## 5.9 Consultation Activities and Additional Engagement

### 5.9.1 TPA03 EP General and Traditional Custodian Consultation Activities

Woodside has been conducting extensive consultation with relevant persons and other parties for this EP since June 2022, 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 TPA03 Well Intervention EP. Consultation aims to be inclusive, transparent, voluntary, respectful and two-way. Consultation was undertaken by email, letter, phone call or meeting.

- Woodside advertised the planned activities proposed for this EP in the national, state and relevant local newspapers including The Australian, The West Australian, Pilbara News, Midwest Times, North West Times (18 January 2023) and Geraldton Times (20 January 2023) (see Appendix F, reference 4.3). Regional newspapers do not require subscription and are available and in some cases delivered directly to households. All communities within or adjacent to the EMBA had access to this information via this media. No direct comments or feedback were received from the advertisements.
- A Consultation Information Sheet was provided to relevant persons and persons Woodside chose to contact (see Section 5.3.4), which included details such as an activity overview, maps, a summary of key risks and/or impacts and management measures (Appendix F, reference 1.15).
- An activity update Consultation Information Sheet was provided to relevant persons and persons Woodside chose to contact (see Section 5.3.4), which included an update regarding planned activities, information regarding the EMBA's for this EP and additional information relating to mitigation and managements measures for this EP (Appendix F, reference 4.1).
- Since the commencement of the initial consultation period (June 2022), the Stakeholder Consultation Information Sheet has also been available on Woodside's website and the activity update Consultation Information Sheet has been available on the Woodside website since February 2023. The Information Sheets include a toll-free 1800 phone number and Woodside's feedback email address (feedback@woodside.com.au).
- Additional targeted information was provided to relevant marine users including Commonwealth and State fisheries, fishery representative bodies, AHO and AMSA – Marine Safety. The targeted information included maps and additional information relevant to the specific category of persons. The relevant persons had a 30-day period in which to provide feedback.
- From 3 May 2023, Woodside commenced a geotargeted sponsored social media campaign (Appendix F, reference 5.35) to various local government authorities that are within or coastally adjacent to the EMBA for the proposed activities. The campaign brought 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. The reach of this campaign is shown at Appendix F, reference 5.35.
- 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.
- 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).
- Consultation activities undertaken with relevant persons are summarised at **Appendix F, Table 1**.

- Engagement undertaken with persons or organisations Woodside assessed as not relevant but chose to contact (see Section 5.3.4) or self-identified and Woodside assessed as not relevant are summarised at **Appendix F, Table 2**.

### **Community Information Sessions**

- Community Information Sessions were held in Roebourne on 5, 10, 19 and 24 May, 22 June and 19 July 2023, and Exmouth on 17 June 2023. Ahead of the events, Woodside advertised the sessions via the means below which provided the opportunity for local individuals to become aware of the event and have access to experts and information about the activity. The methods used to promote these consultation opportunities were developed with input from Indigenous representatives and were adapted to incorporate culturally appropriate and accessible language to encourage engagement and understanding of Woodside’s proposed activities:
  - Advertising the Community Information Sessions in Karratha Community Session in the Pilbara News on 28 June 2023 (**Appendix F, reference 5.40**).
  - From 8 June 2023, Woodside commenced a geotargeted social media campaign along the coastline from Geraldton to Derby (**Appendix F, reference 5.35**) advertising the community information sessions. A Karratha Community Information Session was advertised via a Facebook post on 28 June 2023 and a geotargeted social media campaign from 16 June to 29 June 2023.
  - Directly contacting local Traditional Custodian groups to invite representatives to attend the community information sessions and providing the event information (see **Appendix F, Table 1**).
  - Advertised in Roebourne with posters on four community boards and dropped posters to community locations; and put information and posters on the Roebourne Community Calendar.
  - Representatives from Woodside, including project and environment personnel equipped to answer technical questions, attended the event. Copies of the Consultation Information Sheets and bespoke targeted Consultation Summary Information Sheets were available to attendees. Community members were able to engage with Woodside representatives to understand the proposed activity and how it may affect them, ask questions and provide their feedback.
- On 17 June 2023, a Community Information Session was held in Exmouth. Woodside advertised the session via the means below providing opportunity for local individuals to become aware of the event and have access to experts and information about the activity. The methods used to promote these consultation opportunities were developed with input from Indigenous representatives and were adapted to incorporate culturally appropriate and accessible language to encourage engagement and understanding of Woodside’s proposed activities:
  - From 15–17 June 2023, Woodside commenced a geotargeted social media campaign in Exmouth and surrounding areas (Appendix F, reference 5.38) advertising the Community Information Session.
  - Representatives from Woodside, including project and environment personnel equipped to answer technical questions, attended the event. Copies of the Consultation Information Sheets and bespoke targeted Consultation Summary Information Sheets were available to attendees. Community members were able to engage with Woodside representatives to understand the proposed activity and how it may affect them, ask questions and provide feedback.
- On 22 June 2023, a Community Information Session was held in Roebourne. Woodside advertised the session by distributing posters advising of the event details in the local

community and visiting offices to raise awareness, including the offices of local Traditional Custodian groups (Appendix F, reference 5.39).

- On 28 and 29 June 2023, Community Information Sessions were held in Karratha. Woodside advertised the sessions via the means below providing the opportunity for local individuals to become aware of the event and have access to experts and information about the activity. The methods used to promote these consultation opportunities were developed with input from Indigenous representatives and were adapted to incorporate culturally appropriate and accessible language to encourage engagement and understanding of Woodside's proposed activities:
  - Ahead of the 28 June 2023 event, a story was posted on Woodside's Facebook page (Appendix F, reference 5.41), sharing details of its shopping centre stand where Consultation Information Sheets regarding planned and proposed activities were available, including the activities proposed under this EP.
  - Ahead of the 29 June 2023 event, the Community Information Session was advertised in the Pilbara News (Appendix F, reference 5.40), geotargeting a social media campaign in Karratha and surrounding areas and posting the event details on Woodside's Facebook page (Appendix F, reference 5.42).
  - Representatives from Woodside, including project and environment personnel equipped to answer technical questions, attended the event. Copies of the Consultation Information Sheets and bespoke targeted Consultation Summary Information Sheets were available to attendees. Community members were able to engage with Woodside representatives to understand the proposed activity and how it may affect them, ask questions and provide their feedback.
- On 5 and 6 August 2023, Woodside had a stand at the annual FeNaCING Festival held in Karratha. Members of Woodside's Corporate Affairs and Operations teams actively engaged with the community to discuss proposed EP activities. The stand included Consultation Information Sheets for a number of EPs including TPA03 Well Intervention. Woodside estimates that over 2,000 people visited the Woodside stand based on the number of completed consultation forms and questionnaires. The consultation opportunity was promoted prior to the Festival in the Pilbara News on 2 August 2023, and a story appeared on the Woodside North West Facebook page on 2 August 2023.
- On 18 August 2023, Woodside had a stand at the Passion of the Pilbara festival in Onslow. Members of Woodside's Corporate Affairs engaged with the community to discuss proposed EP activities. The stand included Consultation Information Sheets for a number of EPs including the TPA03 Well Intervention EP. Woodside estimates approximately 100 people visited the Woodside stand. The consultation opportunity was promoted prior to the Festival in a story on the Woodside North West Facebook page on 17 August 2023.
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## 5.9.2 Traditional Custodian Specific Consultation

In addition to the approaches 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 (Section 5.5). Consultation undertaken specifically with Traditional Custodians for this EP includes:

- Direct engagement with nominated representative bodies via the nominated contact listed on the 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:
  - Meetings with directors, elders and any nominated representatives, on country or in Perth
  - Requests and offers of resourcing to enable and support consultation
  - Exchange of written feedback and correspondence
  - A summary Consultation Information Sheet, developed and reviewed by Indigenous representatives in collaboration with technical experts to ensure content is appropriate to the intended recipients, was provided to relevant Traditional Custodian groups (Appendix F, reference 4.2). and phone calls to provide context to the consultation made.
- Ongoing efforts to engage and develop relationships with these nominated representative 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, supported by senior Woodside representatives, subject matter experts, First Nations Relations 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, simplified technical videos and real-world pictures and footage
  - Emphasis on potential planned and unplanned risks and impacts of the activity
  - Ample opportunity for questions and feedback
  - Discussion about ongoing relationship development and opportunities
  - Distribution of hard-copy Summary Consultation Information Sheets (Appendix F, reference 4.1) and bespoke targeted Consultation Summary Sheets (Appendix F, reference 4.2)
  - Meeting all costs such as sitting fees, travel, legal and executive support and other support as required.
- Woodside has a geotargeted sponsored social media campaign (Appendix F, reference 5.35) to various communities that are coastally adjacent to the EMBA for the proposed activities.
  - The wide-reaching campaign brought the proposed activity to the attention of persons who may be interested and advised persons or organisations how they can find out about Woodside's proposed activities by visiting Woodside's website, which details the intent of consultation with relevant persons under the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth). The reach of this campaign is shown at Appendix F, reference 5.35, providing the opportunity to consult via over 139,000 views to date across various regions.

- These social media posts were developed with input from Indigenous representatives. Social media is a highly effective means to engage Indigenous audiences as outlined in Indigenous Digital Life (Professor Carlson, 2021). Advertisements used language and information appropriate to Indigenous audiences. Feedback from community engagements indicates a high level of penetration for this technique.
- Woodside has employed a diverse range of techniques to allow relevant persons to become aware of the proposed activity and how it may affect their functions, activities or interests, and understand their ability to provide feedback. The combination of PBC engagement meetings, traditional print media, social media and face-to face community interaction was designed with input from Indigenous representatives and adapted to the audience, so that it provides a wide-ranging opportunity to consult.

## 6 ENVIRONMENTAL IMPACT AND RISK ASSESSMENT, PERFORMANCE OUTCOMES, STANDARD AND MEASUREMENT CRITERIA

### 6.1 Overview

This section presents the impact and risk analysis, evaluation and Environmental Performance Outcomes (EPOs), Environmental Performance Standards (EPSs) and Measurement Criteria (MC) for the Petroleum Activities Program, using the methodology described in **Section 2** of this EP.

### 6.2 Impact and Risk Analysis and Evaluation

As required by Regulation 13(5) and 13(6) of the Environment Regulations, the following analysis and evaluation demonstrates that the identified risks and impacts associated with the Petroleum Activities Program are reduced to ALARP, are of an acceptable level and consider all operations of the activity, including potential emergency conditions.

The risks identified during the ENVID (including decision type, current risk level, acceptability of risk and tools used to demonstrate acceptability and ALARP) have been divided into two broad categories:

- planned (routine and non-routine) activities that have the potential for inherent environmental impacts;
- unplanned events (accidents, incidents or emergency situations) with an environmental consequence, termed risks.

Within these categories, impact and risk assessment groupings are based on environmental aspects such as emissions and physical presence. In all cases, the worst-case risk was assumed.

The ENVID (performed in accordance with the methodology described in Section 2) identified seven impacts and eight risks associated with the Petroleum Activities Program. Planned activities and unplanned events are summarised in **Table 6-1**.

The TPA03 Well intervention specific ENVID workshop was conducted on Tuesday the 7<sup>th</sup> of June 2022. Attendees included: Environmental Advisers, Environmental Engineers, Environmental Consultants, Subsea Engineers, Senior Completions Engineer, and Hydrocarbon Spill Advisers.

The impact and risk analysis and evaluation for the Petroleum Activities Program indicates that all the current environmental risks and impacts associated with the activity are reduced to ALARP and are of an acceptable level, as discussed further in **Sections 6.6** and **6.7**.

**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 |
| <b>Planned Activities (Routine and Non-routine)</b>   |            |                    |   |            |                              |                     |
| Physical presence: Interference with other marine users and values – proximity of WIV and support vessels causing interference with or displacement to third party vessels (commercial fishing and commercial shipping), and temporary continued presence of the wellheads. | 6.6.1      | F                  | Social and Cultural – Slight, short-term impact (less than one year) to a community or areas/items of cultural significance | -          | -                            | Broadly acceptable  |
| Physical presence: Seabed disturbance from ROV operations and equipment lay down.   | 6.6.2      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors.         | -          | -                            | Broadly acceptable  |
| Routine acoustic emissions: Generation of acoustic signals from DP systems on support vessels and WIV during normal operations, generation of atmospheric noise from helicopter transfers within Operational Area.  | 6.6.3      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors.         | -          | -                            | Broadly acceptable  |
| Routine and non-routine discharges: WIV and support vessels.  | 6.6.4      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors.         | -          | -                            | Broadly acceptable  |
| Routine and non-routine discharges: subsea fluids and WCP fluids  | 6.6.5      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors.         | -          | -                            | Broadly acceptable  |

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| Aspect   | EP Section | Risk Rating        |  |            |                     | Acceptability of Impact/Risk |
|--|------------|--------------------|--|------------|---------------------|------------------------------|
|  |            | Impact/Consequence | Potential Impact/Consequence Level   | Likelihood | Current Risk Rating |                              |
| Routine atmospheric emissions from fuel combustion and cold venting.   | 6.6.6      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors (e.g. air quality).   | -          | -                   | Broadly acceptable           |
| Routine light emissions: External light emissions onboard WIV and support vessels within the Operational Area. | 6.6.7      | F                  | Environment – No lasting effect (less than one month); localised and temporary disturbance to marine fauna.  | -          | -                   | Broadly acceptable           |
| <b>Unplanned Activities (Accidents, Incidents, Emergency Situations)</b>                                       |            |                    |  |            |                     |                              |
| Unplanned hydrocarbon release due to loss of well containment  | 6.7.2      | B                  | Environment – Major, long term impact (ten to 50 years) on highly valued ecosystems, species, habitat, physical or biological attributes.<br>Reputation/brand – National concern and/or international interest. Medium to long-term impact (five to 20 years) to reputation and brand. Venture and/or asset operations restricted. | 1          | M                   | Broadly acceptable           |
| Unplanned hydrocarbon release resulting from a vessel collision  | 6.7.3      | D                  | Environment – Minor, short-term impact (one to two years) on species, habitat (but not affecting ecosystems), physical or biological attributes.   | 1          | M                   | Broadly acceptable           |
| Unplanned discharges: Deck and subsea spills   | 6.7.4      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors (e.g. water quality).   | 2          | L                   | Broadly acceptable           |

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| Aspect  | EP Section | Risk Rating        |   |            |                     | Acceptability of Impact/Risk |
|---|------------|--------------------|---|------------|---------------------|------------------------------|
|   |            | Impact/Consequence | Potential Impact/Consequence Level  | Likelihood | Current Risk Rating |                              |
| Unplanned discharges: Release of solid hazardous and non-hazardous wastes               | 6.7.5      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors (e.g. water quality).  | 2          | L                   | Broadly acceptable           |
| Physical presence: Vessel collision with marine fauna                                   | 6.7.6      | E                  | Environment – Slight, short term local impact (less than one year) on species, habitat (but not affecting ecosystems function), physical or biological attributes.                                      | 0          | L                   | Broadly acceptable           |
| Physical presence: Dropped object resulting in seabed disturbance                       | 6.7.7      | F                  | Environment – No lasting effect (less than one month); localised impact not significant to environmental receptors (e.g. benthic habitats).   | 2          | L                   | Broadly acceptable           |
| Physical presence: Accidental introduction and establishment of invasive marine species | 6.7.8      | E                  | Environment – No credible risk identified.<br>Reputation and Brand – Minor, short-term impact (one to two years) to reputation and brand. Close scrutiny of asset level operations or future proposals. | 0          | L                   | Broadly acceptable           |

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### 6.2.1 Cumulative Impacts

Woodside has assessed the cumulative impacts of the Petroleum Activities Program in relation to other relevant petroleum activities that could realistically result in overlapping temporal and spatial extents. This has resulted in review of the following developments, with impacts discussed as relevant in various sections of **Section 6.6** and **6.7**:

- Goodwyn Alpha platform production – Tidepole manifold and TPA01 and TPA02 wells.

Additionally, where relevant the cumulative impacts of activities associated with undertaking multiple concurrent or parallel activities associated with this Petroleum Activities Program have been assessed for cumulative impacts as relevant in **Section 6.6** and **6.7**.

Given that unplanned activities are not intended to occur during the petroleum activities program, 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 Activities Program or compounding impacts from other petroleum facilities within the region.

### 6.3 Environmental Performance Outcomes, Standards and Measurement Criteria

Regulation 13(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 for the Petroleum Activities Program have been identified to allow Woodside’s environmental performance to be measured and through the implementation of this EP, to determine whether the EPOs and EPSs have been met.

The EPOs, EPSs and MC specified are consistent with legislative requirements and Woodside’s standards and procedures. They have been developed based on the legislation, codes and standards, good industry practices and professional judgement outlined in **Sections 2.6.1.4** and **2.7**, as part of the acceptability and ALARP justification process.

The EPOs, EPSs and MC are presented throughout this section and in **APPENDIX D**. A breach of these EPOs or EPSs constitutes a ‘Recordable Incident’ under the Environment Regulations (refer to **Section 7.9**).

For the physical and biological receptors within the EMBA, Woodside has set EPOs that are consistent with the *Matters of National Environmental Significance – Significant impact guidelines 1.1* (DoE, 2013). For social receptors, including fishing and other commercial activities, The EPOs that have been set reflect the requirements in the OPGGS Act Section 280(2), in that the activities undertaken as part of this EP should not interfere with other marine users, to a greater extent than is necessary for the exercise of right conferred by the titles granted.

### 6.4 Presentation

The analysis and evaluation (ALARP and acceptability), EPOs, EPSs and MC are presented in tabular form throughout this section, as shown in the sample 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.

| <b>Context</b>   |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
|--|--|--|---|-----------------|---------------|--------------------------|---------------------|--|---------------|---------------|--------------------|------------|-------------|-------------|
| <i>Description of the context for the impact/risk. Regulation 13(1), 13(2) and 13(3)</i>   |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| <b>Relevant Activities</b><br>Source of Aspect –<br><b>Section reference</b><br><i>Description of the Activity –<br/>Regulation 13(1)</i>  |  |  | <b>Existing Environment</b><br>Relevant environment –<br><b>Section reference</b><br><i>Description of the Environment –<br/>Regulations 13(2)(3)</i> |                 |               |                          |                     | <b>Person / Organisation consultation</b><br>Consultation – <b>Section reference</b><br><i>Consultation – Regulation 11A</i> |               |               |                    |            |             |             |
| <b>Impacts and Risks Evaluation Summary</b>  |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| <i>Summary of ENVID outcomes</i>   |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| <b>Source of Risk</b><br><i>Regulation 13(1)</i>   |  |  | <b>Environmental Value Potentially Impacted</b><br><i>Regulations 13(2)(3)</i>  |                 |               |                          |                     | <b>Evaluation</b>  |               |               |                    |            |             |             |
|  |  |  | Soil and Groundwater  | Marine Sediment | Water Quality | Air Quality (incl Odour) | Ecosystems/ Habitat | Species  | Socioeconomic | Decision Type | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools |
| Summary of source of risk/ impact  |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| <b>Description of Source of Risk or Impact</b>   |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| Description of the identified risk/impact including sources or threats that may lead to the impact/risk or identified event. Regulation 13(1).   |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| <b>Impact or Consequence Assessment</b>  |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| <b>Environmental Value/s Potentially Impacted</b>  |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |
| Discussion and assessment of the potential impacts to the identified environment value/s. Regulation 13(5) (6).<br>Description of potential impacts to environmental values aligned to Woodside Risk Matrix consequence descriptors. |  |  |   |                 |               |                          |                     |  |               |               |                    |            |             |             |

| <b>Demonstration of ALARP</b>  |   |   |   |  |
|--|---|---|---|--|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>6</sup></b>  | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>  | <b>Control Adopted</b>   |
| <b>ALARP/Hierarchy of Control Tools Us–d - Section 2.6.2</b>   |   |   |   |  |
| <i>Summary of control considered to ensure the impacts and risks are continuously reduced to ALARP. Regulation 13(5)(c).</i> | <i>Technical/logistical feasibility of the control. Cost/sacrifice required to implement the control (qualitative measure).</i> | <i>Qualitative commentary of impact/risk that could be averted/ environmental benefit gained if the cost/ sacrifice is made and the control is adopted.</i> | <i>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.</i> | <i>If control is adopted, reference to Control No. provided.</i> |

<sup>6</sup> Qualitative measure

| Demonstration of ALARP  |  |                                  |                 |                 |
|---|--|----------------------------------|-----------------|-----------------|
| Control Considered  | Control Feasibility (F) and Cost/Sacrifice (CS) <sup>6</sup> | Benefit in Impact/Risk Reduction | Proportionality | Control Adopted |
| <b>ALARP Statement</b>  |  |                                  |                 |                 |
| Made on the basis of the environmental risk/impact assessment outcomes, use of the relevant tools appropriate to the decision type ( <b>Section 2.7</b> ) and a proportionality assessment. Regulation 10A (b). |  |                                  |                 |                 |

| Demonstration of Acceptability  |
|---|
| <b>Acceptability Statement</b>  |
| Made on the basis of applying the process described in <b>Section 2.7</b> taking into account internal and external expectations, risk/impact to environmental thresholds and use of environment decision principles. Regulation I(c) |

| EPOs, EPSs and MC   |  |   |  |
|---|--|---|--|
| Environmental Performance Outcomes  | Controls   | Environmental Performance Standards   | Measurement Criteria   |
| <p><b>EPO No.</b></p> <p><b>S:</b> Specific performance that addresses the legislative and other controls that manage the activity, and against which performance by Woodside in protecting the environment will be measured.</p> <p><b>M:</b> Performance against the outcome will be measured through implementation of the controls via the MC.</p> <p><b>A:</b> Achievability/feasibility of the outcome demonstrated via discussion of feasibility of controls in ALARP demonstration. Controls are directly linked to the outcome.</p> <p><b>R:</b> The outcome will be relevant to the source of risk/impact and the potentially impacted environmental value<sup>7</sup></p> <p><b>T:</b> The outcome will state the timeframe during which the outcome will apply or by which it will be achieved.</p> | <p><b>C No.</b></p> <p>Identified control adopted to ensure that the impacts and risks are continuously reduced to ALARP.</p> <p>Regulation 13(5) (c).</p> | <p><b>PS No.</b></p> <p>Statement of the performance required of a control measure.</p> <p>Regulation 13(7)(a).</p> | <p><b>MC No.</b></p> <p>Measurement criteria for determining whether the outcomes and standards have been met.</p> <p>Regulation 13(7)(c).</p> |

## 6.5 Potential Environment Risks/Impacts not Included Within the Scope of this Environment Plan

The ENVID identified a source of environmental risk/impact that was assessed as not being applicable within or outside the Operational Area and, therefore, were determined to not form part of this EP (refer **Section 2.5**). These are described in **Sections 6.5.1 - 6.5.3** for information only.

### 6.5.1 Shallow/Nearshore Activities

The Petroleum Activities Program is located in water depths approximately 113 m and at a distance of about 76 km from the nearest landfall (North West Island). Consequently, risks associated with shallow/ near-shore activities such as vessel anchoring, and risks of grounding were assessed as not credible.

<sup>7</sup> Where impact/consequence descriptors are capitalised and presented within EPOs in **Section 6**; performance level corresponds with those aligned with the Woodside Risk Matrix (refer **Section 2.6.3**).

## 6.5.2 Bunkering Activities

No bunkering will take place as part of the TPA-03 well intervention activity. As such, marine fuel loss during hydrocarbon bunkering is not a credible risk.

## 6.5.3 Hydrocarbon release from WIV

The fuel storage tanks on suitable WIVs considered are located on the inboard side of the pontoons, below the water line. This tank configuration means that, in the event of a vessel collision, it is not credible that the fuel storage tanks would rupture. Therefore, a spill of MDO from suitable WIVs considered is not credible.

## 6.5.4 Generation of Noise from Helicopters

It is not credible that airborne noise from helicopter transfers would add to levels of underwater noise emanating from the WIV, support vessels and positioning equipment to any extent. As such noise emissions from these sources has not been considered in **Section 6.6.3**.

## 6.5.5 Loss of Containment from Existing Subsea Infrastructure

As described in **Section 4.6.6** existing subsea infrastructure is present in the Operational Area as part of the GWA Field Production Systems. A subsea loss of containment from a rupture of live infrastructure within the Operational Area could occur, in the event of a significant dropped object.

A worst-case credible hydrocarbon release scenario has been defined in the GWA Facility Operations EP as a rupture of the 16-inch flowline upstream of the SSIV. This could result in a release of up to 237 m<sup>3</sup> of GWF-1 condensate. The in force GWA Facility Operations EP provides a description and assessment of impacts and risks. Management controls and response capabilities are detailed in that EP. Additional controls for operating the WIV are provided throughout **Section 6.6** and **6.7**. In particular, controls are included for the prevention of dropped objects (**Section 6.7.7**).

## 6.5.6 Indirect Impacts

For the PAP, the potential 'indirect' environmental impacts and risks evaluated are those associated with mobilisation/demobilisation of the WIV and support vessels to the Operational Area, which have been considered in the environmental impact assessment in **Section 6.6** and **Section 6.7**.

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 WIV and support vessels to be inherently ALARP in its current state. Therefore, Woodside considers that standard vessel and WIV operations are appropriate to manage the potential impacts and risks from mobilisation and demobilisation of the WIV and support vessels to a level that is acceptable.

The extraction of Tidepole well fluids for processing is not included in this Petroleum Activities Program and is included in the scope of the accepted GWA Facility Operation EP. The accepted GWA Facility Operation EP includes analysis and evaluation of impacts and risks arising from the extraction of Tidepole well fluids. Therefore, any indirect impacts and risks arising from the processing of Tidepole well fluids are not considered are included in the GWA Facility Operation EP which demonstrates impacts and risks have been reduced to ALARP and are managed to a level that is acceptable.

## 6.6 Planned Activities (Routine and Non-routine)

### 6.6.1 Physical Presence: Interaction with Other Marine Users and Values

| Context   |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
|---|--|-----------------|---------------|---|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-------------|--------------------|------------|
| Project Vessels – <b>Section 3.7</b>  |  |                 |               | Socioeconomic and Cultural – <b>Section 4.6</b> |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |             |                    |            |
| Impact Evaluation Summary   |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| Source of Impact  | Environmental Value Potentially Impacted |                 |               |   |                     |         |               | Evaluation                      |                    |            |             |             |                    |            |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour)                        | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome    |
| Interference with other users – proximity of WIV and support vessels causing interference with or displacement to third party vessels (commercial fishing and commercial shipping)  |  |                 |               |   |                     |         | X             | A                               | F                  | -          | -           | GP          | Broadly acceptable | EPOs 1 & 2 |
| Description of Source of Impact   |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| <p><b>Presence of WIV and Vessels</b></p> <p>A number of support vessels and a WIV (outlined in <b>Section 3.7</b>) will be temporarily present in the Operational Area during the Petroleum Activities Program to conduct wireline well intervention activities. Two support vessels may also be present; one to transport equipment and materials between the Operational Area and the port/staging area, and the other to remain at the WIV to perform standby duties. The WIV will have a 500 m safety exclusion zone applied for the duration of the Petroleum Activities Program to limit vessel interactions.</p> <p>Well intervention activities are expected to take between 5 and 14 days as outlined in <b>Section 3.5</b> and will be undertaken by a DP WIV. When underway, activities will be 24 hours, 7 days a week.</p> <p>The presence of these project vessels and WIV in the Operational Area presents an opportunity for interaction with third-party marine users.</p>  |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| Impact Assessment   |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| <p><b>Interactions with Commercial Fishing Activities</b></p> <p>The EMBA overlaps five Commonwealth and 17 State managed commercial fisheries management areas, however, only two Commonwealth fisheries and nine State managed fisheries have the potential for interaction with the Petroleum Activities Program (<b>Section 4.6.2</b>). The Operational Area overlaps three Commonwealth and 13 State managed fisheries (<b>Section 4.6.2</b>). However, only the State-managed Pilbara Line Fishery is considered to have limited potential for interaction with project activities (<b>Section 4.6.2</b>). Commercial Tour Operators are active in the wider EMBA, with up to 20 licences active during 2017 – 2022 reporting period. Fishing effort is highest around Ningaloo and Murion Islands, Barrow Island and the Montebello Islands. Therefore, there may be interactions with commercial operators in the wider EMBA.</p> <p>The Operational Area is located within 60 nm CAES block 19150, and 10 NM CAES block 194155. The Pilbara Line Fishery has reported up to 4 vessels active in block 19150 during 2017 to 2022. No fisheries are reported to be active in the 10 NM block that overlaps the Operational Area in the five year assessment period. Fisheries data for the Pilbara Line Fishery is not reported at the 10 NM scale therefore it is uncertain if the effort reported in the 60 NM CAES block 19150 overlaps with the Operational Area. FishCube data indicates the effort is concentrated east of the Operational Area, Around the Southern Pilbara Islands. Given the overlap of the Operational Area with the fishing block and the annual fishing effort, interactions with the Pilbara Line Fishery may occur.</p> <p>During Project activities, vessels will be temporarily present in the Operational Area and may restrict the use of the area by the fisheries, and any other commercial fisheries that have been identified as having potential, though unlikely, to use the Operational Area. Use will particularly be restricted within the 500 m safety exclusion zone (temporary) that will be established around the WIV when undertaking intervention activities, which represents a relatively small area</p> |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| <p>This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.</p> <p>Controlled Ref No: A1806AF1401779378      Revision: 3      Woodside ID: 1401779378      Page 170 of 360</p> <p>Uncontrolled when printed. Refer to electronic version for most up to date information.</p>   |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |

when compared to the extent of the individual fishery boundaries that overlap. The WIV will only be present for up to 14 days, and therefore impacts during intervention activities will be localised and temporary.

Given the short duration of the activity, the temporary presence of vessels in the Operational Area would potentially result in a localised interference (navigational hazard) and displacement/avoidance by commercial fishing vessels within the immediate vicinity of the WIV or support vessels.

#### ***Displacement of Recreational Fishing***

Given the distance from boating facilities, lack of natural attractions (e.g. reefs or shoals) and the water depth of the Operational Area, very little recreational is expected to occur within the Operational Area. As such, impacts to recreational fishing are expected to be localised and of no lasting effect.

If recreational fishing effort occurred within the Operational Area while activities are being performed, displacement as a result of the Petroleum Activities Program would be minimal and relate only to the exclusion zones (temporary) (500 m radius) that would be in place around the WIV when undertaking intervention activities. Therefore, the potential impact is considered to be localised and would result in no lasting effect.

#### ***Displacement to Commercial Shipping***

Commercial shipping occurs in the region, with commercial shipping traffic comprising vessels such as:

- Bulk carriers (e.g. mineral ore, salt etc.) from Port Hedland and Dampier;
- Offtake tankers;
- Support vessels for offshore oil and gas activities; and
- LNG carriers from Dampier, Barrow Island and Ashburton North.

To reduce the likelihood of interactions between commercial vessels and offshore facilities, AMSA have introduced a series of shipping fairways within which commercial vessels are advised to navigate. The fairways are not mandatory, however, AMSA strongly recommends commercial vessels remain within the fairway when transiting the region. The use of shipping fairways is considered to be good seafaring practice, with AUSREP data from AMSA indicating cargo ships and tankers routinely navigate within the established fairways.

The presence of the WIV and/or project vessels will not result in impacts to commercial shipping beyond temporary, highly localised disruption to commercial shipping as the nearest marine fairway is approximately 0.18 km west of the Operational Area. The potential impacts associated with this Petroleum Activities Program may include displacement of vessels as they make slight course alterations to avoid the WIV and/or support vessel(s). Notably, shipping in the area is mainly related to the resources industry.

#### ***Interference with Existing Oil and Gas Infrastructure***

Interactions with operators of other nearby facilities have the potential to occur, including the Goodwyn Alpha platform and associated well infrastructure. Given that the well intervention activity will be performed under the Goodwyn Alpha Permit to Work system, there is no potential for impact.

The nearest facility not operated by Woodside, is the Chevron-operated Wheatstone platform, which lies approximately 55 km south-west of the Operational Area. Given the distance between the Operational Area and petroleum activities undertaken by other operators, no impacts to other operators will occur as a result of the physical presence of the vessels.

For the fisheries considered active in the vicinity of the Operational Area, potential cumulative impacts to vessels that overlap the Operational Area would be localised with no lasting effect.

**Summary of Potential Impacts to Environmental Value(s)**

Given the adopted controls, it is considered that the physical presence of the WIV and project vessels will not result in a potential impact greater than localised displacement of shipping, commercial/recreational fishing, oil and gas interests with no lasting effect.

| <b>Demonstration of ALARP</b>  |  |   |   |                        |
|--|--|---|---|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>1</sup></b> | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>  | <b>Control Adopted</b> |
| <b>Legislation, Codes and Standards</b>  |  |   |   |                        |
| Vessels to adhere to the navigation safety requirements including the <i>Navigation Act 2012</i> and any subsequent Marine Orders  | F: Yes.<br>CS: Minimal cost.<br>Standard practice.                 | The act regulates ship related activities and invokes certain requirements of MARPOL. Vessels (relevant to class) will adhere to requirements.  | Benefits outweigh cost/ sacrifice.<br>Control is also Standard Practice | Yes<br><b>C 1.1</b>    |
| Establishment of a 500 m petroleum safety zone around WIV and 500 m exclusion zone around the installation vessel.   | F: Yes.<br>CS: Minimal cost.<br>Standard practice.                 | Establishment of a 500 m petroleum safety zone around WIV and installation vessels reduces the likelihood of interaction with other marine users.   | Benefits outweigh cost/ sacrifice.<br>Control is also Standard Practice | Yes<br><b>C 1.2</b>    |
| <b>Good Practice</b>   |  |   |   |                        |
| Australian Hydrographic Office (AHO) notified of activities and movements no less than four working weeks prior to scheduled activity commencement date of well intervention activities. | F: Yes<br>CS: Minimal cost.<br>Standard practice.                  | Notification to AHO will enable them to generate navigation warnings (Maritime Safety Information Notifications (MSIN) and Notices to Mariners (NTM) (including AUSCOAST warnings where relevant)). | Benefits outweigh cost/sacrifice.<br>Control is Standard Practice.      | Yes<br><b>C 1.3</b>    |
| Notify relevant fishing industry government departments, representative bodies and licence holders of activities prior to commencement and upon completion of activities.                | F: Yes<br>CS: Minimal cost.<br>Standard practice.                  | Communicating the Petroleum Activities Program to other marine users ensures they are informed and aware, thereby reducing the likelihood of interfering with other marine users.                   | Benefits outweigh cost/sacrifice.<br>Control is also Standard Practice. | Yes<br><b>C 1.4</b>    |
| Notify AMSA JRCC for the well intervention activities: <ul style="list-style-type: none"> <li>24-48 hrs before operations commence</li> </ul>  | F: Yes<br>CS: Minimal cost.<br>Standard practice.                  | Communicating the Petroleum Activities Program to other marine users ensures they are informed and aware, thereby reducing the likelihood of interfering with other marine users.                   | Benefits outweigh cost/sacrifice.<br>Control is also Standard Practice. | Yes<br><b>C 1.5</b>    |
| Notify AHO and AMSA JRCC of any extended delay in the timing of the Petroleum Activities Program.  | F: Yes<br>CS: Minimal cost.<br>Standard practice.                  | Communicating the Petroleum Activities Program to other marine users ensures they are informed and aware, thereby reducing the likelihood of interfering with other marine users.                   | Benefits outweigh cost/sacrifice.<br>Control is also Standard Practice. | Yes<br><b>C 1.6</b>    |

<sup>1</sup> Qualitative measure

| <b>Demonstration of ALARP</b>  |  |   |                                       |                        |
|--|--|---|---------------------------------------|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>8</sup></b>   | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>                | <b>Control Adopted</b> |
| Establish and maintain a publicly available interactive map which provides persons / organisations with updated information on activities being conducted as part of the Petroleum Activities Program including location of WIV.   | F: Yes.<br>CS: Minimal cost. Standard practice.  | Interactive map provides additional/alternate method for marine users to obtain information on the timing of activities, thereby reducing the likelihood of interference with other marine users. | Benefits outweigh cost/sacrifice.     | Yes<br><b>C 1.7</b>    |
| Notify Defence of activities no less than five weeks before the scheduled activity commencement date. This will include confirmation of any restricted airspace.   | F: Yes.<br>CS: Minimal cost. Standard practice.  | Communicating the Petroleum Activities Program to other marine users ensures they are informed and aware, thereby reducing the likelihood of interfering with other marine users.                 | Benefits outweigh cost/ sacrifice.    | Yes<br><b>C 1.8</b>    |
| <b>Professional Judgement – Eliminate</b>  |  |   |                                       |                        |
| Limit well intervention activities to avoid peak shipping and peak commercial fishing activities.  | F: No. Shipping occurs year-round and cannot be avoided. SIMOPS with fishing seasons cannot be eliminated as exact timings for activities are not confirmed.<br>CS: Not considered – control not feasible. | Not considered – control not feasible.  | Not considered – control not feasible | No                     |
| <b>Professional Judgement – Substitute</b>   |  |   |                                       |                        |
| No controls identified.  |  |   |                                       |                        |
| <b>Professional Judgement – Engineered Solution</b>  |  |   |                                       |                        |
| No controls identified.  |  |   |                                       |                        |
| <b>ALARP Statement</b>   |  |   |                                       |                        |
| <p>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, <b>Section 2.6.1</b>), Woodside considers the adopted controls appropriate to manage the impacts of the presence of the WIV and support vessels during the well intervention activity.</p> <p>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.</p> |  |   |                                       |                        |

| <b>Demonstration of Acceptability</b>  |
|--|
| <p><b>Acceptability Statement</b></p> <p>The adopted controls are considered consistent with industry good practice and professional judgement and meet the requirements and expectations of Australian Marine Orders, AMSA, DPIRD, and AHO identified during impact assessment and consultation. Feedback was received and issues raised have been considered in the impact assessment and finalisation of this EP. Further opportunities to reduce the impacts have been investigated above.</p> <p>The impact assessment has determined that, given the adopted controls, the presence of the WIV and project vessels during the well intervention activity may result in negligible, localised impacts with no lasting effect (&lt;1 month) to commercial fishing, recreational fishing, shipping and existing oil and gas infrastructure.</p> |

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**Demonstration of Acceptability**

The adopted controls are considered consistent with industry good practice and professional judgement and meet the requirements and expectations of AMSA and AHO identified during impact assessment and consultation.

Further opportunities to reduce the impacts have been investigated above. The potential impacts are considered broadly acceptable if the adopted controls are implemented. Therefore, Woodside considers the adopted controls appropriate to manage the impacts from the physical of the Petroleum Activities Program to a level that is broadly acceptable as outlined by Woodside’s acceptability criteria in **Section 2.7.2**.

**Environmental Performance Outcomes, Standards and Measurement Criteria**

| <b>Outcomes</b>   | <b>Controls</b>   | <b>Standards</b>   | <b>Measurement Criteria</b>  |
|---|---|--|--|
| <b>EPO 1</b><br>Undertake the Petroleum Activities Program in a manner that does not interfere with other marine users to a greater extent than is necessary for the exercise of right conferred by the titles granted. | <b>C.1.1</b><br>Vessels to adhere to the navigation safety requirements including the <i>Navigation Act 2012</i> and any subsequent Marine Orders   | <b>PS 1.1.1</b><br>Activity support vessels and WIV compliant with Navigation Act and Marine Order 21 (Safety of navigation and emergency procedures) 2012                 | <b>MC 1.1.1</b><br>Marine assurance inspection records demonstrate compliance with standard maritime safety procedures   |
|   | <b>C. 1.2</b><br>Establishment of a 500 m safety zone around WIV and 500 m exclusion zone around the installation vessel.   | <b>PS 1.2.1</b><br>No entry of unauthorised vessels within the 500 m safety exclusion zone   | <b>MC 1.2.1</b><br>Records demonstrate breaches by unauthorised vessels within the safety zone are recorded.   |
|   | <b>C 1.3</b><br>Notify AHO of activities and movements no less than four working weeks prior to the scheduled activity commencement date of well intervention activities.                 | <b>PS 1.3.1</b><br>Notification to AHO of activities and movements to allow generation of navigation warnings (MSIN and NTM [including AUSCOAST warnings where relevant]). | <b>MC 1.2.2</b><br>Consultation records demonstrate that AHO has been notified prior to commencement of well intervention activities to allow generation of navigation warnings (MSIN and NTM [including AUSCOAST warnings where relevant]). |
|   | <b>C 1.4</b><br>Notify relevant government departments, fishing industry representative bodies and licence holders of activities prior to commencement and upon completion of activities. | <b>PS 1.4.1</b><br>DPIRD, WAFIC and Pilbara Line licence holders notified prior to commencement and upon completion of activities.   | <b>MC 1.2.2</b><br><b>See above</b>  |
|   |   |  | <b>MC 1.4.1</b><br>Consultation records demonstrate that relevant persons / organisations have been notified prior to commencement of well intervention activities.  |

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| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b> |  |  |  |
|---|--|--|--|
| <b>Outcomes</b>   | <b>Controls</b>  | <b>Standards</b>   | <b>Measurement Criteria</b>  |
|   | <p><b>C 1.5</b><br/>Notify AMSA JRCC for the well intervention activities 24-48 hrs before operations commence.</p>  | <p><b>PS 1.5.1</b><br/>Notification to AMSA JRCC to prevent activities interfering with other marine users. AMSA's JRCC will require the WIV's details (including name, callsign and Maritime Mobile Service Identity), 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.</p> | <p><b>MC 1.5.1</b><br/>Consultation records demonstrate that AMSA JRCC has been notified within required timeframes.</p>   |
|   | <p><b>C 1.6</b><br/>Notify AHO and AMSA JRCC of any extended delay in the timing of the Petroleum Activities Program.</p>  | <p><b>PS 1.6.1</b><br/>AHO and AMSA JRCC notified of any extended delay in the timing of the Petroleum Activities Program.</p>   | <p><b>MC 1.6.1</b><br/>Consultation records demonstrate that AHO and AMSA JRCC were notified of extended delays in the timing of the Petroleum Activities Program.</p> |
|   | <p><b>C 1.7</b><br/>Establish and maintain a publicly available interactive map which provides persons / organisations with updated information on activities being conducted as part of the Petroleum Activities Program including location of WIV.</p> | <p><b>PS 1.7.1</b><br/>Activity interactive map established and maintained throughout activities.</p>  | <p><b>MC 1.7.1</b><br/>Records demonstrate interactive map was provided and available to persons / organisations throughout activities.</p>                            |
|   | <p><b>C 1.8</b><br/>Notify Defence of activities no less than five weeks before the scheduled activity commencement date. This will include confirmation of any restricted airspace.</p>   | <p><b>PS 1.8.1</b><br/>Notification to Defence five weeks prior to the scheduled activity commencement date.</p>   | <p><b>MC 1.8.1</b><br/>Records demonstrate that Defence has been notified prior to commencement of the Petroleum Activities Program.</p>                               |

### 6.6.2 Physical Presence: Seabed Disturbance from ROV Operations and Equipment Lay-down

| Context  |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
|--|--|-----------------|---------------|---|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-------------|--------------------|------------|
| Remotely Operated Vehicles – <b>Section 3.7.6</b><br>Marine Growth Removal – <b>Section 3.6.9</b><br>Underwater Acoustic Positioning – <b>Section 3.6.8</b>  |  |                 |               | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b><br>Cultural Values and Heritage – <b>Section 4.6.1</b> |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |             |                    |            |
| Impact Evaluation Summary  |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| Source of Impact   | Environmental Value Potentially Impacted |                 |               |   |                     |         |               | Evaluation                      |                    |            |             |             |                    |            |
|  | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour)  | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome    |
| Disturbance to seabed from ROV operations  |  | X               | X             |   | X                   |         | X             | A                               | F                  | -          | -           | GP          | Broadly Acceptable | EPOs 2 & 3 |
| Removal of marine habitat growth on Xmas trees and wellheads.  |  | X               | X             |   | X                   |         | X             | A                               | F                  | -          | -           |             |                    |            |
| Disturbance to seabed from placement of acoustic transponders on seabed  |  | X               | X             |   | X                   |         | X             | A                               | F                  | -          | -           |             |                    |            |
| Disturbance to seafloor from equipment lay-down  |  | X               | X             |   | X                   |         | X             | A                               | F                  | -          | -           |             |                    |            |
| Description of Source of Impact  |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |
| <p><b>ROVs</b></p> <p>ROVs may be used during well intervention activities for surveys, transponder deployment and retrieval, cleaning and for intervention support. The use of ROVs may result in temporary seabed disturbance and suspension of sediment causing increased turbidity as a result of working close to, or occasionally on, the seabed. ROV use close to or on the seabed is limited to that required for effective and safe subsea activities. The footprint of a typical work class ROV is approximately 2.5 m by 1.7 m (4.25 m<sup>2</sup>).</p> <p><b>Subsea Cleaning of Infrastructure</b></p> <p>Subsea cleaning and preparation activities include removing marine growth from infrastructure such as the Xmas tree (<b>Section 3.6.9</b>). Removing marine growth may be done in various ways (water jetting, brush systems, acid). Those that have the potential to impact the seabed include use of high-pressure water and/or brushes on ROVs.</p> <p><b>Underwater Acoustic Positioning</b></p> <p>Underwater acoustic positioning (long base line (LBL) and/or ultra-short baseline (USBL)) may be required to support intervention activities (see <b>Section 3.6.8</b>). 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) and have a typical footprint of approximately &lt; 1 m<sup>2</sup>. A typical seabed frame is 1.5 m x 1.5 m x 1.5 m in dimension and weighs about 40 kg. On completion of the positioning operation, the array transponders moored by clump weight are recovered by means of a hydrostatic release, which leaves the clump weight on the seabed. The transponders mounted on seabed frames will be removed by ROV.</p> <p><b>Equipment lay-down</b></p> <p>Equipment such as ROV frames and baskets may be placed on the seafloor during well intervention activities. Equipment lay-down is temporary and all equipment will be removed on the completion of well intervention activities.</p> |  |                 |               |   |                     |         |               |                                 |                    |            |             |             |                    |            |

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**Impact Assessment**

ROV operations, subsea cleaning, and transponder or equipment lay-down are likely to result in localised, short-term, physical disturbance of benthic habitat and indirect disturbance to benthic habitats from sedimentation.

**Water and sediment quality**

Seabed disturbance may result in a decline in water quality as a result of increased suspended sediment concentrations from ROV operations close to the seabed. The use of water jetting to remove marine growth on the wellhead structures will result in temporary suspension of organic matter and localised increase in turbidity. Water jetting will be limited to what is necessary to perform an effective inspection. However, resuspended sediment loads are not likely to be significant due to the relatively small footprint for each activity described above. Given the short nature of each activity, and the small footprint, any impacts to water and sediment quality are likely to be localised and transient in nature.

**Benthic Habitats and Communities**

Benthic habitats within the Operational Area consist of soft, unconsolidated sediments which host sparse assemblages of filter- and deposit-feeding epifauna and infauna, as well as demersal fishes. These soft sediment habitats, and associated biological communities, are widely represented throughout the NWMR and are not considered to be of particular conservation significance.

Direct seabed disturbance, including permanent modification of benthic communities, may result as a consequence of well intervention activities discussed above. These activities will typically disturb a relatively small area of soft sediment habitat, which is broadly represented in the Operational Area and wider NWS region. The removal of marine growth by water jetting or brushes, is likely to disturb a relatively small area of marine growth, and may be re-settled post well intervention activities. The estimated overall extent of such direct seabed disturbance is extremely small in relation to the extent of the soft sediment habitats which are broadly represented within the Operational Area and the wider NWS province.

**Ancient Coastline at 125 m depth contour**

The Operational Area overlaps the Ancient Coastline at 125 m Depth Contour KEF. The ecological values of the KEF are described in **Section 4.5.3**. These include the potential of enhanced productivity associated with sessile communities due to increased availability of nutrients and enhanced vertical mixing of water layers. While the Operational Area overlaps a small portion of the KEF, the ecological functions of the KEF (submerged coastline providing areas of hard substrate, diverse biological assemblages, enhanced productivity) are not predicted to be impacted by the Petroleum Activities Program. ROV activities near the seafloor may result in localised impacts to deep-water biota, as a result of elevated turbidity and the clogging of respiratory and feeding parts (turbidity) of filter-feeding organisms. However, elevated turbidity would only be expected to be very localised, and temporary, and is therefore not expected to have any significant impact to environment receptors, particularly given the low densities of benthic organisms at the water depths of the Operational Area.

Based on the above assessment, seabed disturbance and water quality impacts are unlikely to impact on the ecological value of the Operational Area and surrounding environment, including the Ancient Coastline at 125 m Depth Contour KEF.

Cumulative impacts in relation to other relevant petroleum activities are not predicted to occur as it is expected that any activities associated with the Petroleum Activities Program will be spatially and temporally separated from activities associated with the GWA infrastructure.

**Cultural Heritage**

As described in **Section 4.6.1** the activity occurs on the Ancient Landscape and therefore there is the potential that Indigenous Cultural features may exist and these may potentially be disturbed from placement of equipment on the seabed.

Archaeological assessment of the area where seabed disturbance may occur (500 m radius around the TPA03 well) by a qualified and experienced maritime archaeologist, including review of remote sensing data, has not identified any underwater cultural heritage that will be affected by the proposed activity (Nutley 2023).

Consultation with Traditional Custodians has not identified any cultural features or heritage values that will be affected by the project activities.

**Summary of Potential Impacts to Environmental Value(s)**

Given the adopted controls, seabed disturbance from the Petroleum Activities Program will result in localised impacts with no lasting effect (<1 month) to marine sediment, water quality and habitat (but not ecosystems) (i.e. Environment Impact F).

| Demonstration of ALARP  |  |   |                                    |   |
|---|--|---|------------------------------------|---|
| Control Considered  | Control Feasibility (F) and Cost/Sacrifice (CS) <sup>9</sup>                                       | Benefit/Reduction in Impact   | Proportionality                    | Control Adopted                         |
| <b>Legislation, Codes and Standards</b>   |  |   |                                    |   |
| No additional controls identified.  |  |   |                                    |   |
| <b>Good Practice</b>  |  |   |                                    |   |
| Any wet parked items will be tracked and removed from the seabed.   | F: Yes.<br>CS: Minimal cost. Standard practice.  | Removing wet parked items will reduce the duration of impact.   | Benefits outweigh cost/sacrifice.  | Yes<br><b>C 2.1</b>                     |
| Review of existing survey data by a suitably qualified maritime archaeologist to inform areas for laydown of equipment to avoid or where not possible, minimise physical impacts to cultural heritage areas or prospective areas. | F: Yes.<br>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.<br><br>Implementing this process will protect and minimise any physical impacts to underwater cultural heritage. Additionally, this process is not inconsistent with the draft guidelines for working in the near and offshore environment to protect Underwater Cultural Heritage (DCCEEW, 2023). | Benefits outweigh cost/ sacrifice. | Yes<br><b>Adopted See Section 4.6.1</b> |
| Unexpected finds of potential Underwater Cultural Heritage sites/ features, including First Nations UCH are managed in accordance with an Unexpected Finds Procedure set out in <b>Section 7.4.</b>                               | F: Yes.<br>CS: Cost of implementation  | Allows management of Unexpected Finds in accordance with legislative requirements, (including <i>Underwater Cultural Heritage Guidance for Offshore Developments</i> and the <i>DRAFT Guidelines to Protect Underwater Cultural Heritage</i> under the <i>UCH Act</i> , expert advice and community expectations.   | Benefits outweigh cost/ sacrifice. | Yes<br><b>C 3.1</b>                     |
| Report any potential underwater cultural heritage finds to relevant stakeholders and authorities in accordance with the Unexpected Finds Procedure, <i>Underwater Cultural Heritage Act 2018</i> and the ATSIHP Act               | F: Yes.<br>CS: Minimal costs associated with reporting process.                                    | Meets legislative requirements and community expectations.  | Benefit outweighs cost/ sacrifice. | Yes<br><b>C 3.2</b>                     |
| Relevant vessel crew and ROV operators will be advised in an induction of the potential to encounter UCH and requirement to   | F: Yes.<br>CS: Minimal cost.   | Ensures workforce are suitably aware of legal and process requirements for managing cultural features and heritage values.  | Benefits outweigh cost/ sacrifice. | Yes<br><b>C 3.3</b>                     |

<sup>9</sup> Qualitative measure

| <b>Demonstration of ALARP</b>   |   |  |   |                        |
|---|---|--|---|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>9</sup></b>  | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>  | <b>Control Adopted</b> |
| follow the Unexpected Finds Procedure (C 3.1).  |   |  |   |                        |
| Limit area for laydown of equipment to a 500 m radius of the TPA03 well.  | F: Yes.<br>CS: Minimal cost. Standard practice.   | Limiting area of laydown of equipment to a 500 m radius of the TPA03 well minimises the area over which seabed disturbance may occur.  | Benefits outweigh cost/ sacrifice.  | Yes<br><b>C 3.4</b>    |
| Environmental monitoring of the seabed prior to and following the Petroleum Activities Program to assess any impacts to seabed. | F: Yes.<br>CS: Significant. Monitoring of the seabed would have significant additional costs to obtain and analyse data with the spatial resolution to accurately assess changes to the seabed habitat. | Environmental monitoring would not result in any additional information about the seabed above what is provided by the Woodside Well Location and Site Appraisal Data Sheet. Therefore, no additional reductions in likelihood or consequence would occur.                               | Control grossly disproportionate. Monitoring will not reduce the consequence or likelihood of any impacts to the seabed, and the cost associated with the level of monitoring required to accurately assess any impacts greatly outweighs the benefits gained.<br><br>Although adoption of this control could be used to verify EPOs, alternative controls identified also allow demonstration that the environmental outcome has been met based on the nature of the activity (i.e. predictable impacts) and relatively low sensitivity of the area. | No                     |
| ROV survey before laydown of equipment on the seabed.   | F: Yes.<br>CS: Time/ cost associated with operating ROV survey and review of data.  | ROV conducting a survey prior to placing equipment on the seabed could identify any potential cultural heritage or prospective areas not identified during the archaeological review.<br><br>However, the archaeological review conducted for this activity considered that the existing | Given the results of the archaeological survey, the negligible and the implementation of C3.1   | No                     |

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| <b>Demonstration of ALARP</b>   |  |   |                                     |                        |
|---|--|---|-------------------------------------|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>9</sup></b>   | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>              | <b>Control Adopted</b> |
|   |  | bathymetrical modelling is sufficient to inform the submerged cultural heritage impacts assessment, meaning an ROV survey before laydown of equipment on the seabed would provide negligible benefit in identifying cultural features or prospective cultural features. |                                     |                        |
| <b>Professional Judgement – Eliminate</b>   |  |   |                                     |                        |
| 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 well intervention activities. ROV usage is already limited to only that required to conduct the work effectively and safely. Due to visibility and operational issues, ROV work on or close to the seabed is avoided unless necessary.<br><br>CS: Not assessed, control not feasible. | Not assessed, control not feasible.   | Not assessed, control not feasible. | No                     |
| <b>Professional Judgement – Substitute</b>  |  |   |                                     |                        |
| No additional controls identified.  |  |   |                                     |                        |
| <b>Professional Judgement – Engineered Solution</b>   |  |   |                                     |                        |
| No additional controls identified.  |  |   |                                     |                        |
| <b>ALARP Statement</b>  |  |   |                                     |                        |
| On the basis of the environmental impact assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type A, <b>Section 2.6.1</b> ), Woodside considers the adopted controls appropriate to manage the impacts of benthic habitat disturbance from ROV operations, subsea cleaning and preparation, acoustic transponder placement and ROV operations. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts are considered ALARP. |  |   |                                     |                        |

| <b>Demonstration of Acceptability</b>   |
|---|
| <b>Acceptability Statement</b>  |
| The impact assessment has determined that, given the adopted controls, disturbance to benthic habitats from the Petroleum Activities Program may result in slight and short term effects (<1 year) or lower to habitat (but not affecting ecosystems function), physical and biological attributes of benthic habitats. |

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| <b>Demonstration of Acceptability</b>  |  |  |  |
|--|--|--|--|
| <p>Woodside acknowledges that uncertainty on cultural values may remain; however, the Ongoing Program on Traditional Custodian Feedback (<b>EPO 16</b> and <b>C 1.9</b>) has been developed to enable Woodside to manage potential uncertainty on the impacts and risks to cultural values which may be identified at any time during Woodside's activities via ongoing dialogue with Traditional Custodians.</p> <p>The adopted controls are considered consistent with industry good practice and professional judgement. On the basis of the environmental impact assessment outcomes and Woodside's criteria for acceptability outlined in <b>Section 2.7.2</b>, this is considered an acceptable level of impact.</p> |  |  |  |
| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>  |  |  |  |
| <b>Outcomes</b>  | <b>Controls</b>  | <b>Standards</b>   | <b>Measurement Criteria</b>  |
| <p><b>EPO 3</b><br/>No adverse impact to Underwater Cultural Heritage<sup>11</sup> without a permit<sup>12</sup></p>   | <p><b>C 3.1</b><br/>Unexpected finds of potential Underwater Cultural Heritage sites / features, including First Nations UCH are managed in accordance with an Unexpected Finds Procedure set out in <b>Section 7.4</b>.</p> | <p><b>PS 3.1.1</b><br/>In the event that an Underwater Cultural Heritage site or feature is identified, implement an Unexpected Finds Procedure set out in <b>Section 7.4</b>.</p>   | <p><b>MC 3.1.1</b><br/>No non-compliance with the Unexpected Finds Procedure.</p>                            |
|  | <p><b>C 3.2</b><br/>Report any potential UCH finds to relevant stakeholders and authorities in accordance with the Unexpected Finds Procedure, <i>Underwater Cultural Heritage Act 2018</i> and the ATSIHP Act.</p>          | <p><b>PS 3.2.1</b><br/>Report any finds of potential UCH in accordance with the Unexpected Finds Procedure (<b>Section 7.4</b>) including to:</p> <ul style="list-style-type: none"> <li>• Australasian Underwater Cultural Heritage Database</li> </ul> | <p><b>MC 3.2.1</b><br/>Records of potential UCH finds reported to relevant authorities and stakeholders.</p> |
|  | <p><b>C 3.3</b><br/>Relevant vessel crew and ROV operators will be advised in an induction of the potential to encounter UCH, and of their requirement to follow the Unexpected Finds Procedure (<b>C 3.1</b>).</p>          | <p><b>PS 3.3.1</b><br/>Relevant vessel crew (including ROV operators) are made aware of the requirements of the Unexpected Finds Procedure through an induction.</p>   | <p><b>MC 3.3.1</b><br/>Records demonstrate vessel crew are made aware of potential to encounter UCH.</p>     |
| <p><b>EPO 2</b><br/>No impacts to benthic habitats greater than a consequence level of F<sup>10</sup> inside the Operational Area during the Petroleum Activities Program.</p>   | <p><b>C 2.1</b><br/>Monitor inventory deployed to field and track removal of equipment during activity, and list residual infrastructure.</p>  | <p><b>PS 2.1.1</b><br/>Any wet parked items will be tracked and removed from the seabed.</p>   | <p><b>MC 2.1.1</b><br/>Surveys demonstrate removal of wet parked items.</p>                                  |

<sup>10</sup> Defined as localised impacts with no lasting effect (<1 month) to marine sediment, water quality and habitat (but not ecosystems)

<sup>11</sup> Underwater Cultural Heritage is defined as any trace of human existence that has a cultural, historical or archaeological character and is located under water, in accordance with the UCH Act

<sup>12</sup> Permit for Entry into a Protected Zone or to Impact Underwater Cultural Heritage would be acquired through the UCH Act.

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| <b>Demonstration of Acceptability</b> |   |  |   |
|---------------------------------------|---|--|---|
|                                       | <p><b>C 3.4</b><br/>Limit area for laydown of equipment to a 500m radius of the TPA03 well.</p> | <p><b>PS 3.4.1</b><br/>Laydown of equipment occurs within a 500m radius of the TPA03 well.</p> | <p><b>MC 3.4.1</b><br/>Records demonstrate equipment laydown occurs within a 500m radius of the TPA03 well.</p> |

### 6.6.3 Routine Acoustic Emissions: Generation of Noise from WIV, Project Vessels, WIV, and Positioning Equipment

| Context   |  |                 |   |                          |                     |         |               |                                 |                    |            |             |             |                    |         |
|---|--|-----------------|---|--------------------------|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-------------|--------------------|---------|
| WIV Operations – <b>Section 3.7.3</b><br>Vessel Operations – <b>Section 3.7.3</b><br>Underwater Acoustic Positioning – <b>Section 3.6.8</b>   |  |                 | Biological Environment – <b>Section 4.5</b> |                          |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |             |                    |         |
| Impact Evaluation Summary   |  |                 |   |                          |                     |         |               |                                 |                    |            |             |             |                    |         |
| Source of Impact  | Environmental Value Potentially Impacted |                 |   |                          |                     |         |               | Evaluation                      |                    |            |             |             |                    |         |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality                               | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome |
| Generation of acoustic signals from DP systems on WIV and support vessels.  |  |                 |   |                          |                     | X       |               | A                               | F                  | -          | -           | G<br>P<br>J | Broadly acceptable | EPO 4   |
| Generation of acoustic signals from WIV and support vessels during normal operations.   |  |                 |   |                          |                     | X       |               | A                               | F                  | -          | -           |             |                    |         |
| Generation of acoustic signals from positioning equipment (transponders)  |  |                 |   |                          |                     | X       |               | A                               | F                  | -          | -           |             |                    |         |
| Description of Source of Impact   |  |                 |   |                          |                     |         |               |                                 |                    |            |             |             |                    |         |
| <p>Project vessels and the WIV will generate noise both in the air and underwater, due to the operation of thruster engines, propeller cavitation, intervention operations, on-board machinery etc. These noises will contribute to and have the potential to exceed ambient noise levels which typically 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).</p> <p><b>WIV, Support vessels and Operation of Dynamic Positioning Systems</b></p> <p>Vessels used for the Petroleum Activities Program are detailed in <b>Section 3.7</b>. The sound levels and frequencies generated by vessels varies with the size of the vessel, speed, engine type and the activity being undertaken. Large vessels typically produce higher sound levels at lower frequencies than small vessels, although significant variation may be found among vessels within the same group (Jiménez-Arranz et al., 2020). Sound levels tend to be greatest when engaging the throttle or thrusters, such as use of DP or when vessels are operating under load, compared with slow moving or idling vessels (Salgado Kent et al. 2016).</p> <p>The WIV and general support vessels will not anchor within the Operational Area; therefore, vessels will use DP. Vessels maintain DP for varying durations during the Petroleum Activities Program, depending on the activity being undertaken. Sources of sound from the WIV are expected to occur primarily from cavitation in thrusters whilst under DP (Connell et al., 2021).</p> <p>The noise modelling conducted by JASCO for the Cooper Energy BMG P&amp;A activities in the Bass Strait (Connell et al, 2021) provides a suitable analogue to the size and type of WIV and support vessels planned for use during the TPA03 well intervention. The WIV was modelled whilst under DP with a PSV (also under DP during resupply) in 132 m water depth at the Manta-2A well location. Given the water depth at the TPA03 location is 115 m, the modelling results for the WIV plus PSV at the Manta-2A well location are regarded as a suitable analogue for the same and similar vessels under DP at the TPA03 location.</p> |  |                 |   |                          |                     |         |               |                                 |                    |            |             |             |                    |         |

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Connell (2021) modelled the underwater broadband energy source level (ESL) for the WIV as 188.9 dB re 1 µPa (10 Hz to 25 kHz) at a water depth of 132.2 m in the Bass Strait. Broadband ESL for support vessels was also determined as 185.2 dB re 1 µPa (10 Hz to 25 kHz). Similarly, McCauley (1998) measured underwater broadband noise equivalent to approximately 182 dB re 1 µPa at 1 m (rms SPL) from a support vessel holding station using DP in the Timor Sea; Hannay et al. (2004) and McCauley (2005) have measured source level for support vessel with DP of 186 dB re 1 µPa at 1 m. Whilst the specific support vessels for this activity have not been identified, it is expected that they will be of a similar size to those described, and similar noise levels will be generated by vessels used for this Petroleum Activities Program.

The WIV may be on location for between 5 to 14 days, between December 2022 and March 2023. When ongoing, activities will be 24 hours per day, seven days per week.

Cumulative noise from the WIV and/or multiple project vessels operating in the Operational Area may result in slightly elevated noise levels, though this is not expected to significantly increase impacts to marine fauna. The WIV with a support vessel on standby are conservatively expected to have an overall combined source level of 194.9 dB re 1 µPa (rms SPL), which represents a doubling of noise output from the single loudest source (i.e. 188.9 dB + 6 dB). (Connell et al., 2021).

**Underwater positioning equipment**

An array of long baseline (LBL) and/or ultra-short baseline (USBL) transponders may be installed on the seabed to support intervention activities (**Section 3.6.8**). These will be installed within a 500 m radius from the well and will be active whilst the WIV is on location.

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., 2020). 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). Transmissions from USBL transponders are similar to LBL transponders.

**Table 6-2: Sources of aspect, and the operating frequency and noise levels**

| Source of aspect      | Operating frequency (kHz) | Source Level          |                       | Sound category | Reference  |
|-----------------------|---------------------------|-----------------------|-----------------------|----------------|--|
|                       |                           | SPL (L <sub>p</sub> ) | PK (L <sub>pk</sub> ) |                |  |
| WIV (DP)              | 0.01-25                   | 188.9                 | -                     | Continuous     | Connell (2021)   |
| Support vessels (DP)  | 0.01-25                   | 181-186               | -                     | Continuous     | Connell (2021)<br>McCauley (1998, 2005)<br>Hannay (2004) |
| Positioning equipment | 21-31                     | 180-206               | -                     | Impulsive      | Jimenez-Arranz et al. (2020)                             |

**Cumulative noise sources**

Cumulative noise from activities conducted under the GWA Operations EP in nearby infrastructure, may result in slightly elevated noise levels, though this is not expected to significantly increase impacts to marine fauna. Activities conducted under the GWA Operations EP would typically consist of one IMMR project vessel, and are unlikely to occur concurrently to well intervention activities.

**Impact Assessment**

**Receptors**

The Operational Area is located in waters 113 m deep. The fauna associated with this area will be predominantly pelagic species of fish, with migratory species such as cetaceans, whale sharks and marine turtles potentially present in the area seasonally (**Section 4.5.2.5**). Noise interference is a key threat to a number of migratory and threatened cetaceans and marine turtles identified as potentially occurring within Operational Area.

The Operational Area overlaps BIAs for flatback turtles (internesting) and whale sharks (foraging). Flatback turtles nest in the region between October and March, however, given water depths and distance from shore, the area does not constitute foraging or important internesting habitat. Satellite tracking of flatback turtle nesting populations (Barrow Island and mainland sites) indicates this species travels to the east of Barrow Island between nesting events, within WA mainland coastal waters less than 70 m deep (Chevron Australia Pty Ltd, 2015).

Whale sharks will be present between March and November. Cetaceans, such as pygmy blue whales and humpback whales, and other marine turtle species may also be present within the Operational Area seasonally; however, no

BIAs or other important areas for these species overlap the Operational Area. The migration BIAs for humpback and pygmy blue whales are located 25 km and 43 km from the Operational Area respectively.

Whilst the Ancient Coastline KEF may be associated with outcroppings of hard substrate, no evidence of significant reefs associated with such outcroppings has been found in the Operational Area. Some demersal fish are likely to be associated with subsea infrastructure such as pipelines (McLean et al. 2017).

**Potential Impact of Noise**

Elevated underwater noise can affect marine fauna, including cetaceans, fish, turtles, sharks and rays, in three main ways (Richardson et al., 1995; Simmonds et al., 2004):

- by causing direct physical effects on hearing or other organs. Hearing loss may be temporary (temporary threshold shift [TTS]; referred to as auditory fatigue), or permanent threshold shift (PTS; injury)
- by masking or interfering with other biologically important sounds (including vocal communication, echolocation, signals and sounds produced by predators or prey)
- through disturbance leading to behavioural changes or displacement from important areas (e.g. BIAs). The occurrence and intensity of disturbance is highly variable and depends on a range of factors relating to the animal and situation.

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.

Marine Mammals

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), physical damage and stress (NRC, 2003; Erbe, 2012; Rolland et al., 2012). There is little information available regarding call masking in whales (Richardson et al., 1995), although it has been suggested that an observed lengthening of calls in response to low-frequency noise in humpback whales and orcas may be a response to auditory masking (Fristrup et al., 2003; Foote et al., 2004). Exposure to intense impulsive noise may be more hazardous to hearing than continuous noise.

The thresholds that could result in a behavioural response, temporary threshold shift (TTS) and permanent threshold shift (PTS) for cetaceans as a result of continuous noise sources are presented in **Table 6-3**. These thresholds have been adopted by the United States National Oceanic and Atmospheric Administration (NOAA) (National Marine Fisheries Service [NMFS], 2018; Southall et al., 2019; NOAA 2018).

**Table 6-3: Thresholds for PTS, TTS and behavioural response onset in low-frequency (LF) and high-frequency (HF) cetaceans for impulsive and continuous noise**

| Hearing group | Impulsive   |   |                                    | Continuous  |   |                                    |
|---------------|---|---|------------------------------------|---|---|------------------------------------|
|               | PTS onset thresholds: SEL <sub>L24h</sub> (dB re 1 µPa <sup>2</sup> .s) | TTS onset thresholds: SEL <sub>L24h</sub> (dB re 1 µPa <sup>2</sup> .s) | Behavioural response (dB re 1 µPa) | PTS onset thresholds: SEL <sub>L24h</sub> (dB re 1 µPa <sup>2</sup> .s) | TTS onset thresholds: SEL <sub>L24h</sub> (dB re 1 µPa <sup>2</sup> .s) | Behavioural response (dB re 1 µPa) |
| LF cetaceans  | 183   | 168   | 160                                | 199   | 179   | 120                                |
| HF cetaceans  | 185   | 170   |                                    | 198   | 178   |                                    |

Source: NMFS (2014, 2018; Southall, 2019; NOAA, 2018).

Marine Turtles

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, indicating that they have the highest hearing sensitivity in the frequency range 100 – 700 Hz (Bartol and Musick, 2003). 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).

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. McCauley et al. (2000) observed the behavioural response of caged sea turtles—green (*Chelonia mydas*) and loggerhead (*Caretta caretta*)—to an approaching seismic airgun. For received levels above 166 dB re 1 µPa (SPL), the turtles increased their swimming activity and above 175 dB re 1 µPa (SPL) they began to behave erratically, which was interpreted as an agitated state.

Proposed sound exposure thresholds for marine turtles are summarised in **Table 6-4** below. A Popper et al. (2014) review assessed thresholds for marine turtles and found qualitative results that the risk of behavioural disturbance

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was high for near field exposure, moderate for intermediate field exposure and low for far field exposure (Popper et al., 2014).

**Table 6-4: Thresholds for PTS, TTS and behavioural response onset in marine turtles for impulsive and continuous noise**

| Hearing group  | Impulsive  |  |                                    | Continuous   |  |                                     |
|----------------|--|--|------------------------------------|--|--|-------------------------------------|
|                | PTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | TTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | Behavioural response (dB re 1 µPa) | PTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | TTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | Behavioural response (dB re 1 µPa)  |
| Marine turtles | 204  | 189  | 166*<br>175+                       | 220  | 200  | (N) High<br>(I) Moderate<br>(F) Low |

Source: PTS and TTS thresholds (Finneran et al., 2017), \* behavioural response threshold (NSF 2011), + behavioural disturbance threshold (McCauley et al. 2000).

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).

**Fish**

The majority of fish species detect sounds from <50 Hz up to 500-1500 Hz (Popper and Hawkins, 2019). A smaller number of species can detect sounds over 3 kHz, while very few species can detect ultrasound over 100 kHz (Ladich and Fay, 2013). The critical issue for understanding whether an anthropogenic sound will affect the hearing of a fish is whether it is within the hearing frequency range of the fish and loud enough to be detectable above background ambient noise.

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 (including whale sharks) 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 considering differences in fish physiology; these are presented in **Table 6-5**.

**Table 6-5: Thresholds for PTS, TTS and behavioural response onset in fish, sharks and rays for impulsive and continuous noise**

| Hearing group                              | Impulsive  |  |                                      | Continuous   |  |   |
|--|--|--|--------------------------------------|--|--|---|
|  | PTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | TTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | Behavioural response (dB re 1 µPa)   | PTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | TTS onset thresholds: SEL <sub>24h</sub> (dB re 1 µPa <sup>2</sup> .s) | Behavioural response (dB re 1 µPa)      |
| Fish: no swim bladder                      | 216  | 186  | (N) High<br>(I) Moderate<br>(F) Low  | (N) Low<br>(I) Low<br>(F) Low  | (N) Moderate<br>(I) Low<br>(F) Low                                     | (N) Moderate<br>(I) Moderate<br>(F) Low |
| Fish: swim bladder not involved in hearing | 203  | 186  | (N) High<br>(I) Moderate<br>(F) Low  | (N) Low<br>(I) Low<br>(F) Low  | (N) Moderate<br>(I) Low<br>(F) Low                                     | (N) Moderate<br>(I) Moderate<br>(F) Low |
| Fish: swim bladder involving hearing       | 203  | 186  | (N) High<br>(I) High<br>(F) Moderate | 170 dB rms SPL for 48-hours  | 158 dB rms SPL for 12-hours  | (N) High<br>(I) Moderate<br>(F) Low     |

Impulsive noise:

All criteria are presented as sound pressure, even for fish without swim bladders, since no data for particle motion exist.

Continuous noise:

rms SPL: root mean square of time-series pressure level, useful for quantifying continuous noise sources.

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Relative risk (high, moderate, or low) is given for animals at three distances from the source defined in relative terms as near (N), intermediate (I), and far (F).  
 Source: Popper et al. (2014)

**WIV and Support Vessels Noise Impacts**

**Cetaceans**

Connell et al. (2021) modelled acoustic emissions from the WIV, and with a project support vessel on DP, in similar water depths in the Bass Strait to the Operational Area. As described above, the WIV and support vessels are conservatively expected to have source levels of 188.9 dB re 1 µPa (rms SPL) and 185.2 dB re 1 µPa (rms SPL) respectively.

Modelling of sound propagation loss for the WIV on DP, predicted that noise levels would drop below 120 dB re 1 µPa (behavioural response threshold for continuous noise sources; **Table 6-3**) within 25.6 km. The modelling also estimated propagation of combined noise from the WIV and support vessel alongside, both operating on DP. The modelling predicted combined noise levels from the two vessels would drop below 120 dB within 28.7 km.

Table 6-6 describes maximum horizontal distances for PTS and TTS onset. For the WIV operating on DP, PTS onset is predicted to occur within 0.1 km for LF cetaceans and is not predicted for HF cetaceans. For TTS onset, the maximum predicted distance was 3.49 km for LF cetaceans and 0.05 km for HF cetaceans. For the WIV with support vessel alongside, PTS onset could occur within 0.11 km for LF cetaceans and is not predicted for HF cetaceans. TTS onset could occur within 3.82 km and 0.06 km for LF and HF cetaceans respectively. However, PTS and TTS criteria exceedances are based upon exposure for 24-hours by a stationary receptor. The SEL<sub>24h</sub> criterion is a cumulative metric that reflects the dosimetric impact of sound energy accumulated over a 24-hour period and assumes that an animal is consistently exposed to such noise levels at a fixed location. The radii that correspond to SEL<sub>24h</sub> therefore represent a highly unlikely scenario for SEL-based exposure since, more realistically, marine fauna would not stay in the same location or at the same range for 24-hours (Connell et al., 2021). PTS and TTS thresholds are highly unlikely to be exceeded for cetaceans transiting through the Operational Area. Furthermore, the Operational Area is surrounded by open water, with no restrictions (such as shallow waters, embayments) on an animal's ability to avoid the activities.

Pygmy blue and humpback whales may occur in Operational Area, during migratory periods, as well as other transitory cetaceans. Interactions between whales and vessels typically results in avoidance behaviour, with whales generally moving away from vessels (Bauer 1986; Stamation et al., 2010). Therefore, potential impacts to pygmy blue whales and humpback whales from predicted noise levels are expected to be limited to behavioural impacts within a localised area around vessels with no lasting effect. As the pygmy blue whale migration BIA is 43 km from the Operational Area and modelling of sound propagation for the WIV on DP predicted that noise levels would drop below the behavioural response threshold for continuous noise sources (120 dB re 1 uPa) within 25.6 km, the activity is not expected to cause a behavioural response in pygmy blue whales within the migration BIA.

Transponders used for positioning have the potential to cause some temporary behavioural disturbance to marine fauna; 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.

Potential impacts from predicted noise levels from project vessels (including WIV and support vessels) and transponders are not considered to be ecologically significant at a population level.

**Table 6-6: Maximum ( $R_{max}$ ) horizontal distances (km) to frequency-weighted SEL<sub>24h</sub> PTS and TTS thresholds for cetaceans**

| Hearing group | Frequency weighted SEL <sub>24h</sub> threshold ( $L_{E,24h}$ ; dB re 1 µPa <sup>2</sup> ·s) | WIV operations ( $R_{max}$ distance, km) | WIV operations with support vessel on DP ( $R_{max}$ distance, km) |
|---------------|--|--|--|
| <b>PTS</b>    |  |  |  |
| LF cetaceans  | 199  | 0.1                                      | 0.11   |
| HF cetaceans  | 198  | -  | -  |
| <b>TTS</b>    |  |  |  |
| LF cetaceans  | 179  | 3.49                                     | 3.82   |
| HF cetaceans  | 178  | 0.05                                     | 0.06   |

NB. A dash indicates the level was not reached within the limits of the modelled resolution (20 m).

**Marine Turtles**

Five species of marine turtle may occur in the Operational Area: flatback, green, hawksbill, loggerhead and leatherback turtles. As discussed above, there is a paucity of data regarding responses of marine turtles to continuous underwater noise. However, given the thresholds outlined in **Table 6-4**, it is reasonable to expect that marine turtles may demonstrate avoidance or attraction behaviour to the noise generated by the Petroleum Activities Program.

As described above, acoustic modelling (Connell et al., 2021) was conducted for scenarios including the WIV, and the WIV and support vessel on DP. Based on the application of the multiple SEL<sub>24h</sub> thresholds (Finneran et al., 2017), PTS was not predicted to occur within the modelling resolution (20 m), and turtles could potentially experience TTS within 0.09 km from the WIV and 0.11 km from the WIV with support vessel on DP alongside (**Table 6-7**). However, marine turtles within the Operational Area are expected to be transient, and unlikely to remain within 110 m of the vessels for 24-hours, and therefore TTS thresholds are not expected to be reached. Behavioural impacts to marine turtles from continuous noise sources generated by the Petroleum Activities Program are expected to be short-term and localised,

**Table 6-7: Maximum predicted horizontal distances (R<sub>max</sub>) to PTS and TTS thresholds for marine turtles**

| Hearing group  | Sound exposure threshold                              | WIV operations (R <sub>max</sub> distance, km) | WIV operations with support vessel on DP (R <sub>max</sub> distance, km) |
|----------------|---|--|--|
| Marine turtles | <b>PTS</b>  |  |  |
|                | 220 dB re 1 µPa <sup>2</sup> .s (SEL <sub>24h</sub> ) | -  | -  |
|                | <b>TTS</b>  |  |  |
|                | 200 dB re 1 µPa <sup>2</sup> .s (SEL <sub>24h</sub> ) | 0.09   | 0.11   |

N.B. A dash indicates the threshold was not reached within the limits of the modelling resolution (20 m).

**Fish, Sharks and Rays**

Sound produced by the project vessels on DP could cause recoverable injury or TTS to some fish species with a swim bladder involved in hearing, but only if the fishes are in very close proximity to the sound source for extended periods.

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. While fish may initially be startled and move away from the sound source, once the source moves on fish would be expected to move back into the area.

The Operational Area overlaps a small proportion of the foraging BIA for whale sharks and they may be seasonally present between March and November (with the annual peak aggregation at Ningaloo Reef between April and May). Behavioural disturbance to whale sharks as a result of vessel noise may result in a temporary deviation on their migration route, which covers a wide area and is not spatially restricted. Potential impacts from acoustic emissions on fish, sharks and rays are likely to be restricted to localised and temporary avoidance behaviour whilst transiting through the Operational Area, and individuals impacted are unlikely to represent a significant proportion of the population with the Operational Area and the NWS region overall.

**Cumulative impacts**

The Operational Area is located 12 km from the producing GWA facility and 0.18km East of the nearest shipping fairway. Therefore, there is the potential for cumulative impacts from underwater noise emissions associated with shipping vessels and GWA IMR vessel activities. The combined sound fields are likely to result in a marginal increase the maximum range to the behavioural response threshold for LF cetaceans (i.e. >15 km). Notably, IMR activities that may occur at the GWA platform are likely to be conducted by one project vessel, meaning this additional cumulative noise source would be very limited. Therefore, the potential for significant cumulative impacts from underwater noise emissions to occur from concurrent activities around the GWA platform is minimal.

**Summary of Potential Impacts to environmental value(s)**

It is considered that noise generated by the WIV and support vessels and positioning transponders will not result in a potential impact greater than localised impacts, with no lasting effect on marine fauna.

| <b>Demonstration of ALARP</b>   |   |  |   |                        |
|---|---|--|---|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>13</sup></b>                     | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>  | <b>Control Adopted</b> |
| <b>Legislation, Codes and Standards</b>   |   |  |   |                        |
| EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans, including the following measures: <ul style="list-style-type: none"> <li>• Support vessels will not travel greater than 6 knots within 300 m of a cetacean or turtle (caution zone) and not approach closer than 100 m from a whale.</li> <li>• Support 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).</li> <li>• If the cetacean or turtle shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.</li> <li>• Support vessels will not travel 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.</li> </ul> | F: Yes.<br>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 adopted based on legislative requirements – must be adopted. | Yes<br><b>C 4.1</b>    |
| <b>Good Practice</b>  |   |  |   |                        |
| Use of aircraft to carry out visual observations for pygmy blue whale foraging activity (aerial survey).  | F: Yes<br>CS: Time/ cost associated with chartering aircraft and use of dedicated MFOs. | Aerial surveys could assist in identifying pygmy blue whale foraging activity over a larger monitoring zone.   | Disproportionate. The cost/ sacrifice outweighs benefit gained.       | No                     |

<sup>1</sup> Qualitative measure

| <b>Demonstration of ALARP</b>   |  |   |  |                        |
|---|--|---|--|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>13</sup></b>  | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>   | <b>Control Adopted</b> |
|   |  |   | As the Operational Area does not overlap the pygmy blue whale migration and foraging BIAs, presence of PBWs carrying out opportunistic foraging activities in the area is not likely. Adequate observations are able to be made from support vessel bridge crews. It is not expected that an aircraft would add significantly more value than this, to warrant deployment. |                        |
| Move support vessel(s) away from WIV (>3.6 km) if foraging pygmy blue whale(s) observed within 500 m – when support vessel is not being used to perform functionality as required by Safety Case                                    | F: Yes<br>CS: Time / Cost associated with vessel moving and delay to activities which cannot be carried out without support vessel present and at required standby distance  | Can reduce cumulative noise and potential reduction in likelihood of impact to foraging Pygmy Blue Whales   | Disproportionate. The cost/sacrifice outweighs benefit gained.<br>As the Operational Area does not overlap the pygmy blue whale migration and foraging BIAs, presence of PBWs carrying out opportunistic foraging activities is not likely.  | No                     |
| The use of dedicated Marine Fauna Observers (MFOs) on project vessels for the duration of the Petroleum Activities Program to watch for whales and provide direction on and monitor compliance with Part 8 of the EPBC Regulations. | F: Yes. However, activity support vessel bridge crews already maintain a constant watch during operations in compliance with the Woodside Marine – Charterers Instructions, on the requirements of vessel and whale interactions. In the event of a cetacean (or other sensitive fauna) in close proximity to project vessels, it is unlikely that DP (the most significant source of underwater noise expected during the Petroleum Activities Program) will be deactivated given it is a | Given that support vessel bridge crews already maintain a constant watch during operations, additional MFOs would not further reduce the likelihood or consequence of impact. | Disproportionate. The cost/sacrifice outweighs the benefit gained.   | No                     |

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| <b>Demonstration of ALARP</b>  |  |  |  |                        |
|--|--|--|--|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>13</sup></b>  | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>   | <b>Control Adopted</b> |
|  | safety critical requirement for project vessels to hold station. As such, an MFO implementing management / shut down zones is considered to be ineffective.<br>CS: Additional cost of MFOs   |  |  |                        |
| Undertake site-specific acoustic modelling   | F: Yes, feasible to undertake site-specific modelling; however, the generation of noise from these sources is already well understood and this noise cannot be eliminated due to operating requirements.<br>CS: Additional cost of modelling.  | Assessment of potential impacts of underwater acoustic emissions based on applicable analogue modelling results.<br>Given that noise cannot be eliminated due to operating requirements, modelling would not further reduce the likelihood or consequence of impact, noting that no activities of significant noise generation (i.e. explosives) are proposed. | Disproportionate. The cost/sacrifice outweighs the benefit gained. | No                     |
| <b>Professional Judgement – Eliminate</b>  |  |  |  |                        |
| Remove support vessel on standby at the Petroleum Activities Program location.                                   | F: No. Activity support vessel required as per WIV Safety Case, particularly for maintaining the 500 m safety exclusion zone around the HIV.<br>CS: Introduces unacceptable safety risk.   | Not considered – control not feasible.   | Not considered – control not feasible.                             | No                     |
| Eliminate the use of DP on vessels during the Petroleum Activities Program.                                      | F: No. Both WIV and support vessels are required to reliably hold station during the Petroleum Activities Program. Failure to do so may lead to loss of separation between vessels and infrastructure. This would result in unacceptable safety and environmental risk.<br>CS: Not considered, control not feasible. | Not considered – control not feasible.   | Not considered – control not feasible.                             | No                     |
| Elimination of noise from the project vessels (including WIV and support vessels), and positioning transponders. | F: No. The generation of noise from these sources cannot be eliminated due to operating requirements.<br>CS: Inability to conduct the Petroleum Activities Program. Loss of project.   | Not considered – control not feasible.   | Not considered – control not feasible.                             | No                     |

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| <b>Demonstration of ALARP</b>  |  |  |  |                        |
|--|--|--|--|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>13</sup></b>  | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>   | <b>Control Adopted</b> |
| <b>Professional Judgement – Substitute</b>   |  |  |  |                        |
| Avoid peak migration periods for migratory cetaceans.  | <p>F: Yes. Migration periods for cetaceans that may occur in the Operational Area (pygmy blue and humpback whales) are well known.</p> <p>CS: Potentially significant. Woodside has not finalised the schedule for the Petroleum Activities Program, and some activities may be undertaken on an opportunistic basis and in succession to one another while a vessel is available. Precluding operations during cetacean migration periods may impose a considerable cost and operational burden, while resulting in little environmental benefit.</p> | <p>No overlap between Operational Area and pygmy blue whale and humpback whale migration BIAs.</p> <p>Avoiding migration periods would reduce the likelihood of impacts to cetaceans. However, given that the predicted impacts from noise sources associated with the Petroleum Activities Program are considered to be localised with no lasting effect, the overall benefit is minimal.</p> | Disproportionate. The cost/sacrifice outweighs the benefit gained. | No                     |
| <b>Professional Judgement – Engineered Solution</b>  |  |  |  |                        |
| No additional controls identified.   |  |  |  |                        |
| <b>ALARP Statement</b>   |  |  |  |                        |
| 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 potential impacts from noise generated from the Petroleum Activities Program to be ALARP. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts are considered ALARP.  |  |  |  |                        |
| <b>Demonstration of Acceptability</b>  |  |  |  |                        |
| <b>Acceptability Statement</b>   |  |  |  |                        |
| <p>The impact assessment has determined that noise disturbance from the WIV, support vessels and transponders may result in localised impacts to species with no lasting effect. BIAs overlapping the Operational Area include flatback turtle interning and whale shark foraging BIAs. Migration BIAs for humpback and pygmy blue whales are located 25 and 43 km from the Operational Area, respectively. Relevant recovery plans and conservation advice have been considered during the impact assessment, and the Petroleum Activities Program is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice (<b>Section 6.8</b>).</p> <p>The adopted controls are considered consistent with industry good practice and professional judgement. On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in <b>Section 2.7.2</b>, this is considered an acceptable level of impact.</p> |  |  |  |                        |

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| Environmental Performance Outcomes, Standards and Measurement Criteria  |   |  |   |
|---|---|--|---|
| Outcomes  | Controls  | Standards  | Measurement Criteria  |
| <p><b>EPO 4</b><br/>No impacts to marine fauna from noise emissions with a consequence level greater than F<sup>14</sup> during the Petroleum Activities Program.</p> | <p><b>C 4.1</b><br/>EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans, including the following measures:</p> <ul style="list-style-type: none"> <li>• Support vessels will not travel greater than 6 knots within 300 m of a cetacean or turtle (caution zone) and not approach closer than 100 m from a whale.</li> <li>• Support 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).</li> <li>• If the cetacean or turtle shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.</li> <li>• Support vessels will not travel 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.</li> </ul> | <p><b>PS 4.1.1</b><br/>Vessels will comply with the EPBC Regulations 2000 – Part 8 Division 8.1 (Regulation 8.05 and 8.06) Interacting with cetaceans to manage the risk of fauna collision.</p> | <p><b>MC 4.1.1</b><br/>Records demonstrate no breaches with EPBC Regulations 2000 Part 8 Division 8.1 Interacting with cetaceans and Woodside Marine Charterers Instructions.</p> |
|   |   |  | <p><b>MC 4.1.2</b><br/>Records demonstrate reporting cetacean ship strike incidents to the National Ship Strike Database.</p>   |

<sup>14</sup> Defined as 'No lasting effect (<1 month) or negligible impact. Localised impact not significant to environmental receptors'.

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### 6.6.4 Routine and Non-routine Discharges: WIV and Support Vessels

| Context   |  |                 |  |                          |                     |         |                                 |               |                    |            |             |             |                    |          |  |  |
|---|--|-----------------|--|--------------------------|---------------------|---------|---------------------------------|---------------|--------------------|------------|-------------|-------------|--------------------|----------|--|--|
| Project Vessels– <b>Section 3.7</b>   |  |                 | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b> |                          |                     |         | Consultation – <b>Section 5</b> |               |                    |            |             |             |                    |          |  |  |
| Impact Evaluation Summary   |  |                 |  |                          |                     |         |                                 |               |                    |            |             |             |                    |          |  |  |
| Source of Impact  | Environmental Value Potentially Impacted |                 |  |                          |                     |         |                                 | Evaluation    |                    |            |             |             |                    |          |  |  |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality  | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic                   | Decision Type | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome  |  |  |
| Routine discharge of sewage, grey water and putrescible wastes to marine environment from project vessels |  |                 | X  |                          |                     |         |                                 | A             | F                  | -          | -           | LCS         | Broadly Acceptable | EPO<br>5 |  |  |
| Routine discharge of deck and bilge water to marine environment from project vessels                      |  |                 | X  |                          |                     |         |                                 | A             | F                  | -          | -           |             |                    |          |  |  |
| Routine discharge of brine or cooling water to the marine environment from project vessels                |  |                 | X  |                          |                     |         |                                 | A             | F                  | -          | -           |             |                    |          |  |  |

#### Description of Source of Impact

##### ***Vessel and HIV Operations***

##### Sewage, grey water and putrescible wastes

The WIV and project vessels routinely generate small volumes of treated sewage, putrescible waste and grey water (impact assessment based on approximate discharge of 15 m<sup>3</sup>) which is discharged to the marine environment, using an average volume of 75 L/person/day. Using a rate of 0.375 m<sup>3</sup>/person/day as a guide (NERA, 2017), it is expected that vessel discharges will range from ~ 45 m<sup>3</sup>/day from the WIV (maximum 120 people onboard) to ~ 7.5 m<sup>3</sup>/day from a support vessel.

##### Food waste:

Vessel crew and passengers will generate food waste, estimated to be in the order of 1—2 kg per person per day, which will be discharged to the marine environment under controlled conditions.

##### Deck and bilge water

The WIV and project vessels routinely generate/ discharge:

- Routine/periodic discharge of relatively small volumes of bilge water. Bilge tanks receive fluids from many parts of the WIV or support vessel. Bilge water can contain water, oil, detergents, solvents, chemicals, particles and other liquids, solids or chemicals.
- Variable water discharge from WIV/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.
- Cooling water from machinery engines and brine water produced during the desalination process of reverse osmosis to produce potable water onboard project vessels and WIV.

##### Brine

Reverse osmosis (RO), distillation or desalination plants on board vessels and the WIV use seawater to produce potable

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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.

During the distillation 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. Scale inhibitors and biocide are usually used at low dosages, and are usually consumed in the inhibition process, so there is little or no residual chemical concentration remaining upon discharge.

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 m<sup>3</sup>/d.

### **Impact Assessment**

#### **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 m<sup>3</sup> 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). 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).

Given the offshore location and short duration of the activity (WIV on station for 5 to 14 days), any routine and non-routine discharges of sewage and greywater and putrescible wastes from activities associated with the well intervention will result in no lasting change to water quality. Therefore, impacts to water quality 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 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 minor quantities involved, the expected localised mixing zone and high level of dilution into the open water marine environment of the Operational Area. The involved is located more than 12 nm from land, which exceeds the exclusion zones required by Marine Order 96 (Marine pollution prevention – sewage) 2018 and Marine Order 95 (Marine pollution prevention – garbage) 2013.

Based on the detailed evaluation, the magnitude of potential impact of a change in water quality is no lasting effects.

##### *Brine or cooling water*

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The key physicochemical stressors that are associated with reject brine and cooling water discharge include salinity, pH, temperature and chemical toxicity.

Water quality of the surrounding environment may be altered 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).

The potential impacts on water quality due to cooling water discharge include chlorine toxicity and increased water temperatures.

Reject brine water is typically 20 to 50% higher in salinity to the surrounding water and, 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, decreasing in salinity rapidly as distance from source increases.

Generally, reject brine and cooling water containing chemical additives are inherently safe at the low dosages used. They are usually consumed in the inhibition process, so there is little or no residual chemical concentration remaining upon discharge.

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.

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.

#### ***Sediment Quality***

Impacts associated with routine and non-routine deck and bilge water discharges will be limited to the area surrounding the discharge source of the vessel. Due to the dispersive nature of the discharges within the highly mixed offshore marine environment, any toxins associated with transient surface discharges from well intervention activities are not expected to reach marine sediments at concentrations that will result in notable changes to sediment quality.

#### ***Marine Fauna***

Discharge of food waste into the marine environment has the potential to attract some opportunistic marine fauna including fish and seabirds to the area in response to the increased food availability or, indirectly because of attraction of prey species. However, given the small quantities of food waste to be disposed, and the temporary nature of the activity, any attraction is likely to be minor, temporary and localised.

It is possible that marine fauna transiting the localised area may come into contact with vessel discharges (e.g. marine turtles, humpback whales, whale sharks, as they traverse the Operational Area, **Section 4.5.2**). Whilst the likely presence of marine fauna varies at different times of the year depending on migration, foraging and breeding patterns in the region, the potential for impact remains low due to the localised nature of discharges and rapid dilution in the open ocean waters of the Operational Area.

#### ***Plankton***

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 only (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. The Operational Area is located more than 12 nm from land, which exceeds the exclusion zones required by Marine Order 96 (Marine pollution prevention – sewage) 2018 and Marine Order 95 (Marine pollution prevention – garbage) 2013.

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.

#### ***Aesthetic Values***

The composition of sewage and greywater may include physical particulate matter such as solids composed of floating, settle able, colloidal and dissolved matter which can affect aspects of aesthetics such as ambient water colour, the

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presence of surface slicks/sheens and odour. However, given vessels will be transient during the discharge of sewage and greywater, this will promote mixing and dilution of the waste.

Given the distance of the project offshore, the proximity of water quality changes to the discharge source, the rapid consumption of matter by planktonic species and bacteria, and the spatial nature of tourism and recreation activities and coastal settlements (i.e. on or near the shoreline); impacts to receptors associated with changes in aesthetic values are not expected to occur.

**Summary of Potential Impacts to Environmental Value(s)**

The overall impact significance level for routine and non-routine discharges from vessels is F based on no lasting effect to marine fauna.

**Demonstration of ALARP**

| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>15</sup></b> | <b>Benefit/Reduction in Impact</b>                      | <b>Proportionality</b>  | <b>Control Adopted</b> |
|--|---|---|---|------------------------|
| <b>Legislation, Codes and Standards</b>  |   |   |   |                        |
| Marine Order 95 – Marine 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.   | F: Yes.<br>CS: Minimal cost. Standard practice.                     | No reduction in likelihood or consequence would result. | Controls based on legislative requirements – must be adopted. | Yes<br><b>C 5.1</b>    |
| Marine Order 96 – Marine pollution prevention – sewage (as appropriate to vessel class) which includes the following requirements: <ul style="list-style-type: none"> <li>• a valid International Sewage Pollution Prevention (ISPP) Certificate, as required by vessel class</li> <li>• a sewage treatment plant approved by AMSA or an issuing body</li> <li>• a sewage comminution and disinfection system</li> <li>• a sewage holding tank sized appropriately to contain all generated waste (black and grey water)</li> <li>• discharge of sewage which is not comminuted or disinfected will only occur at a distance of more than 12 nm from the nearest land</li> <li>• discharge of sewage which is comminuted or disinfected using a certified approved sewage treatment plant will only</li> </ul> | F: Yes.<br>CS: Minimal cost. Standard practice.                     | No reduction in likelihood or consequence would result. | Controls based on legislative requirements – must be adopted. | Yes<br><b>C 5.2</b>    |

<sup>1</sup> Qualitative measure

| <b>Demonstration of ALARP</b>   |   |   |  |                                    |
|---|---|---|--|------------------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>15</sup></b> | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>   | <b>Control Adopted</b>             |
| <p>occur at a distance of more than 3 nm from the nearest land</p> <ul style="list-style-type: none"> <li>discharge of sewage will occur at a moderate rate while support vessel is proceeding (more than four knots), to avoid discharges in environmentally sensitive areas.</li> </ul>   |   |   |  |                                    |
| <p>Where there is potential for loss of primary containment of oil and chemicals on the WIV, deck drainage must be collected via a closed drainage system, e.g. drill floor.</p>  | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>             | <p>Reduces the likelihood of contaminated deck drainage water being discharged to the marine environment. No change in consequence would occur.</p> | <p>Benefits outweigh cost/sacrifice.</p>                             | <p><b>Yes</b><br/><b>C 5.3</b></p> |
| <p>Marine Order 91 – Marine pollution prevention – oil (as relevant to vessel class) requirements, which includes mandatory measures for processing oily water before discharge:</p> <ul style="list-style-type: none"> <li>Machinery space bilge/oily water shall have International Maritime Organisation (IMO)-approved oil filtering equipment (oil/water separator) with an online monitoring device to measure OIW content to be less than 15 ppm before discharge.</li> <li>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.</li> <li>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.</li> </ul> | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>             | <p>No reduction in likelihood or consequence would result.</p>  | <p>Controls based on legislative requirements – must be adopted.</p> | <p><b>Yes</b><br/><b>C 5.4</b></p> |

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| <b>Demonstration of ALARP</b>  |   |  |                                       |                        |
|--|---|--|---------------------------------------|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>15</sup></b>   | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>                | <b>Control Adopted</b> |
| <ul style="list-style-type: none"> <li>There shall be a waste oil storage tank available, to restrict oil discharges.</li> <li>If machinery space bilge discharges cannot meet the oil content standard of less than 15 ppm without dilution or be treated by an IMO-approved oil/water separator, they will be contained on-board and disposed of onshore.</li> <li>Valid International Oil Pollution Prevention (IOPP) Certificate.</li> </ul> |   |  |                                       |                        |
| Chemicals will be selected with the lowest practicable environmental impacts and risks subject to technical constraints  | F: Yes.<br>CS: Minimal cost. Standard practice.   | Environmental assessment of chemicals will reduce the consequence of impacts resulting from discharges to the marine environment by ensuring chemicals have been assessed for environmental acceptability. Planned discharges are required for safely executing activities; therefore, no reduction in likelihood can occur. | Benefits outweigh cost/ sacrifice.    | Yes<br><b>C 5.5</b>    |
| <b>Good Practice</b>   |   |  |                                       |                        |
| No additional controls identified.   |   |  |                                       |                        |
| <b>Professional Judgement – Eliminate</b>  |   |  |                                       |                        |
| No additional controls identified.   |   |  |                                       |                        |
| <b>Professional Judgement – Substitute</b>   |   |  |                                       |                        |
| 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.<br><br>Distance of activity offshore also makes the implementation of | Not considered, control not feasible.  | Not considered, control not feasible. | No                     |

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| <b>Demonstration of ALARP</b>   |   |                                    |                        |                        |
|---|---|------------------------------------|------------------------|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>15</sup></b>         | <b>Benefit/Reduction in Impact</b> | <b>Proportionality</b> | <b>Control Adopted</b> |
|   | this control not feasible.<br><br>CS: Not considered, control not feasible. |                                    |                        |                        |
| <b>Professional Judgement – Engineered Solution</b>   |   |                                    |                        |                        |
| No additional controls identified.  |   |                                    |                        |                        |
| <b>ALARP Statement</b>  |   |                                    |                        |                        |
| On the basis of the environmental impact assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type A, <b>Section 2.6.1</b> ), Woodside considers the adopted controls appropriate to manage the impacts of planned routine discharges from the WIV and project vessels. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts are considered ALARP. |   |                                    |                        |                        |
| <b>Demonstration of Acceptability</b>   |   |                                    |                        |                        |
| <b>Acceptability Statement</b>  |   |                                    |                        |                        |
| The impact assessment has determined that, given the adopted controls, routine and non-routine discharges from the WIV and support vessels may result in localised impacts with no lasting effect (<1 month) to water quality and species. BIAs within the Operational Area include flatback turtle internesting and whale shark foraging, and wedge-tailed shearwater breeding BIA. However, these species are not expected to be impacted.  |   |                                    |                        |                        |
| The adopted controls are considered consistent with industry legislation, codes and standards, and professional judgement and meet the requirements of Australian Marine Orders. On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in <b>Section 2.7.2</b> , this is considered an acceptable level of impact.  |   |                                    |                        |                        |

| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>   |  |  |  |
|---|--|--|--|
| <b>Outcomes</b>   | <b>Controls</b>  | <b>Standards</b>   | <b>Measurement Criteria</b>  |
| <b>EPO 5</b><br><br>No impact to water quality greater than a consequence level of F <sup>16</sup> from discharge of sewage, greywater, putrescible wastes, bilge and deck drainage to the marine | <b>C 5.1</b><br><br>Marine Order 95 – Marine pollution prevention – garbage (as appropriate to vessel class) which requires putrescible waste and food scraps be passed through a macerator, so they are able to pass through a screen with no opening wider than 25 mm. | <b>PS 5.1.1</b><br><br>WIV and support vessels compliant with Marine Order 95 – Marine pollution prevention – garbage. | <b>MC 5.1.1</b><br><br>Records demonstrate WIV and support vessels are compliant with Marine Order 95. |

<sup>16</sup> Defined as ‘F - No lasting effect (<1 month) or negligible impact. Localised impact not significant to environmental receptors’.

| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b> |   |   |   |
|---|---|---|---|
| <b>Outcomes</b>   | <b>Controls</b>   | <b>Standards</b>  | <b>Measurement Criteria</b>   |
| environment during the Petroleum Activities Program.                          | <p><b>C 5.2</b></p> <p>Marine Order 96 – Marine pollution prevention – sewage (as appropriate to vessel class) which includes the following requirements:</p> <ul style="list-style-type: none"> <li>• a valid ISPP Certificate, as required by vessel class</li> <li>• a sewage treatment plant approved by AMSA or an issuing body</li> <li>• a sewage comminution and disinfection system</li> <li>• a sewage holding tank sized appropriately to contain all generated waste (black and grey water)</li> <li>• discharge of sewage which is not comminuted or disinfected will only occur at a distance of more than 12 nm from the nearest land</li> <li>• 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</li> <li>• discharge of sewage will occur at a moderate rate while support vessel is proceeding (more than four knots), to avoid discharges in environmentally sensitive areas.</li> </ul> | <p><b>PS 5.2.1</b></p> <p>WIV and support vessels compliant with Marine Order 96 – Marine pollution prevention – sewage (as appropriate to vessel class).</p> | <p><b>MC 5.2.1</b></p> <p>Records demonstrate WIV and support vessels are compliant with Marine Order 96.</p> |
|   | <p><b>C 5.3</b></p> <p>Where there is potential for loss of primary containment of oil and chemicals on the WIV, deck drainage must be collected via a closed drainage system, e.g. drill floor.</p>  | <p><b>PS 5.3.1</b></p> <p>Contaminated drainage contained, treated and/or separated before discharge.</p>   | <p><b>MC 5.3.1</b></p> <p>Records demonstrate WIV has a functioning bilge/oily water management system.</p>   |

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| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b> |  |  |  |
|---|--|--|--|
| <b>Outcomes</b>   | <b>Controls</b>  | <b>Standards</b>   | <b>Measurement Criteria</b>  |
|   | <p><b>C 5.4</b></p> <p>Marine Order 91 – Marine pollution prevention – oil (as relevant to vessel class) requirements, which includes mandatory measures for processing oily water before discharge:</p> <ul style="list-style-type: none"> <li>• Machinery space bilge/oily water shall have IMO-approved oil filtering equipment (oil/water separator) with an online monitoring device to measure OIW content to be less than 15 ppm before discharge.</li> <li>• 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.</li> <li>• 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.</li> <li>• There shall be a waste oil storage tank available, to restrict oil discharges.</li> <li>• If machinery space bilge discharges cannot meet the oil content standard of less than 15 ppm without dilution or be treated by an IMO-approved oil/water separator, they will be contained on-board and disposed of onshore.</li> <li>• Valid IOPP Certificate.</li> </ul> | <p><b>PS 5.4.1</b></p> <p>Discharge of machinery space bilge/oily water meet oil content standard of less than 15 ppm without dilution.</p>          | <p><b>MC 5.4.1</b></p> <p>Records demonstrate discharge specification met for WIV and support vessels.</p>                               |
|   | <p><b>C 5.5</b></p> <p>Chemicals will be selected with the lowest practicable environmental impacts and risks subject to technical constraints</p>   | <p><b>PS 5.5.1</b></p> <p>Reduces to ALARP the impact potential of all chemicals intended or likely to be discharged into the marine environment</p> | <p><b>MC 5.5.1</b></p> <p>Records demonstrate chemical selection, assessment and approval process for selected chemicals is followed</p> |

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### 6.6.5 Routine and Non-routine Discharges: Subsea Fluids and WCP Fluids

| Context   |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
|---|--|-----------------|--|--------------------------|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-------------|--------------------|----------|
| Subsea Intervention Riser System and Well Control Package Installation – <b>Section 3.6.3</b>   |  |                 | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b> |                          |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |             |                    |          |
| Subsea Equipment Preservation Chemicals – <b>Section 3.6.6</b>  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
| Marine Growth Removal – <b>Section 3.6.9</b>  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
| Project Fluids – <b>Section 3.7</b>   |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
| Impact Evaluation Summary   |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
| Source of Impact  | Environmental Value Potentially Impacted |                 |  |                          |                     |         |               | Evaluation                      |                    |            |             |             |                    |          |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality  | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome  |
| Routine and non-routine discharge of subsea intervention WCP fluids   |  | X               | X  |                          | X                   | X       |               | A                               | F                  | -          | -           | GP          | Broadly Acceptable | EPO<br>6 |
| Routine and non-routine discharge of chemicals used for removal of marine growth.   |  | X               | X  |                          | X                   | X       |               | A                               | F                  | -          | -           |             |                    |          |
| Description of Source of Impact   |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
| <b>Subsea Fluids (Well Intervention Fluids, Control Fluids and Other Subsea Fluids)</b>   |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |
| <p>Subsea fluids are likely to be released during well intervention activities including during Xmas tree valve actuation. Should repair activities be required, including pressure/leak testing, valve functioning, flushing, hot stab change out or Xmas tree repair or replacement, environmental discharges may occur. All well intervention activities that result in subsea control fluid discharges are likely to only discharge small, intermittent volumes.</p> <p>The WCP is operated using open hydraulic systems (utilising water-based control fluids). Each time a pressure and function test schedule is undertaken, between 1000L and 3000 L of water-based fluid is released to the marine environment, of this approximately 4% is control fluid additive (<b>Section 3.6.3</b>). WCP operation includes function and pressure testing approximately every 21 days, and a function test approximately every seven days, excluding the week a pressure test is conducted (<b>Section 3.6.3</b>).</p> <p>Wireline pressure-containing equipment onboard includes a grease system comprised of a readily biodegradable vegetable-based oil, that will only be used during contingency or emergency operations. If contingency wireline operations take place, approximately 50mL/min would be applied through the wellbore (25L for a single run) and some may be released to the environment Under normal operations, grease would be applied in the event of an emergency to fill the void between a dual pack off, where a small quantity (&lt;10L) could be released to the environment.</p> <p>An ESD (Emergency Shut Down) may be implemented if the WIV is required to rapidly shut in the well. ESD aims to leave the Xmas tree and WCP/PCE in a secure condition but may result in the loss of small volumes of fluids/gases in the umbilical or upper PCE around the disconnection points (&lt;50L).</p> <p>During a drift off / drive off the vessel will autonomously separate from the WCP, and autonomously shut in the well (if an ESD has not been initiated). Disconnection aims to leave the Xmas tree and WCP/PCE in a secure condition but</p> |  |                 |  |                          |                     |         |               |                                 |                    |            |             |             |                    |          |

may result in the loss of small volumes of fluids/gases in the umbilical or upper PCE around the disconnection points (<1 m<sup>3</sup>).

**Marine Growth Removal**

During marine growth removal activities, it may be necessary to remove marine growth from the Xmas tree and wellhead using acid (typically sulphamic acid).

**Impact Assessment**

Pelagic and benthic habitats in the Operational Area are considered to be of low sensitivity (no known significant epibenthic habitat or infauna habitat). Although the Ancient Coastline at 125 m Depth Contour KEF overlaps with the Operational Area, the values and sensitivities of this KEF occur on a broad scale outside of the Operational Area (**Section 4.5.3**). Coupled with the low toxicity of the fluids to be used for the Petroleum Activities Program, the likelihood of any significant impact to marine biota is considered low.

**Subsea Fluids (WCP Xmas tree and Well Intervention Activity Control Fluids)**

Subsea control fluids are water-based hydraulic fluids containing ~3% active ingredients. Modelling undertaken for another offshore drilling project indicates that a release of subsea control fluids during function testing is expected to reach a dilution of 3000 times within a maximum displacement of the plume within 98 m distance from the release site (BP Azerbaijan, 2013). Based on this information, concentrations of subsea control fluid are expected to be ~10 ppm within 100 m of the well. Using a conservative ocean current speed of 0.1 m/s, fluids would be expected to travel 100 m (and thus reach concentrations of 10 ppm) in ~16 minutes. Changes in water quality, would comprise the presence of low toxicity contaminants for a short duration and extent in the water column above the seabed. Given the small volumes associated with this discharge and limited exposure times due to rapid dilution, any potential impact to this aspect is expected to be localised and short term. There is potential for some toxins in the control fluid to accumulate in the sediment, but due to the very small volumes and rapid dispersal, it is considered negligible.

The wireline grease is comprised primarily of vegetable-based oils and is considered non-toxic to aquatic organisms. It contains no OSPAR SUB (phase out) components and is readily biodegradable (>70% biodegradation over 28 days). Given the relatively small volumes of potential discharges, low toxicity, readily biodegradable nature and rapid dispersion in the open ocean environment of the Operational Area, any potential impacts to water quality from these discharges are likely to be localised and temporary.

**Marine Growth Removal**

The use of water jetting and acid washing to remove marine growth on subsea infrastructure will result in temporary suspension of organic matter and localised increase in turbidity. Water jetting will be limited to what is necessary to clean infrastructure for intervention activities to take place. Due to the very minor quantities of acid used, the limited duration and rapid dispersion in the water column, impacts to the marine environment are expected to be negligible.

**Summary of Potential Impacts to Environmental Value(s)**

The overall impact significance level for routine and non-routine discharges from subsea fluids is F based on no lasting effect on water quality and therefore it is not expected that there will be impacts to marine fauna.

**Demonstration of ALARP**

| <i>Control Considered</i>  | <i>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>17</sup></i> | <i>Benefit/Reduction in Impact</i>  | <i>Proportionality</i>            | <i>Control Adopted</i> |
|--|---|---|-----------------------------------|------------------------|
| <b>Legislation, Codes and Standards</b>  |   |   |                                   |                        |
| No additional controls identified.   |   |   |                                   |                        |
| <b>Good Practice</b>   |   |   |                                   |                        |
| Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment completed before use. | F: Yes.<br>CS: Minimal cost. Standard practice.                     | Environmental assessment of chemicals will reduce the consequence of impacts resulting from discharges to the marine environment, by ensuring chemicals have been | Benefits outweigh cost/sacrifice. | Yes<br><b>C 6.1</b>    |

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| <b>Demonstration of ALARP</b>   |  |  |                                       |                        |
|---|--|--|---------------------------------------|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>17</sup></b>  | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>                | <b>Control Adopted</b> |
|   |  | assessed for environmental acceptability. Planned discharges are required for the safe execution of activities and therefore no reduction in likelihood can occur.                                   |                                       |                        |
| Chemical reviews will be performed on all previously approved chemicals to confirm potential chemical impacts are reduced to ALARP.   | F: Yes.<br>CS: Minimal cost. Standard practice.  | Reviews will ensure chemicals selected for Drilling and Completions fluids remain ALARP.   | Benefits outweigh cost/sacrifice.     | Yes<br><b>C 6.2</b>    |
| <b>Professional Judgement – Eliminate</b>   |  |  |                                       |                        |
| Do not use control fluids.  | F: No. Control fluids are critical to the operation of the WCP.<br>CS: Not considered, control not feasible. | Not considered, control not feasible.  | Not considered, control not feasible. | No                     |
| Return bulk unused inhibited MEG/brine package for onshore disposal where possible.   | F: Yes.<br>CS: Minor   | Transfer of excess MEG/brine package for onshore disposal would eliminate the bulk discharge to the marine environment and eliminate the likelihood and consequence of impacts from such activities. | Benefits outweigh cost/sacrifice.     | Yes<br><b>C 6.3</b>    |
| <b>Professional Judgement – Substitute</b>  |  |  |                                       |                        |
| No additional controls identified.  |  |  |                                       |                        |
| <b>Professional Judgement – Engineered Solution</b>   |  |  |                                       |                        |
| No additional controls identified.  |  |  |                                       |                        |
| <b>ALARP Statement</b>  |  |  |                                       |                        |
| On the basis of the environmental impact assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type A, <b>Section 2.6.1</b> ), Woodside considers the adopted controls appropriate to manage the impacts of subsea fluids. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts are considered ALARP. |  |  |                                       |                        |

| <b>Demonstration of Acceptability</b>   |
|---|
| <b>Acceptability Statement</b>  |
| The impact assessment has determined that, given the adopted controls, the discharge of routine and non-routine subsea fluids may result in localised impacts with no lasting effect (<1 month) to marine sediment, water quality and |

**Demonstration of Acceptability**

habitat (but not ecosystems). Feedback was received and issues raised have been considered in the impact assessment and finalisation of this EP.

The adopted controls are considered consistent with industry good practice and professional judgement. On the basis of the environmental impact assessment outcomes and Woodside's criteria for acceptability outlined in **Section 2.7.2**, this is considered an acceptable level of impact.

**Environmental Performance Outcomes, Standards and Measurement Criteria**

| <b>Outcomes</b>  | <b>Controls</b>  | <b>Standards</b>   | <b>Measurement Criteria</b>  |
|--|--|--|--|
| <b>EPO 6</b><br>No impact to water quality or marine biota greater than a consequence level of F <sup>18</sup> from subsea fluids during the Petroleum Activities Program. | <b>C 6.1</b><br>Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment completed before use. | <b>PS 6.1.1</b><br>All chemicals, planned to be used and intended or likely to be discharged to the marine environment reduced to ALARP using the chemical assessment process. | <b>MC 6.1.1</b><br>All chemicals, planned to be used and intended or likely to be discharged to the marine environment reduced to ALARP using the chemical assessment process. |
|  | <b>C 6.2</b><br>Chemical reviews will be performed on all previously approved chemicals to confirm potential chemical impacts are reduced to ALARP.            | <b>PS 6.2.1</b><br>Acceptability of previously approved chemicals are re-evaluated to ensure ALARP and alternatives are considered.  | <b>MC 6.2.1</b><br>Records confirm reviews have occurred, and any actions/changes are implemented.   |
|  | <b>C 6.3</b><br>Unused MEG/brine will be returned to port/staging point for disposal where possible.   | <b>PS 6.3.1</b><br>Return all unused MEG/Brine for onshore disposal where possible.  | <b>MC 6.3.1</b><br>Records demonstrate that unused MEG/ brine is returned to port/ staging point for disposal where possible.  |
|  |  | <b>PS 6.3.2</b><br>In a contingency scenario, bulk operational discharges must be conducted under WIV's permit to work (PTW) system.   | <b>MC 6.3.2</b><br>Records confirm that the WIV has an appropriate PTW for bulk discharges, if required to be performed in a contingency scenario.                             |

<sup>18</sup> Defined as 'F - No lasting effect (<1 month) or negligible impact. Localised impact not significant to environmental receptors'.

### 6.6.6 Routine and Non-routine Atmospheric Emissions

| Context   |  |                 |               |   |                     |         |               |                                 |                    |            |             |               |                    |          |
|---|--|-----------------|---------------|---|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|---------------|--------------------|----------|
| Subsea Intervention Activities – <b>Section 3.6</b><br>Project Vessels and Support Activities – <b>Section 3.7</b><br>Contingent Activities – <b>Section 3.8</b>  |  |                 |               | Socioeconomic and Cultural – <b>Section 4.6</b> |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |               |                    |          |
| Impact Evaluation Summary   |  |                 |               |   |                     |         |               |                                 |                    |            |             |               |                    |          |
| Source of Impact  | Environmental Value Potentially Impacted |                 |               |   |                     |         |               | Evaluation                      |                    |            |             |               |                    |          |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour)                        | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools   | Acceptability      | Outcome  |
| Exhaust emissions from internal combustion engines and incinerators on WIV, support vessels and helicopters   |  |                 |               | X   |                     |         |               | A                               | F                  | -          | -           | LC<br>S<br>GP | Broadly acceptable | EPO<br>7 |
| Venting at surface  |  |                 |               | X   |                     |         |               | A                               | F                  | -          | -           |               |                    |          |
| Small volume gas releases subsea  |  |                 |               | X   |                     |         |               | A                               | F                  | -          | -           |               |                    |          |
| Description of Source of Impact   |  |                 |               |   |                     |         |               |                                 |                    |            |             |               |                    |          |
| <p><b>DP Vessel Fuel Consumption</b></p> <p>The Petroleum Activities Program is estimated to be completed between 5 to 14 days and when underway, activities will be 24 hours per day, seven days per week. Based on fuel consumption information from the DPS-1 MODU on previous Woodside drilling campaigns and the expected activity duration plus mobilisation, it is estimated that a Dynamically Positioned Vessel such as the proposed WIV could consume up to approximately 50t/d when compared to similar scenarios, however this is considered conservative estimate. Allowing for mobilisation assumptions and up to two weeks for Intervention activities it is expected that in this time 1050 tonnes of fuel maybe consumed.</p> <p><b>Support Vessel Fuel Consumption</b></p> <p>There is the potential for up to two Support Vessels to operate out of KBSB supporting the well intervention activity, although emissions produced will be substantially less than that of the WIV. Given that expected operation for the WIV is expected to be approximately 2 weeks and using an estimated fuel use of 5 t/d for support vessels (Energy Institute 2000), it is expected that approximately 140 tonnes of fuel would be consumed in this time.</p> <p>Using an estimated fuel use of 600 L/r (Energy Institute 2000) and applying aviation fuel emissions factor from NGER. The potential for multiple helicopter runs has been considered in greenhouse gas summations.</p> <p><b>Cold venting of residual gas</b></p> <p>During well intervention activities there are several scenarios that may cause small amounts of gas to be vented directly to atmosphere in an intrinsically safe manner via the choke manifold onboard the WIV. Due to the small quantities of gas, it is not viable to flare this gas. These sources of direct gas emissions include:</p> <p>WCP disconnect – The WCP will be disconnected at the end well intervention activities. Pressurised gas will be vented to the Atmosphere.</p> |  |                 |               |   |                     |         |               |                                 |                    |            |             |               |                    |          |

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Wireline tool string & tool change – During the well intervention activity it is estimated that there will be 3 to 5 tool changes which will cause a small quantity of venting to the atmosphere via the–wireline lubricator.

Surface returns - Small volumes of hydrocarbon gas from annular spaces will be cold vented via a choke manifold in a controlled and safe manner from the WIV.

**Small volume gas releases subsea**

Removal of a tree cap – A Tree cap will be in place and will be recovered to allow access to the wellbore.. During the tree cap removal small volumes of gas could be released. Tree valves will be pressure tested prior to operations to confirm integrity.

An ESD may be implemented if the WIV is required to rapidly disengage from the well. ESD aims to leave the wellhead and WCP/PCE in a secure condition but will result in the loss of small volumes of fluids/gases in the umbilical or upper PCE around the disconnection points following disconnection.

**Table 6-8 – GHG Emissions sources and quantities**

| Source                                 | GHG Emissions released (CO <sub>2</sub> -e t) <sup>19</sup> |
|--|---|
| DP Vessel Operations                   | 2,845   |
| Support vessel Operations              | 379   |
| Helicopter operations                  | 6.8   |
| Cold venting - Tool change (5 changes) | <1  |
| Cold venting – Surface returns         | <1  |
| Cold venting – Removal of tree cap     | <1  |
| <b>Total Estimated GHG Emissions</b>   | <b>3,258</b>  |

**Impact Assessment**

Fuel combustion, incineration, and venting have the potential to result in localised, temporary reduction in air quality. Potential impacts include a localised reduction in air quality, generation of dark smoke and contribution to greenhouse gas emissions. Given the short duration and exposed location of project vessels (which will lead to the rapid dispersion of the low volumes of atmospheric emissions), the potential impacts are expected to be localised and of no lasting effect.

The air quality within the Operational Area is typical of an unpolluted tropical offshore environment and the wider offshore NWMR, and is likely to be of high quality. Atmospheric emissions from fuel combustion and incineration on project vessels (including generation of dark smoke) have the potential to result in localised reduction in air quality in the immediate vicinity of the release point, with no lasting effect.

Given the offshore location of the Operational Area, and the low volumes of atmospheric emission which will be generated, biodiversity, ecological integrity, social amenities and human health will not be impacted and any potential impact to air quality is slight.

Venting of hydrocarbon gases may result in a temporary gas plume and a localised contribution to greenhouse gas emissions. During cold venting intervention activities discharge of umbilical/upper PCE gas volumes of 2.5 m<sup>3</sup> at 1800 PSI are expected. During tool change (approx. five changes) cold venting of 0.5 m<sup>3</sup> is expected. There is potential for human health effects for workers in the immediate vicinity of atmospheric emissions. However, due to the remote offshore location of the Operational Area, any risks associated with off-site human health effects are negligible beyond the immediate zone of release and dispersion. Given the isolated location of the Petroleum Activities Program, these low volumes of atmospheric emissions will be rapidly dispersed. Therefore, the potential impacts are expected to be localised and no cumulative impacts are anticipated when considered in the context of existing oil and gas operations in the region.

GHG emissions attributed to the WIV, vessels and helicopters contribute to global concentrations of GHG emissions. Cumulative increases in net global atmospheric GHG concentrations are considered to contribute to climate change. It is important to acknowledge that climate change impacts cannot be directly attributed to any one activity, as they are instead the result of global GHG, minus global GHG sinks, that have accumulated in the atmosphere since the industrial revolution.

<sup>19</sup> Diesel – 0.836t/m<sup>3</sup> | Conversion factor (t Diesel fuel) to (t CO<sub>2</sub>e) = 2.7094 | GHG factor (CH<sub>4</sub>) = 84t CO<sub>2</sub>e | Source: NGERs 2021

**Marine Fauna**

Atmospheric emissions can cause direct impacts to fauna if they are present in the immediate vicinity of significant releases. Birds, for example, have been shown to suffer respiratory distress and illness when subjected to extended duration exposure to air pollutants (Sanderfoot and Holloway, 2017).

There is a breeding BIA for the wedge-tailed shearwater overlapping the Operational Area. The nearest potential seabird roosting habitat, the Montebello Islands, lies approximately 76 km south of the Operational Area at the closest point. Given, the low numbers of transient individuals expected to potentially occur within the Operational Area, combined with the highly dispersed nature of project air emissions; no adverse impacts to wedge-tailed shearwaters are anticipated due to changes in air quality.

**Summary of Potential Impacts to Environmental Value(s)**

Given the adopted controls, it is considered that the release of a small volume of greenhouse gases will not result in a potential impact greater than a temporary impact to local air quality with no lasting effect.

**Demonstration of ALARP**

| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>20</sup></b>     | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>                                      | <b>Control Adopted</b> |
|---|---|--|---|------------------------|
| <b>Legislation, Codes and Standards</b>   |   |  |   |                        |
| Marine Order 97 (Marine Pollution Prevention – Air Pollution), which details requirements for: <ul style="list-style-type: none"> <li>International Air Pollution Prevention (IAPP) Certificate, required by vessel class</li> <li>use of low sulphur fuel when available</li> <li>Ship Energy Efficiency Management Plan, where required by vessel class</li> <li>onboard incinerator to comply with Marine Order 97.</li> </ul> | F: Yes<br>CS: Minimal cost  | Legislative requirements to be followed may slightly reduce the likelihood of air pollution.   | Control based on legislative requirements – must be adopted | Yes<br><b>C 7.1</b>    |
| Reporting of GHG emissions as required by regulatory requirements   | F: Yes.<br>CS: Minimal cost. Standard practice for Woodside activities. | 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<br><b>C 7.2</b>    |
| <b>Good Practice</b>  |   |  |   |                        |

<sup>1</sup> Qualitative measure

| <b>Demonstration of ALARP</b>   |   |   |   |                        |
|---|---|---|---|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>20</sup></b>   | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>                      | <b>Control Adopted</b> |
| Vessel operations planned such that fuel consumption and therefore subsequent emissions are minimised. Examples may include such aspects as vessel speeds, cleaning of biofouling, preventative maintenance on equipment such as thrusters, or turning off equipment when not in use. | F: Yes<br>CS: Schedule delays   | Managing vessel operations including vessel speeds, use of project vessels, cleaning of biofouling, preventative maintenance and turning off equipment when not in use can reduce fuel usage and subsequent GHG / air emissions | Potential benefit outweighs cost/sacrifice. | Yes<br><b>C 7.3</b>    |
| Contracting strategy and evaluation for hire of support vessels includes consideration of vessel emissions parameters and low carbon / alternative fuels.   | F: Yes.<br>CS: Fuel cost over the contract is considered in evaluation of responses, allowing for competitive consideration of low carbon alternatives (batteries).   | Minimise cost and emissions through eco-efficiency approach recognising cost of fuel and carbon emissions over the contract term.   | Benefits outweigh cost/sacrifice.           | Yes<br><b>C 7.4</b>    |
| Contractors will be engaged to identify additional GHG emissions reduction opportunities.   | F: Yes<br>CS: Minimal – Good Practise   | Through sharing aspirations and collaborating new opportunities may be identified and implemented to further reduce emissions.  | Benefits outweigh cost/sacrifice            | Yes<br><b>C 7.5</b>    |
| <b>Professional Judgement – Eliminate</b>   |   |   |   |                        |
| Do not combust fuel.  | F: No. There are no WIVs or vessels that do not use internal combustion engines.<br>CS: Not considered, control not feasible.   | Not considered, control not feasible.   | Not considered, control not feasible.       | No                     |
| <b>Professional Judgement – Substitute</b>  |   |   |   |                        |
| Fuel types selected to reduce expected GHG emissions.   | F: Yes<br>CS: Monetary cost of fuel, logistics associated with fuel type supply (especially With regard to international vessels) and fuel inventory management for international vessels which may be required to change fuel type | Alternative fuel types such as Marine Gas Oil and Marine Diesel Oil (MGO & MDO) can reduce GHG emissions during use when compared to heavy or intermediate fuel oils (HFO or IFO)   | Potential benefit outweighs cost/sacrifice. | Yes<br><b>C 7.6</b>    |

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| Demonstration of ALARP  |   |  |                                  |                 |
|---|---|--|----------------------------------|-----------------|
| Control Considered  | Control Feasibility (F) and Cost/Sacrifice (CS) <sup>20</sup>             | Benefit/Reduction in Impact                                  | Proportionality                  | Control Adopted |
| <b>Professional Judgement – Engineered Solution</b>   |   |  |                                  |                 |
| Use moored MODU to complete well intervention   | F: Y<br>CS: Significant additional cost to source alternative larger MODU | Minor reduction in air emissions due to reduction in DP use. | Cost/sacrife outweighs benefits. | No              |
| <b>ALARP Statement</b><br>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, <b>Section 2.6.1</b> ), Woodside considers the adopted controls are considered good oil-field practice/industry best practice, and appropriate to manage the impacts of fuel combustion and venting. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts are considered ALARP.  |   |  |                                  |                 |
| Demonstration of Acceptability  |   |  |                                  |                 |
| <b>Acceptability Statement</b><br>The impact assessment has determined that, given the adopted controls, routine atmospheric emissions from fuel combustion and venting may result in localised impacts to air quality with no lasting effect (<1 month).<br>The adopted controls are considered consistent with industry legislation, codes and standards, and professional judgement and meet the requirements of Australian Marine Orders. On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in <b>Section 2.7.2</b> , this is considered an acceptable level of impact. |   |  |                                  |                 |

| Environmental Performance Outcomes, Standards and Measurement Criteria   |  |  |   |
|--|--|--|---|
| Outcomes   | Controls   | Standards  | Measurement Criteria  |
| <b>EPO 7</b><br>Emissions to atmosphere as a result of fuel combustion and incineration limited to those necessary to complete the Petroleum Activities Program. | <b>C 7.1</b><br>Marine Order 97 (Marine Pollution Prevention – Air Pollution) which details requirements for: <ul style="list-style-type: none"> <li>International Air Pollution Prevention (IAPP) Certificate, required by vessel class</li> <li>use of low sulphur fuel when available</li> <li>Ship Energy Efficiency Management Plan, where required by vessel class</li> <li>onboard incinerator to comply with Marine Order 97.</li> </ul> | <b>PS 7.1.1</b><br>WIV and project vessels compliant with Marine Order 97 (marine pollution prevention – air pollution) to restrict emissions to those necessary to perform the activity.<br>Vessel marine assurance process conducted prior to contracting vessels, to ensure suitability and compliance with vessel combustion certification/ Marine Order requirements. | <b>MC 7.1.1</b><br>Marine Assurance inspection records demonstrate compliance with Marine Order 97. |
|  | <b>C 7.2</b>   | <b>PS 7.2.1</b>  | <b>MC 7.2.1</b>   |

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|  |   |  |  |
|--|---|--|--|
|  | Reporting of GHG emissions as required by regulatory requirements   | GHG emission regulatory reporting undertaken as required   | Records demonstrate required regulatory GHG emission reported  |
|  | <b>C 7.3</b><br>Vessel operations will be planned such that fuel consumption is minimised where practicable. Examples may include such aspects as vessel speeds, cleaning of biofouling, preventative maintenance on equipment such as thrusters, or turning off equipment when not in use. | <b>PS 7.3.1</b><br>Vessel operations planned, where practicable, to minimise fuel consumption and associated GHG/air emissions | <b>MC 7.3.1</b><br>Plan/records show fuel use/emissions have been considered in vessel operations.   |
|  |   | <b>PS 7.3.2</b><br>Relevant vessel crew aware of requirement to consider GHG/air emissions in vessel operations.               | <b>MC 7.3.2</b><br>Awareness training records include information on consideration of fuel use/GHG emissions for vessel operations.          |
|  | <b>C 7.4</b><br>Contracting strategy and evaluation for hire of support vessels includes consideration of vessel emissions parameters and low carbon / alternative fuels.   | <b>PS 7.4.1</b><br>Evaluation of tenders of support vessels considers emissions parameters and low carbon / alternative fuels. | <b>MC 7.4.1</b><br>Records demonstrate that emissions were considered in tender evaluations.   |
|  | <b>C 7.5</b><br>Contractors will be engaged to identify additional GHG emissions efficiencies   | <b>PS 7.5.1</b><br>Contractors engaged prior to mobilisation on energy/ GHG emissions efficiencies.                            | <b>MC 7.5.1</b><br>Minutes of meetings with contractor including any identified opportunities.   |
|  |   | <b>PS 7.5.2</b><br>Opportunities identified implemented, where technically feasible and ALARP.                                 | <b>MC 7.5.2</b><br>Records demonstrate that opportunities, if identified, to reduce GHG emissions have been implemented during the activity. |
|  | <b>C 7.6</b><br>Fuels types selected to reduce expected GHG emissions.  | <b>PS 7.6.1</b><br>Project vessels will not use heavy fuel oil (HFO) or intermediate fuel oil (IFO)                            | <b>MC 7.6.1</b><br>Records show project vessels use alternative fuels to HFO / IFO   |

### 6.6.7 Routine Light Emissions: External Lighting on WIV and Project Vessels

| Context   |  |                 |               |  |                     |         |               |                                 |                    |            |             |             |                    |          |
|---|--|-----------------|---------------|--|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-------------|--------------------|----------|
| Project Vessels and Support Activities – <b>Section 3.7</b>   |  |                 |               | Biological Environment – <b>Section 4.5</b><br>Socioeconomic and Cultural – <b>Section 4.6</b> |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |             |                    |          |
| Impact Evaluation Summary   |  |                 |               |  |                     |         |               |                                 |                    |            |             |             |                    |          |
| Source of Impact  | Environmental Value Potentially Impacted |                 |               |  |                     |         | Evaluation    |                                 |                    |            |             |             |                    |          |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour)   | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome  |
| External light emissions onboard WIV and project vessels  |  |                 |               |  | X                   |         | A             | F                               | -                  | -          | -           | PJ          | Broadly Acceptable | EPO<br>8 |
| Underwater ROV  |  |                 |               |  | X                   |         | A             | F                               | -                  | -          | -           |             |                    |          |
| Description of Source of Impact   |  |                 |               |  |                     |         |               |                                 |                    |            |             |             |                    |          |
| <p><b>Vessel Operations</b></p> <p>Routine light emissions include light sources that alter the ambient light conditions in an environment at night. The WIV and project vessels will routinely use external lighting to navigate and conduct safe operations at night throughout the Petroleum Activities Program. Lighting levels will be determined primarily by operational safety and navigational requirements under relevant legislation, specifically the <i>Navigation Act 2012</i>. The WIV and support vessels will be lit to maintain operational safety on a 24-hour basis. External light emissions from the WIV and project vessels are typically managed to maintain good night vision for crew members. Vessel/WIV lighting will also be used to communicate the vessel's presence to other marine users (i.e. navigation/warning lights). Lighting is required for safely operating project vessels/WIV and cannot reasonably be eliminated.</p> <p>The vessels/WIV that may be required for the Petroleum Activities Program are outlined in <b>Section 2.8</b>. External lighting is located on vessel/WIV decks, with most external lighting directed towards working areas such as the main decks.</p> <p>The activity is expected to take between 5 to 14 days and will take place 24 hours, 7 days a week.</p> <p>Lighting from vessels/WIV may appear as a direct light source from an unshielded lamp with direct line of sight to the observer or through sky glow. Direct lighting falling upon a surface is referred to as light spill. Sky glow is the diffuse glow caused by light that is screened from view, but through reflection and refraction creates a glow in the atmosphere. The distance at which direct light and sky glow may be visible from the source depends on the characteristics of vessel/WIV lighting (including height above sea level) and environmental conditions (e.g. cloud cover). The extent of line of sight visibility for vessels of similar sizes to those proposed to be used as part of this activity, with MODU lighting regarded as conservative, has previously been measured by Woodside as 30 km (Woodside Energy Limited, 2014).</p> <p>While the line of sight may extend tens of kilometres from the source, the light density (measured in Lux – which represents the intensity of light that arrives at or leaves a surface, as perceived by the human eye) rapidly decreases as distance increases from the source of the light. Monitoring undertaken as a part of Woodside's 2014 study indicated that light density (from navigational lighting) attenuated to below 1.00 Lux and 0.03 Lux at distances of 300 m and 1.4 km, respectively, from the source (a MODU). Light densities of 1.00 and 0.03 Lux are comparable to natural light densities experienced during deep twilight and during a quarter moon. Navigational lighting from vessels is less than lighting on a WIV. Therefore, light emissions from the WIV and vessels are expected to be below 1.00 Lux within 300 m from the source.</p> |  |                 |               |  |                     |         |               |                                 |                    |            |             |             |                    |          |
| <p>This document is protected by copyright. No part of this document may be reproduced, adapted, transmitted, or stored in any form by any process (electronic or otherwise) without the specific written consent of Woodside. All rights are reserved.</p> <p>Controlled Ref No: A1806AF1401779378      Revision: 3      Woodside ID: 1401779378      Page 213 of 360</p> <p>Uncontrolled when printed. Refer to electronic version for most up to date information.</p>   |  |                 |               |  |                     |         |               |                                 |                    |            |             |             |                    |          |

During support activities, underwater lighting is generated over short periods of time while ROVs are in use, as well as from deck lighting. Given the typical intensity of ROV lights and the attenuation of light in seawater, light from ROVs will be localised to the vicinity of the ROV and vessels.

#### **Cumulative light sources**

Cumulative light from activities conducted under the GWA Operations EP in nearby infrastructure may result in slightly elevated ambient light levels, though this is not expected to significantly increase impacts to marine fauna given the short-term nature of this well intervention activity and distance from the GWA platform. Further, vessel based IMR activities conducted under the GWA Operations EP are likely to consist of one project vessel, and are unlikely to occur concurrently to well intervention activities.

### **Impact Assessment**

Receptors that have important habitat within a 20 km buffer of the Operational Area were considered for the impact assessment, based on recommendations of the National Light Pollution Guidelines for Wildlife Including Marine Turtles, Seabirds and Migratory Shorebirds (NLPG). The 20 km threshold provides a precautionary limit based on observed effects of sky glow on marine turtle hatchlings, demonstrated to occur at 15–18 km, and fledgling seabirds grounded in response to artificial light 15 km away (Commonwealth of Australia, 2020).

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. Additionally, there is no known critical habitat within the Operational Area for EPBC listed species, although as described in **Section 4.5.2** there are BIAs for interesting buffer flatback turtles, breeding wedge-tailed shearwaters, and foraging whale sharks that overlap the Operational Area.

#### ***Oceanic Seabirds and/ or Migratory Shorebirds***

Artificial 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 as a result of collision (Longcore and Rich, 2004; Gaston et al., 2014). The nearest emergent land that could be used for roosting or nesting habitat is the Montebello Islands (about 76 km from the Operational Area). The Operational Area may be occasionally visited by seabirds and migratory shorebirds, and overlaps a breeding and foraging BIA for the wedge-tailed shearwater. The breeding period for wedge-tailed shearwaters at Montebello Islands occurs from August to April (**Section 4.5.2.5**).

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, 2020). 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 76 km from the nearest emergent land, impacts to adult nesting or fledgling seabirds and migratory shorebirds are not expected. Artificial light from the Petroleum Activities Program 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 is considered to be low, based on the intermittent and localised nature of the activities in the Operational Area, as well as the distance offshore. 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.

Foraging adult seabirds may occur within the Operational Area. Foraging adult seabirds, including shearwaters, are less susceptible to impacts from artificial light than fledglings or nesting adult seabirds. However, they are still vulnerable as artificial light can interact with offshore foraging behaviour which may occur during the day or night.

Foraging adult wedge-tailed shearwaters may be attracted to sources of light emissions to feed on fish drawn to the light, or may be attracted to vessel light during periods of low visibility (Catry et al., 2009; Whitow 1997). During the breeding period at the Muiron Islands off Exmouth Gulf (from around August to April, peak November), adult wedge-tailed shearwaters were observed taking a combination of short (1–4 days) or long (6–30 days) foraging trips from the Muiron Islands, travelling over large areas across the north west of Australia towards Indonesia (Cannell et al., 2019). During the breeding period, foraging adult wedge-tailed shearwaters were observed travelling up to around 1000 km from the breeding colony (Cannell et al., 2019). Although the breeding and foraging BIA overlapping the Operational

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Area is defined as the area within around 70-80 km from the Montebello Islands, wedge-tailed shearwaters on the NWS have been observed foraging beyond the breeding and foraging BIA. Based on the large area where foraging is known to occur, the Operational Area does not represent a significant portion of the known foraging area for the wedge-tailed shearwaters. Therefore, impacts to wedge-tailed shearwaters are likely to be limited to localised behavioural disturbance to isolated transient individuals. Artificial lighting from the Petroleum Activities Program is not expected to significantly impact foraging or displace seabird species from important foraging habitat.

**Marine Reptiles**

Turtle hatchlings emerge from the nest and orient towards the sea. After entering the water, hatchlings use a combination of cues (wave direction and currents) to orient and travel into offshore waters. Impacts to the sea-finding behaviour of hatchlings are more common for light sources behind a beach, as lighting offshore will orient emerging hatchlings towards the sea. Artificial light at close distances can also impact hatchling dispersal once they are in the water. Light spill may 'entrap' hatchling swimming behaviour, reducing the success of their seaward dispersion and potentially increasing their exposure to predators via silhouetting (Salmon et al., 1992).

The nearest turtle nesting locations (the Montebello Islands) are about 76 km south-west of the Operational Area, therefore there is no potential for lighting impacts to flatback, green and loggerhead hawksbill turtle hatchling emergence.

Additionally, since the Operational Area is located >76 km from turtle nesting beaches in the Montebello Islands, the risk of significant numbers of dispersing hatchlings becoming attracted to direct light or sky glow from project vessels/WIV is not considered credible. This is supported by the findings of a desktop lighting impact assessment for the Scarborough Project, conducted by Pendoley Environmental (PENV, 2020). At a range of >76 km, the density of dispersing hatchlings is expected to be low and very few individuals will be at risk of attraction. For any isolated individuals potentially attracted to light spill from project vessels/WIV, following sunrise, any effect of these light sources on hatchlings will be eliminated allowing dispersal behaviour to resume.

Any impacts to hatchling turtles from artificial light will be limited to possible localised behavioural impacts to isolated individual hatchlings offshore, with no lasting effect to the species.

Although the flatback turtle interesting BIA is within the Operational Area and individuals may migrate and forage in the Operational Area, marine turtles do not use light cues to guide these behaviours. Furthermore, there is no evidence, published or anecdotal, to suggest that foraging or migrating turtles are impacted by light from offshore vessels. As such, light emissions from the project vessels/WIV are unlikely to result in displacement of, or behavioural changes to individuals in these life stages (PENV, 2020).

**Fish**

Lighting from ROV or project vessel/WIV activities during the Petroleum Activities Program may result in the localised aggregation of fish around the ROV or below the vessel/WIV. These aggregations of fish due to light are considered localised and temporary. Any long-term changes to fish species composition or abundance is considered highly unlikely. Any localised impacts to marine fish are not expected to impact on any commercial fishers in the area. Krill or plankton may also aggregate around the source of light. These aggregations of fish, krill or plankton would be confined to a small area and would only occur when the ROV is in use. Based on the short duration and localised nature of the Petroleum Activities Program, these aggregations are not expected to attract either pygmy blue whales or humpback whales. A whale shark foraging BIA overlaps the Operational Area and this localised increase in fish extends to those comprising the whale shark's diet. However, lighting from ROV or support vessel/WIV activities is not expected to have any negative impacts on whale shark behaviour.

**Cumulative Impacts**

The Operational Area is located 12 km from the producing GWA facility, therefore, there is the potential for cumulative impacts from the routine light emissions arising from activities conducted under the GWA Operations EP, including IMMR activities on adjacent infrastructure. However, activities associated with the GWA Operations EP are likely to be conducted by one project vessel and unlikely to occur concurrently. Therefore, the potential for significant cumulative impacts to occur to seabird, fish and marine reptile species from light emissions to occur from concurrent activities around the GWA platform is minimal. Light emissions from vessels using the nearby shipping fairway will only be temporary in nature as they transit through and therefore unlikely to be of sufficient duration to cause cumulative impacts.

**Summary of Potential Impacts to Environmental Value(s)**

Light emissions from the project vessels will not result in an impact greater than localised and temporary disturbance to fauna in the vicinity of the Operational Area, with no lasting effect (i.e. Environment Impact – F).

| <b>Demonstration of ALARP</b>   |   |   |   |                        |
|---|---|---|---|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>21</sup></b>   | <b>Benefit/Reduction in Impact</b>  | <b>Proportionality</b>  | <b>Control Adopted</b> |
| <b>Legislation, Codes and Standards</b>   |   |   |   |                        |
| No additional controls identified.  |   |   |   |                        |
| <b>Good Practice</b>  |   |   |   |                        |
| 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<br><b>C 8.1</b>    |
| Implement a Seabird Management Plan that includes: <ul style="list-style-type: none"> <li>Standardisation and maintenance of record keeping and reporting of seabird interactions</li> <li>Procedures on seabird intervention, care and management.</li> <li>Regulatory reporting requirements for seabirds (unintentional death of or injury to seabirds that constitute MNES)</li> <li>A scalable adaptive management process should negative light impacts to nocturnal seabirds be detected.</li> </ul> | F: Yes. The management plan is an internal Woodside process developed to manage the impacts of artificial light emissions.<br>CS: Minimal cost/sacrifice. | Implementing a Seabird Management Plan will enable standardised data collection to better understand seabird interactions with project vessels, provide guidance on seabird management to enable the best outcomes 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<br><b>C 8.2</b>    |
| Lighting modifications (shielding, directional lighting) to minimise over water light spill and light emissions during peak turtle hatchling season (Dec to Mar).   | F: Yes, lighting is able to be modified on the vessels<br>CS: Financial cost of changes and time associated with implementing these                       | Reducing light spill over water and overall light glow from a vessel can reduce the likelihood that hatchling behaviour will be influenced.   | Cost/sacrifice outweighs benefit.   | No                     |

<sup>1</sup> Qualitative measure

| <b>Demonstration of ALARP</b>   |   |  |   |                        |
|---|---|--|---|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>21</sup></b>   | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>  | <b>Control Adopted</b> |
|   |   | Due to the distance from turtle nesting beaches (>76 km, benefits in implementing this control are expected to be minimal.             |   |                        |
| <b>Professional Judgement – Eliminate</b>   |   |  |   |                        |
| No use of external lighting during Petroleum Activities Program.  | F: No. Light management will be consistent with that required to provide a safe working environment onboard WIV and support vessels.<br><br>CS: Not considered – control not feasible.  | Not considered – control not feasible.   | Not considered – control not feasible.  | No                     |
| Restrict the Petroleum Activities Program to daylight hours, eliminating the need for external work lights.                             | F: No. Components of the Petroleum Activities Program cannot safely be completed within a 12-hour day shift. As such, the need for external lighting cannot safely be eliminated.<br><br>CS: Not considered – control not feasible                                | Not considered – control not feasible  | Not considered – control not feasible   | No                     |
| Vary the timing of the Petroleum Activities Program to avoid peak turtle nesting periods (December to February).                        | F: Yes. Avoidance of turtle nesting periods is technically feasible, although is not considered to be practicable.<br><br>CS: Not considered – control not practicable.   | Negligible or no reduction consequence given the distance of the nesting areas to the Operational Area.                                | Grossly disproportionate. Implementation of the control requires considerable cost sacrifice for minimal environmental benefit. | No                     |
| Vary the timing of the Petroleum Activities Program to avoid peak breeding and migration periods for seabirds and migratory shorebirds. | F: No. The peak breeding and migration periods of seabirds and migratory shorebirds that may occur within the Operational Area spans all seasons.<br><br>CS: Significant cost and schedule impacts due to delays in securing vessels/WIV for specific timeframes. | Not considered, control not feasible.  | Not considered, control not feasible.   | No                     |
| <b>Professional Judgement – Substitute</b>  |   |  |   |                        |
| Substitute external lighting with light sources designed to minimise impacts to seabirds, shorebirds and marine turtles:                | F: Yes. Replacement of external lighting with lighting appropriate for turtles and seabirds is technically feasible, although is not  | Given the potential impacts to turtles, nesting seabirds and fledglings during this activity are insignificant, implementation of this | Grossly disproportionate. Implementation of the control requires considerable   | No                     |

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| <b>Demonstration of ALARP</b>   |   |  |   |                        |
|---|---|--|---|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>21</sup></b>   | <b>Benefit/Reduction in Impact</b>   | <b>Proportionality</b>  | <b>Control Adopted</b> |
| <ul style="list-style-type: none"> <li>use flashing/intermittent lights instead of fixed beam</li> <li>use motion sensors to turn lights on only when needed</li> <li>use luminaires with spectral content appropriate for the species present</li> <li>avoid high intensity light of any colour.</li> </ul>  | considered to be practicable.<br>CS: Significant cost sacrifice. The retrofitting of all external lighting on the WIV, etc., would result in considerable cost and time expenditure. Considerable logistical effort to source sufficient inventory of the range of light types onboard the WIV. | control would not result in a reduction in consequence.<br>Potential for minor reduction in impact to individual foraging seabirds that may transit the Operational Area, as outlined in the NLPG. | cost sacrifice for minimal environmental benefit.<br>The cost/sacrifice outweighs the benefit gained. |                        |
| <b>Professional Judgement – Engineered Solution</b>   |   |  |   |                        |
| No additional controls identified.  |   |  |   |                        |
| <b>ALARP Statement</b>  |   |  |   |                        |
| On the basis of the environmental impact assessment outcomes and use of the relevant tools appropriate to the decision type (i.e. Decision Type A, <b>Section 2.6.1</b> ), Woodside considers the potential impacts from routine light emissions from the WIV and project vessels to be ALARP in its current risk state. As no reasonable additional/alternative controls were identified that would further reduce the impacts without grossly disproportionate sacrifice, the impacts are considered ALARP.   |   |  |   |                        |
| <b>Demonstration of Acceptability</b>   |   |  |   |                        |
| <b>Acceptability Statement</b>  |   |  |   |                        |
| The impact assessment has determined that, given the adopted controls, routine light emissions from external lighting on the WIV and project vessels may result in localised and temporary behavioural disturbance to species within the Operational Area, with no lasting effect (<1 month). BIAs overlapping the Operational Area include the flatback turtle internesting buffer, whale shark foraging, and wedge-tailed shearwater breeding. 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 Activities Program is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice ( <b>Section 6.8</b> ). |   |  |   |                        |
| On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in <b>Section 2.7.2</b> , Woodside considers this an acceptable level of impact.  |   |  |   |                        |

| Environmental Performance Outcomes, Standards and Measurement Criteria   |   |   |  |
|--|---|---|--|
| Outcomes   | Controls  | Standards   | Measurement Criteria   |
| <b>EPO 8</b><br>No impacts to marine fauna from light emissions with a consequence level greater than F <sup>22</sup> during the Petroleum Activities Program. | <b>C 8.1</b><br>Lighting will be limited to the minimum required for navigational and safety requirements, with the exception of emergency events.  | <b>EPS 8.1.1</b><br>Lighting will be limited to that required for safe work/navigation.   | <b>MC 8.1.1</b><br>Inspection verifies no excessive light being used beyond that required for safe work/ navigation. |
|  | <b>C 8.2</b><br>Implement an Offshore Seabird Management Plan that includes: <ul style="list-style-type: none"> <li>• Standardisation and maintenance of record keeping and reporting of seabird interactions</li> <li>• Procedures on seabird intervention, care and management</li> <li>• Regulatory reporting requirements for seabirds (unintentional death of or injury to seabirds that constitute MNES)</li> <li>• A scalable adaptive management process should negative light impacts to nocturnal seabirds be detected</li> </ul> | <b>EPS 8. 2.1</b><br>Implementation of the Woodside Offshore Seabird Management Plan by WIV and key PAP vessels to minimise potential impact should nocturnal seabird groundings occur. | <b>MC 8.2.1</b><br>Records demonstrate the Woodside Offshore Seabird Management Plan implemented.                    |

<sup>22</sup> Defined as 'No lasting effect (<1 month) or negligible impact. Localised impact not significant to environmental receptor'.

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## 6.7 Unplanned Activities (Accidents, Incidents, Emergency Situations)

### 6.7.1 Quantitative Spill Risk Assessment Methodology

#### 6.7.1.1 Credible spill scenarios

As part of the risk identification process, Woodside identified the range of credible hydrocarbon spill scenarios that may occur from the Petroleum Activities Program. These scenarios are considered in the risk assessments of accidental hydrocarbon spill scenarios (**Sections 6.7.2 to 6.7.3**), and include:

- uncontrolled subsea release to the marine environment lasting 12 hours.
- a vessel collision resulting in about 250 m<sup>3</sup> of marine diesel instantaneously released.

Modelling of the potential uncontrolled subsea release has been undertaken for the TPA03 well location using GWF-1 condensate, a combination of condensate from all GWF wells which includes TPA03 condensate.

The physical characteristics of the GWF-1 condensate, along with marine diesel, as used in the hydrocarbon spill modelling studies, are provided in **Table 6-9**.

An instantaneous release of 250 m<sup>3</sup> of marine diesel following a vessel collision has been modelled at the TPA03 well location.

#### 6.7.1.2 Spill Risk Assessment Methodology

Quantitative hydrocarbon spill modelling was undertaken by RPS, on behalf of Woodside, using a three-dimensional (3D) hydrocarbon spill trajectory and weathering model, SIMAP (Spill Impact Mapping and Analysis Program), 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 representative 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 of the particles (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.

All 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.

**Table 6-9: Hydrocarbon characteristics used in oil spill modelling**

| Hydrocarbon Type | Initial Density (g/cm <sup>3</sup> ) | Viscosity (cP) | Component BP (°C) | Volatiles <180 °C | Semi volatiles 180–265 °C | Low Volatility (%) 265–380 °C | Residual (%) >380 °C | Aromatic (%) of whole oil <380 °C BP |
|------------------|--------------------------------------|----------------|-------------------|-------------------|---------------------------|-------------------------------|----------------------|--------------------------------------|
|                  |                                      |                |                   | Non-Persistent    |                           |                               | Persistent           |                                      |
| GWF-1 condensate | 0.802 @ 15 °C                        | 1.245 @ 20 °C  | % of total        | 65                | 22.44                     | 10.16                         | 1.41                 | 18                                   |
|                  |                                      |                | % aromatics       | 10                | 4.8                       | 3.2                           | -                    | -                                    |
| Marine diesel    | 0.829 @ 25 °C                        | 4.0 @ 25 °C    | % of total        | 6.0               | 34.6                      | 54.4                          | 5.0                  | 3.0                                  |
|                  |                                      |                | % aromatics       | 1.8               | 1.0                       | 0.2                           | -                    | -                                    |

**6.7.1.3 Environment that May Be Affected and Hydrocarbon Contact Thresholds**

The outputs of the quantitative hydrocarbon spill modelling were used to assess the environmental consequence, if a credible hydrocarbon spill scenario occurred, in terms of delineating which areas of the marine environment could be exposed to hydrocarbon levels exceeding hydrocarbon threshold concentrations. The summary of all the locations where hydrocarbon thresholds could be exceeded by any of the simulations for the two modelled scenarios is defined as the EMBA.

As the weathering of different fates of hydrocarbons (surface, entrained and dissolved) differs due to the influence of the metocean transport mechanisms, the EMBA combines the potential spatial extent of the different fates.

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 a variety of weather and metocean conditions, and the EMBA represents the total extent of all the locations where hydrocarbon thresholds could be exceeded from all modelling runs, and is combined for the two modelled scenarios. Furthermore, as the weathering of different fates of hydrocarbons (surface, entrained and dissolved) differs due to the influence of the metocean transport mechanism, a different EMBA is presented for each fate. These EMBA together define the spatial extent for the existing environment, which is described in **Section 4**. Hydrocarbon contact below the defined thresholds may occur outside the EMBA and socio-cultural EMBA; however, the effects of these low exposure values will be limited to temporary exceedance of water quality triggers. The area within which this may occur in the event of a worst-case credible spill is presented in **Appendix D: Figure 5-1, Table 6-10** and described in the following subsections.

**Table 6-10: Summary of thresholds applied to the quantitative hydrocarbon spill risk modelling results**

| Hydrocarbon Type | EMBA                                    |                             |                                      |  | Socio-cultural EMBA                     |  |
|------------------|---|-----------------------------|--------------------------------------|--|---|--|
|                  | Surface Hydrocarbon (g/m <sup>2</sup> ) | Entrained hydrocarbon (ppb) | Dissolved aromatic hydrocarbon (ppb) | Accumulated hydrocarbons (g/m <sup>2</sup> ) | Surface Hydrocarbon (g/m <sup>2</sup> ) | Accumulated hydrocarbons (g/m <sup>2</sup> ) |
| GWF-1 Condensate | 10                                      | 100                         | 50                                   | 100  | 1                                       | 10   |
| Marine Diesel    | 10                                      | 100                         | 50                                   | 100  | 1                                       | 10   |

**Surface Hydrocarbon Threshold Concentrations**

The spill modelling outputs defined the EMBA for surface hydrocarbon spills (contact on surface waters) using the ≥10 g/m<sup>2</sup> threshold (dull metallic colours) based on the relationship between film thickness and appearance (Bonn Agreement, 2015) (Table 6-11). This threshold concentration, expressed in terms of g/m<sup>2</sup>, is geared towards informing potential oiling impacts for wildlife groups and habitats that may break through the surface slick from the water or the air (e.g. emergent reefs, vegetation in the littoral zone and air-breathing marine reptiles, cetaceans, seabirds and migratory shorebirds).

Thresholds for registering biological impacts resulting from contact of surface slicks have been estimated by different researchers at about 10–25 g/m<sup>2</sup> (French et al., 1999; Koops et al., 2004; NOAA, 1996; French-McCay, 2018). 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<sup>2</sup> threshold is the reported level of oiling to instigate impacts to seabirds, and is also applied to other wildlife, although 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 have a lower toxicity due to changes in their composition over time. Potential impacts to shoreline sensitive receptors may be markedly reduced in instances where there is extended duration until the slick contacts the shoreline.

Woodside recognises that hydrocarbons may be visible at low concentrations of approximately 1 g/m<sup>2</sup>. Therefore, the threshold for visible surface oil (1 g/m<sup>2</sup>) was 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. Any ecological impacts from dissolved and entrained hydrocarbons above prescribed thresholds, as in Table 6-10, may also result in socio-cultural impacts. Potential impacts to socio-cultural values assessed within these EMBA’s include the following:

- protected areas
- National and Commonwealth Heritage Listed places
- tourism and recreation
- fisheries.

The boundaries of the two EMBA’s may differ due to the different thresholds, hydrodynamics and weathering of the released hydrocarbons.

**Table 6-11: The Bonn Agreement oil appearance code**

| Appearance (following Bonn visibility descriptors) | Mass per area (g/m <sup>2</sup> ) | Thickness (µm) | Volume per area (L/km <sup>2</sup> ) |
|--|-----------------------------------|----------------|--------------------------------------|
| 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                            |

***Dissolved Hydrocarbon Threshold Concentration***

Dissolved hydrocarbons present a narcotic effect resulting from uptake into the tissues of marine organisms. This effect is additive, increasing with exposure concentration or with time of exposure (French-McCay, 2002; NRC, 2005). The dissolved aromatic threshold of 50 ppb has been selected as a medium level threshold to approximate the potential toxic effects, particularly sublethal effects to sensitive species, as consistent with the NOPSEMA Oil Spill Modelling Guidance Bulletin (NOPSEMA, 2019).

***Entrained Hydrocarbon Threshold Concentration***

Entrained hydrocarbons present a number of possible mechanisms for toxic exposure to marine organisms. The entrained hydrocarbon droplets may contain soluble compounds, hence have the potential for generating elevated concentrations of dissolved aromatic hydrocarbons (e.g. if mixed by breaking waves against a shoreline). Physical and chemical effects of the entrained hydrocarbon droplets have also been demonstrated through direct contact with organisms, for example through physical coating of gills and body surfaces, and accidental ingestion (National Research Council 2005).

The entrained threshold has been selected to be consistent with the NOPSEMA Oil Spill Modelling Guidance Bulletin (NOPSEMA, 2019). An entrained threshold of 100 ppb is considered to be appropriate given the oil characteristics for informing potential impacts to receptors.

***Accumulated Hydrocarbon Threshold Concentrations***

Owens and Sergy (1994) define accumulated hydrocarbon <100 g/m<sup>2</sup> to have an appearance of a stain on shorelines. French-McCay (2009) defines accumulated hydrocarbons ≥100 g/m<sup>2</sup> 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/m<sup>2</sup> has therefore been adopted to define the EMBA for both a condensate and diesel spill. Further, any ecological impacts at the accumulated thresholds concentration EMBA may also result in socio-cultural impacts.

**6.7.1.4 Scientific Monitoring**

A planning area for scientific monitoring is also described in **Section 5.7** of the Oil Spill Preparedness and Response Mitigation Assessment (**Appendix D**). This planning area has been defined with reference to the low exposure entrained value of 10 ppb detailed in NOPSEMA Bulletin #1 Oil Spill Modelling (2019). This low exposure threshold is based on the potential for exceeding water quality triggers.

A scientific monitoring program would be activated following a Level 2 or 3 unplanned hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors. This would consider receptors at risk (ecological and socio-economic) for the entire predicted EMBA and in particular, any identified Pre-emptive Baseline Areas (PBAs) for the worst-case credible spill scenario(s) or other identified unplanned hydrocarbon releases associated with the operational activities.

### 6.7.2 Unplanned Hydrocarbon Release: Loss of Well Containment

| Context   |  |                 |               |   |                     |         |               |                                 |                      |            |             |  |               |          |  |
|---|--|-----------------|---------------|---|---------------------|---------|---------------|---------------------------------|----------------------|------------|-------------|--|---------------|----------|--|
| Subsea Intervention Activities – <b>Section 3.6</b>   |  |                 |               | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b><br>Socioeconomic and Cultural – <b>Section 4.6</b> |                     |         |               | Consultation – <b>Section 5</b> |                      |            |             |  |               |          |  |
| Risks Evaluation Summary  |  |                 |               |   |                     |         |               |                                 |                      |            |             |  |               |          |  |
| Source of Risk  | Environmental Value Potentially Impacted |                 |               |   |                     |         |               | Evaluation                      |                      |            |             |  |               |          |  |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour)  | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence / Impact | Likelihood | Risk Rating | ALARP Tools                            | Acceptability | Outcome  |  |
| Loss of hydrocarbons to marine environment due to loss of well containment  | X  | X               | X             | X   | X                   | X       | X             | B                               | B                    | 1          | M           | LCS<br>GP<br>PJ<br>RB<br>A<br>CV<br>SV | Acceptable    | EPO<br>9 |  |
| Description of Source of Risk   |  |                 |               |   |                     |         |               |                                 |                      |            |             |  |               |          |  |
| <p><b>Background</b></p> <p>Woodside has identified a loss of well containment during well intervention activities as a credible spill scenario. A loss of well containment is an uncontrolled release of reservoir hydrocarbon or other well fluids to the environment. This is an incident where formation fluid flows out of the well after all the downhole well barriers fail and the WCP/PCE and Xmas tree barriers fail to seal. Woodside has identified the following scenario that could lead to a loss of well containment:</p> <p>Loss of Containment to the seafloor. In this scenario, a catastrophic failure of the WOCS/WORS WCP/PCE occurs and the XMAS tree and multiple downhole barriers also fail to seal the well, resulting in an uncontrolled subsea release of TPA03 condensate for 12 hours (based on the vessel regaining control and ROVs closing the Xmas tree and/ or SID WCP valves within 12 hours). With light well intervention there is no rigid riser connecting the MODU/vessel to the wellhead. This means there is no credible scenario in which the vessel could put sufficient load onto the Xmas Tree or wellhead to cause complete structural failure of the lower well control package, tree or wellhead. It is possible if an umbilical or guidewire snagged during a drive off that the upper well control package could be damaged.</p> <p>The Well Operations Management Plan (WOMP) explains the appropriate standards and practices, within the Woodside Management System, which are used to manage well integrity and loss of containment risks. The key governing process used to reduce loss of containment risk to ALARP, include:</p> <ul style="list-style-type: none"> <li>Well Lifecycle Management</li> <li>Drilling and Completions (D&amp;C) Standards and Practices <ul style="list-style-type: none"> <li>Engineering Standard – Well Barriers</li> <li>D&amp;C Risk Management Procedure</li> <li>D&amp;C Change Management Procedure</li> <li>Process Safety Critical Role Competency Procedure.</li> </ul> </li> </ul> <p>The TPA03 Well Intervention WOMP, which will detail well specific integrity risks and controls measures, will be prepared and submitted for approval in future.</p> |  |                 |               |   |                     |         |               |                                 |                      |            |             |  |               |          |  |

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**Industry Experience**

A risk assessment by AMSA of oil spills in Australian ports and waters (Det Norske Veritas 2011) concluded that:

- overall national exceedance frequency for oil spills from offshore drilling in Australia is 0.033 for spills > 1 tonne/year decreasing to 0.008 for spills > 100 tonnes/year
- probability of a blow-out from a well intervention is  $1 \times 10^{-4}$  (0.0001, or 0.01%), considerably lower than drilling activities (International Association of Oil and Gas Producers 2010).

Woodside has a good history of implementing industry standard practice in well design and construction. In the company's 60 year history, it has not experienced any well containment events that have resulted in significant releases or significant environmental impacts.

Therefore, in accordance with the Woodside Risk Matrix, a loss of well containment event corresponds to a 'highly unlikely' event as it has occurred many times in the industry, but not in the Company.

**Credible Scenario – Loss of Well Containment**

The credible scenario to be considered during the TPA-03 well intervention is an uncontrolled subsea release to environment lasting about 12 hours. This time frame has been selected based on the estimated time for the vessel to regain control and ROVs to close Xmas tree and/ or SID WCP valves.:

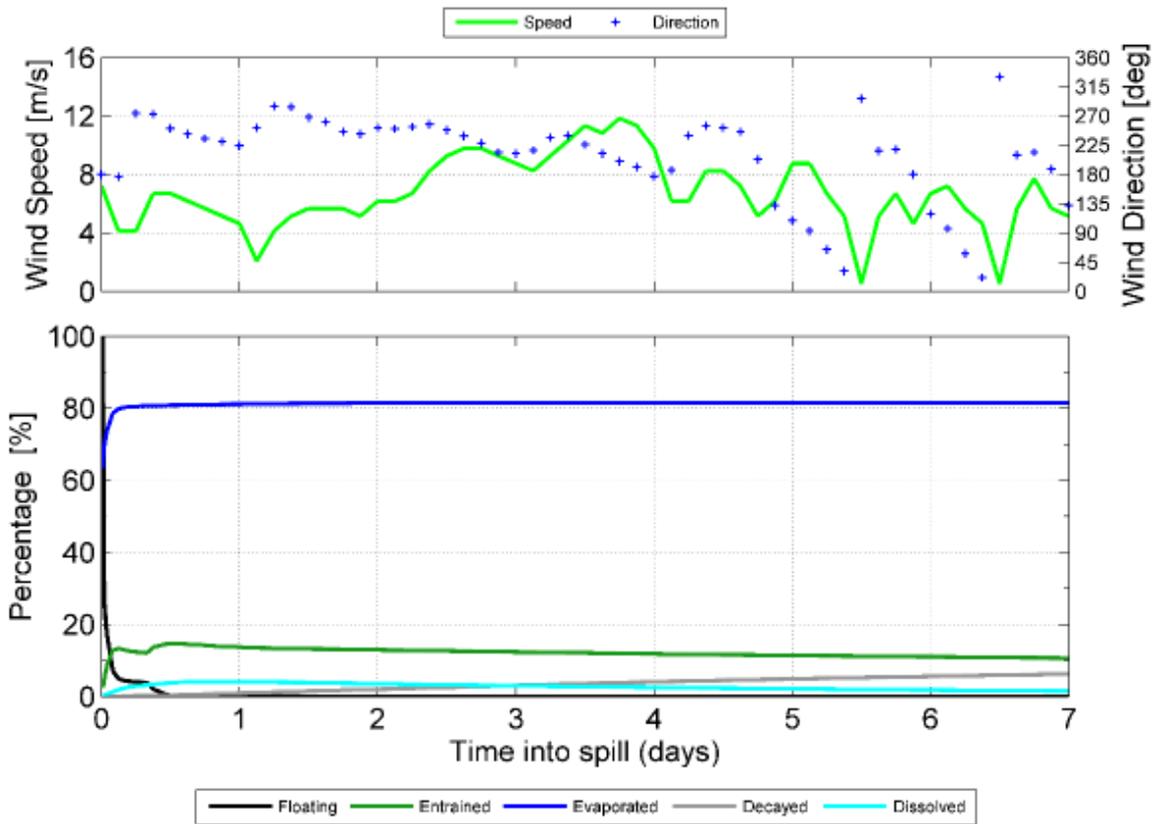
**Quantitative Hydrocarbon Spill Modelling – Loss of Well Containment**

Spill modelling previously undertaken by RPS, on behalf of Woodside, determined the fate of hydrocarbon released from the loss of well containment scenario. The modelled release rate provided assumes the worst case scenario for the largest oil volume release. 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**

GWF-1 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 65.7% of the oil is predicted to evaporate within the first 12 hours, and up to a further 22.8% could evaporate within the first 24 hours. Under calm conditions, the majority 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.

Under variable-wind conditions, where the winds are of greater strength on average, entrainment of GWF-1 condensate into the water column will be significant (**Figure 6-2**). Approximately 12 hours after the spill, around 14% of the oil mass is forecast to have entrained and a further 80% is forecast to have evaporated, leaving <1% of the oil floating on the water surface. Given the large proportion of entrained oil and the tendency for it to remain mixed in the water column, the remaining hydrocarbons will decay and/or evaporate over time scales of several weeks to a few months. This long weathering duration will extend the area of potential effect, requiring the break-up and dispersion of the slicks and droplets to reduce concentrations below thresholds for potential impact.



**Figure 6-1: Proportional mass balance plot representing the weathering of GWA Condensate spilled onto the water surface as a one-off release (50 m<sup>3</sup> over one hour) and subject to variable wind at 27 °C water temperature and 25 °C air temperature**

**Subsea Plume dynamics**

The surface/subsea release that has been modelled forecasts the size of the hydrocarbon droplets that would be released from the well as determined by the OILMAP model.

The results of the OILMAP simulation predict that the discharges will generate a cone of rising gas that will entrain the hydrocarbons droplets and ambient sea water up to the water surface. The mixed plume is initially forecast to jet towards the water surface with a vertical velocity of around 10.3m/s, gradually slowing and increasing in plume diameter as more ambient water is entrained. The diameter of the central cone of rising water and oil at the point of surfacing is predicted to be about 15 m.

Given the discharge velocity and turbulence generated by the expanding gas plume, the release is predicted to generate large droplet sizes ranging from 289 µm to 1041 µm. These droplets will be subject to mixing due to turbulence generated by the lateral displacement of the rising plume. The plume mixture is expected to reach the Surface after approximately 1 minute.

**Consequence Assessment**

**Potential impacts to environmental values**

**EMBA**

Quantitative hydrocarbon spill modelling results are shown in **Table 6-12** and have been used to define the EMBA (**Sections 4.1 and 6.7.1.3**).

**Surface Hydrocarbons**

Quantitative hydrocarbon spill modelling results for surface hydrocarbons are shown in **Figure 4-1**. In the event of the loss of well containment scenario occurring, surface hydrocarbons at or above 1 g/m<sup>2</sup> are forecast to potentially occur up to 15 km from the release site. Surface oil concentrations greater than the 10 g/m<sup>2</sup> threshold could occur up to 7 km from the spill site. No sensitive receptors are predicted to be contacted by surface hydrocarbons above the 1 g/m<sup>2</sup> or 10 g/m<sup>2</sup> threshold (**Table 6-12**).

**Entrained Hydrocarbons**

Entrained hydrocarbons at concentrations equal to or greater than the 100 ppb threshold is predicted to be found up to around 120 km from the release site. Contact by entrained hydrocarbons at concentrations equal to or greater than 100 ppb is predicted at Montebello AMP (1.5%) (**Table 6-12**). The maximum entrained hydrocarbons concentration is predicted to be 129 ppb at Montebello AMP.

**Dissolved Hydrocarbons**

Dissolved aromatic hydrocarbons at concentrations equal to or greater than the 50 ppb thresholds are predicted to be found up to around 290 km from the release site. Contact by dissolved aromatic hydrocarbons at concentrations equal to or greater than 50 ppb is predicted to be greatest at Rankin Bank (11%) and Montebello AMP (11.5%), as well as several other sensitive receptors with probabilities of less than 1% (**Table 6-12**). The maximum dissolved aromatic hydrocarbon concentration forecast for any receptor is predicted as 820 ppb at Montebello AMP.

**Accumulated Hydrocarbons**

Hydrocarbons are not predicted to accumulate on any shorelines above threshold levels.

**Summary of Potential impacts to environmental values**

**Table 6-12** presents the full extent of the EMBA, i.e. the sensitive receptors and their locations that may be exposed to hydrocarbons (surface, entrained and dissolved) at or above the set threshold concentrations in the unlikely event of a major hydrocarbon release from a loss of well containment during the Petroleum Activities Program. Details of these receptors are outlined in **Section 4**. The potential biological and ecological impacts of an unplanned hydrocarbon release as a result of a loss of well containment during the Petroleum Activities Program are presented in the following sections.

**Table 6-12: 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 probability of contact [%])**

| 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 (%)   |                                      |   |                         |  |                         |                        |   |  |  |   |   |                                  |  |
|-----------------------------|---|--|------------------------------|--------------------------|------------------------------|-----------|------------------------|-------------------------------------|--------------------|--|--------------------------|--------------|---|--------------|------------------------------|------------------------------------|---------------|-------------------------------------|---|-------------------------|--------------|---|--------------------------------------|---|-------------------------|--|-------------------------|------------------------|---|--|--|---|---|----------------------------------|--|
|                             |   | Physical   |                              | Biological               |                              |           |                        |                                     |                    |  |                          |              |   |              |                              |                                    |               | Socioeconomic and Cultural          |   |                         |              | Note: the probability is based on stochastic modelling of 100 hypothetical worst-case spills under a variety of weather and metocean conditions |                                      |   |                         |  |                         |                        |   |  |  |   |   |                                  |  |
|                             |   | Water Quality  | Sediment Quality             | Marine Primary Producers | Other Communities / Habitats |           |                        |                                     |                    |  | Protected Species        |              |   |              |                              |                                    | Other Species | Fisheries – commercial              |   | Fisheries – traditional |              | Tourism and Recreation  |                                      | Protected Areas / Heritage – European and Indigenous / Underwater Cultural Heritage |                         | Offshore Oil and Gas Infrastructure (topside and subsea) |                         | Socio-cultural EMBA    |   | Ecological EMBA  |  |   |   |                                  |  |
|                             |   | 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/m <sup>2</sup> ) | Accumulated hydrocarbons (10–100 g/m <sup>2</sup> ) | Surface hydrocarbon (≥10 g/m <sup>2</sup> ) | Entrained hydrocarbon (≥100 ppb) | Dissolved aromatic hydrocarbon (≥50 ppb) |
| Offshore <sup>23</sup>      | Montebello AMP  | ✓  | ✓                            | ✓                        |                              | ✓         | ✓                      |                                     |                    |  |                          |              | ✓   | ✓            |                              |                                    | ✓             | ✓                                   | ✓   | ✓                       | ✓            | ✓   | ✓                                    | ✓   |                         | ✓  |                         |                        | -   | -  | -  | 1.5   | 11.5  | -                                |  |
|                             | Ningaloo AMP  | ✓  | ✓                            | ✓                        |                              | ✓         | ✓                      | ✓                                   |                    |  |                          |              |   | ✓            |                              |                                    |               | ✓                                   |   | ✓                       | ✓            | ✓   | ✓                                    | ✓   | ✓                       |  | ✓                       |                        |   | -  | -  | -   | -   | 0.5                              | -  |
|                             | Rankin Bank   | ✓  | ✓                            | ✓                        |                              | ✓         | ✓                      | ✓                                   |                    |  |                          |              |   | ✓            |                              |                                    |               | ✓                                   |   | ✓                       | ✓            | ✓   | ✓                                    | ✓   | ✓                       |  | ✓                       |                        |   | -  | -  | -   | -   | 11                               | -  |
| Islands                     | Montebello Islands (including State Marine Park)  | ✓  | ✓                            | ✓                        | ✓                            | ✓         | ✓                      |                                     |                    |  | ✓                        |              | ✓   | ✓            | ✓                            |                                    | ✓             | ✓                                   | ✓   | ✓                       | ✓            | ✓   | ✓                                    | ✓   | ✓                       |  | ✓                       |                        |   | -  | -  | -   | -   | 0.5                              | -  |
|                             | Barrow Island (including State Nature Reserves, State Marine Park and Marine Management Area) | ✓  | ✓                            | ✓                        | ✓                            |           | ✓                      | ✓                                   |                    |  |                          | ✓            |   | ✓            | ✓                            | ✓                                  |               | ✓                                   | ✓   | ✓                       | ✓            | ✓   | ✓                                    | ✓   | ✓                       |  | ✓                       | ✓                      |   | -  | -  | -   | -   | 0.5                              | -  |
|                             | Muiron Islands (WHA, State Marine Park)   | ✓  | ✓                            | ✓                        | ✓                            |           | ✓                      | ✓                                   | ✓                  |  |                          | ✓            |   | ✓            | ✓                            | ✓                                  |               | ✓                                   | ✓   | ✓                       | ✓            | ✓   | ✓                                    | ✓   | ✓                       |  | ✓                       | ✓                      |   | -  | -  | -   | -   | 0.5                              | -  |
| Mainland (nearshore waters) | Ningaloo Coast (North, Middle & South; WHA, and State Marine Park)                            | ✓  | ✓                            | ✓                        | ✓                            | ✓         | ✓                      | ✓                                   |                    |  | ✓                        |              | ✓   | ✓            | ✓                            |                                    | ✓             | ✓                                   | ✓   | ✓                       | ✓            | ✓   | ✓                                    | ✓   | ✓                       |  | ✓                       | ✓                      |   | -  | -  | -   | -   | 0.5                              | -  |

<sup>23</sup> Note: hydrocarbons cannot accumulate on open ocean, submerged receptors, or receptors not fully emergent.

| Summary of Potential Impacts to Environmental Values(s) |  |
|---|--|
| Summary of Potential Impacts to protected species       |  |
| Setting   | Receptor Group   |
| Offshore  | <p><b>Cetaceans</b></p> <p>A range of cetaceans were identified as potentially occurring within the Operational Area and wider EMBA (<b>Section 4.5.2.3</b>). 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).</p> <p>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.</p> <p>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).</p> <p>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. Such species are more likely to occupy coastal waters (refer to the Mainland and Islands section below for additional information). Suitable habitat for oceanic toothed whales (e.g. sperm whales) and dolphins is broadly distributed throughout the region and as such, impacts are unlikely to affect an entire population. Other species identified in <b>Section 4.5.2.3</b> may also have possible transient interactions with the EMBA (refer to <b>Table 6-12</b> or the list of receptor locations for cetaceans).</p> <p>Pygmy blue whales and humpback whales are known to migrate seasonally through the wider EMBA; however, the migration BIAs in the region for both species do not overlap the Operational Area. A major spill in May to November would coincide with humpback whale migration through the waters off the Pilbara and North West Cape (<b>Figure 4-8</b>). A major spill in April–August or October would coincide with pygmy blue whale migration (<b>Figure 4-7</b>). 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.</p> <p>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. There is a small possibility that the dugong breeding, calving, and nursing BIAs in the Exmouth Gulf will be contacted by entrained and dissolved hydrocarbons above threshold concentrations (<b>Table 6-12</b>).</p> <p>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. Potential impacts to inshore cetaceans and other marine mammals are discussed in the Mainland and Islands (nearshore) impacts discussion below.</p> |

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**Summary of Potential Impacts to Environmental Values(s)**

**Marine Turtles**

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).

An interesting BIA for flatback turtles overlaps the Operational Area (

Table 4-8). 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 (~113 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 overlap the EMBA (**Section 4.5.2.2** and Figure 4-5: Marine turtle BIAs).

In particular, the interesting BIAs and habitat critical to the survival of a species for green, loggerhead and hawksbill turtles extend for ~20 km from known nesting locations, and for ~60 km for flatback turtles. It is noted that well intervention activities may take place at any point in the year, which may coincide with several species' peak hatching season (November to April), where higher numbers of turtles may be present (refer to **Table 4-14**). Oil from an ongoing loss of containment could be present during nesting season depending on the timing of a spill.

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. Potential impacts to nesting marine turtles are discussed in the Mainland and Islands (nearshore) impacts discussion below.

**Sea snakes**

Impacts to sea snakes from direct contact with hydrocarbons are likely to result in similar physical effects to those recorded for marine turtles. They may include potential damage to the dermis and irritation to mucus membranes of the eyes, nose and throat (International Tanker Owners Pollution Federation [ITOPF] 2011a). They may also be impacted when they return to the surface to breathe and inhale the toxic vapours associated with the hydrocarbons, resulting in damage to their respiratory system.

In general, sea snakes frequent the waters of the continental shelf area around offshore islands and potentially submerged shoals (water depths <100 m; see Submerged Shoals below). It is acknowledged that sea snakes may be present in the Operational Area and are present in the wider EMBA. Their abundance is not expected to be high in the deepwater and offshore environment.

Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore 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 in the Submerged Shoals and Banks and Mainland and Islands (nearshore) impacts discussion below.

**Sharks, Sawfish and Rays**

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 4.5.2.1**, within which whale sharks are seasonally present between April and October (**Section 4.5.2.5**). Impacts to sharks and rays may occur through

**Summary of Potential Impacts to Environmental Values(s)**

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.

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. Potential impacts to inshore and offshore reef associated sharks, sawfish and rays are discussed in the Submerged Shoals and Banks and Mainland and Islands (nearshore) impacts discussion below.

**Seabirds and/or Migratory Shorebirds**

Offshore waters 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 4.5.2.4**):

- the wedge-tailed shearwater
- White-tailed Tropicbird
- the roseate tern
- the lesser crested tern
- the fairy tern

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. Potential impacts to coastal and offshore island associated birds are discussed in the Mainland and Islands (nearshore) impacts discussion below.

| <b>Summary of Potential Impacts to Environmental Values(s)</b> |  |
|--|--|
| <b>Submerged Shoals and Banks</b>                              | <p><b>Marine Turtles</b></p> <p>There is the potential for marine turtles to be present at submerged shoals such as Rankin Bank and Glomar Shoals, which have potential to be contacted by entrained hydrocarbons above the threshold concentration. Rankin Bank and Glomar Shoals may, at times, be foraging habitat for marine turtles, given the coral and filter feeding biota associated with this area.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to 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. Potential impacts to nesting and internesting marine turtles are discussed in the Mainland and Islands (nearshore) impacts discussion below.</p>  |
|  | <p><b>Sea snakes</b></p> <p>There is the potential for sea snakes to be present at submerged shoals such as Rankin Bank. The potential impacts of exposure are as discussed previously in Offshore – Sea snakes. 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 disproportionately affected by a hydrocarbon spill affecting such habitat.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore reef associated 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 sea snakes are discussed in the Mainland and Islands (nearshore) impacts discussion below.</p>  |
|  | <p><b>Sharks, Sawfish and Rays</b></p> <p>There is the potential for resident shark and ray populations 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 predicted to be contacted by dissolved and entrained hydrocarbons above 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.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to offshore reef 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. Potential impacts to inshore associated sharks, sawfish and rays are discussed in the Mainland and Islands (nearshore) impacts discussion below.</p>  |
| <b>Mainland and Islands (Nearshore Waters)</b>                 | <p><b>All Species</b></p> <p>The information provided on protected species in this section is in addition to that provided in the preceding Offshore and Submerged Banks and Shoals sections. Refer to these preceding sections for additional discussion of protected species.</p>  |
|  | <p><b>Cetaceans and Dugongs</b></p> <p>In addition to a number of whale species that may occur in nearshore waters (refer to <b>Section 4.5.2.3</b> for the full list of EPBC listed cetacean species identified by the PMST with potential to occur within the EMBA), coastal populations of small cetaceans and dugongs are known to reside or frequent nearshore waters, including the Muiron Islands, Montebello/Barrow Islands Group, and the Pilbara Southern Island Group (see <b>Table 6-12</b>) which may be potentially impacted by entrained and dissolved 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); therefore, humpbacks moving into the Gulf 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 is expected for Camden Sound, an important calving area for humpback whales.</p> <p>The potential impacts of exposure are as discussed previously in Offshore – Cetaceans. 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.</p> <p>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</p> |

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**Summary of Potential Impacts to Environmental Values(s)**

actual timing, duration and extent of a spill in relation to species' migratory movements and distributions.

**Marine Turtles**

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 Muiron, Montebello, Barrow and Pilbara Islands Groups. A number of BIAs have been identified for marine turtles, including nesting, internesting and foraging areas as discussed previously in Offshore – Marine Turtles. There are distinct breeding seasons, as detailed in **Section 4.5.2.2**. The nearshore waters of these turtle habitat areas may be exposed to entrained hydrocarbons exceeding the threshold concentration. Accumulated shoreline hydrocarbons above the threshold concentration of 100 g/m<sup>2</sup> are predicted at Muiron, Montebello, and Pilbara Island Groups, as well as the Ningaloo coast. It is noted that well intervention activities will be undertaken between January - March and this coincides with some turtle species' peak hatching season where higher numbers of turtles may be present (refer to **Table 4-14**). However, oil from an ongoing loss of containment could be present during nesting season depending on the timing of a spill.

The potential impacts of exposure are as discussed previously in Offshore – Marine Turtles. 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 in nearshore waters.

A worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to 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.

**Sea snakes**

Impacts to sea snakes for the mainland and island nearshore waters from direct contact with hydrocarbons may occur and may include potential damage to the dermis and irritation to mucous membranes of the eyes, nose and throat (ITOPF 2011a).

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.

**Sharks, Sawfish and Rays**

Whale sharks and manta rays are known to frequent the Ningaloo coast and the Exmouth Gulf, as well as several islands including 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 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 sharks and rays (e.g. sawfish species identified in **Section 4.5.2.1**) populations to be impacted directly from hydrocarbon contact or indirectly through contaminated prey or loss of habitat. **Table 6-12** indicates the receptor locations predicted to be contacted by entrained hydrocarbons above the threshold concentration where impacts to the benthic

| <b>Summary of Potential Impacts to Environmental Values(s)</b> |   |
|--|---|
|  | <p>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.</p> <p>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.</p>  |
|  | <p><b>Seabirds and/or Migratory Shorebirds</b></p> <p>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.</p> <p>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 sublethal will depend on the weathering stage and its inherent toxicity. 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. Important areas for foraging seabirds and migratory shorebirds are identified in <b>Section 4.5.2.4</b>.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to nearshore associated seabirds and migratory shorebirds, with consequence severity dependent on the actual timing, duration and extent of a spill in relation to species' migratory movements, breeding seasons and distributions.</p> |

| <b>Summary of potential impacts to other species</b> |  |
|--|--|
|--|--|

| <b>Setting</b>      | <b>Receptor Group</b>   |
|---------------------|---|
| <b>All Settings</b> | <p><b>Pelagic Fish Populations</b></p> <p>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 <i>Amoco Cadiz</i> in 1978 and the <i>Florida</i> in 1969) have occurred in sheltered bays.</p> <p>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.</p> <p>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).</p> <p>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</p> |

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| <b>Summary of Potential Impacts to Environmental Values(s)</b>  |  |
|---|--|
|   | <p>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 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.</p> <p>Demersal species are associated with the Ancient Coastline KEF, which overlaps the Operational Area. Additional KEFs that may host relatively diverse or abundant fish assemblages compared to relatively featureless continental shelf habitats that occur within the wider EMBA are:</p> <ul style="list-style-type: none"> <li>• Continental Slope Demersal Fish Communities KEF (44 km west), which has a highly diverse fish assemblage with a high degree of endemism (DAWE, 2021)</li> <li>• Glomar Shoals KEF (76 km north-east), which are used by several commercial and recreational fish species (DAWE, 2021)</li> <li>• Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula KEF (227 km south-west), which has been shown to host demersal fish (BMT Oceanica 2016)</li> <li>• Commonwealth Waters adjacent to Ningaloo Reef KEF (273 km south-west), which has high biological productivity and hosts a yearly aggregation of whale sharks (DAWE, 2021).</li> </ul> <p>Mortality and sublethal effects may impact populations located close to a release 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.</p> <p>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.</p> |
| <b>Summary of Potential Impacts to Marine Primary Producers</b> |  |
| <b>Setting</b>  | <b>Receptor Group</b>  |
| <b>Submerged Shoals</b>   | <p>The waters overlying the Rankin Bank and Glomar Shoals have the potential to be exposed to entrained hydrocarbons above threshold concentrations (<math>\geq 100</math> ppb). Potential biological impacts could include sublethal 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. Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to primary producer groups at these sites.</p>  |
| <b>Mainland and Islands (nearshore waters)</b>                  | <p><b>Coral Reef</b></p> <p>The quantitative spill risk assessment indicates there would be potential for coral reef habitat to be exposed to entrained hydrocarbons <math>\geq 100</math> ppb at locations including the Montebello AMP, Ningaloo AMP, several island groups, and the Ningaloo Coast (<b>Table 6-12</b>).</p> <p>Exposure to entrained hydrocarbons (<math>\geq 100</math> 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/ Muiro Islands, Pilbara Southern Island Groups) and the 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).</p> <p>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</p>  |

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| <b>Summary of Potential Impacts to Environmental Values(s)</b>        |   |
|---|---|
|   | <p>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 will depend on actual hydrocarbon concentration, duration of exposure and water depth of the affected communities.</p> <p>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).</p> <p>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 &gt;10 years) likely. The consequence severity is predicted to be greatest at reefs closest to the potential release location (e.g. Montebello Islands).</p>   |
|   | <p><b>Seagrass Beds/Macroalgae</b></p> <p>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 the Montebello AMP, Barrow/Montebello/Muiron Islands, the Pilbara Islands (documented as low and patchy cover), and the Ningaloo Coast (patchy and low cover associated with the shallow limestone lagoonal platforms), all have the potential to be exposed (see <b>Table 6-12</b> for a full list of receptors within the EMBA).</p> <p>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.</p> <p>Mangrove habitat at Montebello AMP, Barrow/Montebello Islands may be contacted by entrained hydrocarbons within the EMBA (see <b>Table 6-12</b>). 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 (&gt;10 years).</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in major long-term impacts to seagrass beds and macroalgae communities within the EMBA, with consequence severity predicted to be greatest at receptors closest to the potential release location (e.g. Montebello Islands).</p> |
| <b>Summary of Potential Impacts to Other Habitats and Communities</b> |   |
| <b>Setting</b>  | <b>Receptor Group</b>   |
| <b>Offshore</b>   | <p><b>Benthic Fauna Communities</b></p> <p>In the event of a major release at the seabed, the stochastic spill model predicted hydrocarbons droplets would be entrained, rapidly transporting them to the sea surface. As a result, the low sensitivity benthic communities 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 at 125 m Depth Contour KEF, Continental Slope Demersal Fish Communities KEF, Canyons KEF, Glomar Shoals and Commonwealth Waters adjacent to Ningaloo Reef KEF (<b>Section 4.5.3</b>)).</p>  |

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| <b>Summary of Potential Impacts to Environmental Values(s)</b> |  |
|--|--|
|  | <p>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.</p>  |
|  | <p><b>Open Water – Productivity/Upwelling</b></p> <p>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).</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to plankton populations within the EMBA, with impacts predicted to be greatest for habitats closest to the potential release location.</p>  |
|  | <p><b>Filter Feeders</b></p> <p>Entrained hydrocarbons above the 100 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 Ancient Coastline at 125 m Depth Contour KEF, Glomar Shoals and Continental Slope Demersal Fish Communities KEF, Canyons KEF, and Commonwealth Waters adjacent to Ningaloo Reef KEF. Refer to 'mainland and islands (nearshore waters) for a description of potential impacts to filter feeders in shallower waters.</p>  |
| <b>Mainland and Islands (Nearshore Waters)</b>                 | <p><b>Open Water – Productivity/Upwelling</b></p> <p>Nearshore waters and adjacent offshore waters surrounding the offshore islands (e.g. Montebello/Barrow Islands Group) and to the 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 Offshore description above).</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to plankton populations within the EMBA.</p>   |
|  | <p><b>Spawning/Nursery Areas</b></p> <p>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.</p> <p>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 Islands Group, Pilbara Southern Islands Groups, Ningaloo Coast, 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 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</p> |

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| <b>Summary of Potential Impacts to Environmental Values(s)</b> |  |
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|  | <p>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).</p> <p>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.</p>  |
|  | <p><b>Non-biogenic Reefs</b></p> <p>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.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to non-biogenic reefs within the EMBA.</p>   |
|  | <p><b>Filter Feeders</b></p> <p>Hydrocarbon exposure to shallow nearshore filter feeding communities (&lt;20 m depth) (e.g. Montebello Islands) 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.</p> <p>Nearshore filter feeders that are present in shallower water &lt;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.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in minor, short-term impacts to filter feeders within the EMBA.</p>   |
| <b>Key Ecological Features</b>                                 | <p><b>Key Ecological Features</b></p> <p>KEFs potentially impacted by the hydrocarbon spill from a loss of well containment event are detailed in <b>Section 4.5.3</b>. Although these KEFs are primarily defined by seabed geomorphological features, they can indicate a potential for increased biological productivity and, therefore, ecological significance.</p> <p>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, see <b>Section 4.5.3</b>). Impacts to benthic habitats are not predicted given the maximum depth of entrained hydrocarbons above 100 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.</p> <p>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.</p> |
| <b>Summary of Potential Impacts to Water Quality</b>           |  |
| <b>Setting</b>   | <b>Aspect</b>  |
| <b>All Settings</b>  | <p><b>Open Water – Water Quality</b></p> <p>Water quality would be affected due to hydrocarbon contamination above impact thresholds. These are defined by the EMBA descriptions for each of the entrained and dissolved hydrocarbon fates and their predicted extent. 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 potential release location.</p>  |

| <b>Summary of potential impacts to marine sediment quality</b>  |  |
|---|--|
| <b>Setting</b>  | <b>Receptor Group</b>  |
| <b>Offshore</b>   | <p><b>Marine Sediment Quality</b></p> <p>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.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in slight, short-term impacts to offshore sediment quality within the EMBA, with impacts predicted to be greatest for areas closest to the potential release location.</p> |
| <b>Mainland and Islands (Nearshore waters)</b>  | <p><b>Marine Sediment Quality</b></p> <p>Entrained hydrocarbons (at or above the defined threshold) are predicted to potentially contact shallow, nearshore waters of identified islands and mainland coastlines. Such hydrocarbon contact may lead to reduced marine sediment quality through adherence to sediment.</p> <p>Therefore, 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.</p>   |
| <b>Summary of Potential Impacts to Air Quality</b>  |  |
| <p>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.</p> <p>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 ~170 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.</p> |  |
| <b>Summary of Potential Impacts to Protected Areas</b>  |  |
| <p>The quantitative spill risk assessment results indicate that the open-water environment protected within a number of Commonwealth AMPs (refer to <b>Table 6-12</b>) may be affected by released hydrocarbons in the event of a loss of well containment. In the Remote likelihood of a major spill occurring, entrained hydrocarbons may contact the identified key receptor locations of islands and mainland coastlines and shoreline accumulation may occur above the socio-cultural threshold (but below the ecological threshold) at limited locations, resulting in the actual or perceived contamination of protected areas as identified for the EMBA.</p> <p>Impact on the protected areas is discussed in the sections above for ecological values and sensitivities, and below for socioeconomic values. Additionally, such hydrocarbon contact may alter understanding and/or perception of the protected marine environment, given these represent areas which are largely unaffected by anthropogenic influences and contain biologically diverse environments.</p>  |  |

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**Summary of Potential Impacts to Socioeconomic Values**

| <b>Setting</b>  | <b>Receptor Group</b>   |
|-----------------|---|
| <b>Offshore</b> | <p><b>Fisheries – Commercial</b></p> <p>A hydrocarbon release during a loss of well containment event has the potential to result in direct impacts to target species of the two Commonwealth and nine State managed fisheries reported to be active in the defined EMBA (refer <b>Section 4.6.2</b>). 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 Activities Program may also lead to an exclusion of fishing from the spill-affected area for an extended period.</p> <p>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.</p> <p><u>Prawn Managed Fisheries</u></p> <p>Targeted fish, prawn, mollusc and lobster species could experience sublethal stress, or in some instances mortality, depending on the concentration and duration of any potential hydrocarbon exposure and its inherent toxicity. In the event of a major spill, the modelling indicated the entrained and dissolved EMBA may extend to nearshore waters, including the actively fished areas of the designated Exmouth Gulf Prawn Managed Fishery, Onslow Prawn Managed Fishery and Nickol Bay Prawn Managed Fishery.</p> <p>Prawn habitat usage differs between species in the post-larval, juvenile and adult stages (Dall et al. 1990) and direct impacts to benthic habitat due to a major spill have 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 the event of a major spill, a range of subtidal habitats that support juvenile prawns may be exposed to hydrocarbons above impact thresholds, including:</p> <ul style="list-style-type: none"> <li>• Montebello Islands</li> <li>• Barrow Island</li> <li>• Lowendal Islands</li> <li>• Pilbara Southern Island Group</li> <li>• Ningaloo Coast.</li> </ul> <p>Localised loss of juvenile prawns in the worst spill-affected areas is possible. Whether lethal or sublethal effects occur may depend on duration of exposure, hydrocarbon concentration and 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.</p> <p>Therefore, a well intervention 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.</p> <p><b>Tourism including Recreational Activities</b></p> <p>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. Recreational fishing is mainly concentrated around the coastal waters and islands, including the Montebello Islands, and other islands and reefs in the region (DoF, 2011). In the event of an oil spill, fish in these areas could be affected by hydrocarbons above threshold</p> |

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| <b>Summary of Potential Impacts to Socioeconomic Values</b> |  |
|---|--|
|   | <p>concentrations. Impacts on species that are recreationally fished are described above under Summary of Potential Impacts to Other Species.</p> <p>A major loss of hydrocarbons from the Petroleum Activities Program may lead to exclusion of marine nature-based tourist activities, 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.</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in moderate, medium-term impacts to tourism and recreation within the EMBA.</p> <hr/> <p><b>Offshore Oil and Gas Infrastructure</b></p> <p>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 are:</p> <ul style="list-style-type: none"> <li>• GWA platform (operated by Woodside): 12 km from the Operational Area</li> <li>• NRC platform (operated by Woodside): 31 km from the Operational Area</li> </ul> <p>Operation of these facilities is likely to be affected in the event of a worst-case loss of well containment and 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.</p>                                     |
| <b>Submerged Shoals</b>                                     | <p><b>Tourism and Recreation</b></p> <p>In the event of a major spill, the offshore islands and reefs 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 (but not the ecological threshold) at limited locations. 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. There is also the potential to result in a temporary prohibition on charter boat recreational fishing/diving and any other marine nature-based tourism trips to offshore Rankin Bank and Glomar Shoals.</p> <p>If a potential loss of well containment or vessel collision 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.</p> <p>There is the potential for people to perceive 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).</p> <p>Therefore, a well intervention hydrocarbon spill scenario has the potential to result in moderate, medium-term impacts to tourism and recreational activities within the EMBA.</p> |
| <b>Mainland and Islands (Nearshore Waters)</b>              | <p><b>Tourism and Recreation</b></p> <p>In the event of a major spill, the nearshore waters of offshore islands and reefs 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 (but not the ecological threshold) at limited locations. 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 loss of well containment 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</p>   |

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| <b>Summary of Potential Impacts to Socioeconomic Values</b> |   |
|---|---|
|   | <p>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.</p> <p>There is the potential for people to perceive 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).</p> <p>Therefore, a worst-case hydrocarbon spill scenario has the potential to result in moderate, medium-term impacts to tourism and recreational activities within the EMBA.</p>  |
|   | <p><b>Cultural Values and Heritage</b></p> <p>Through consultation and a review of available literature (<b>Section 4.6.1</b>), Woodside understands that Sea Country, including marine ecosystems and species, archaeological heritage and heritage sites, marine parks, as well as intangible cultural heritage may be impacted in the event of a hydrocarbon release from a loss of well containment. Cultural features and heritage values that have the potential to be impacted include:</p> <ul style="list-style-type: none"> <li>• <b>Marine ecosystems and species:</b> Marine ecosystems may hold both cultural and environmental value to Traditional Custodians (see <b>Section 4.6.1</b>), with cultural and environmental values intrinsically linked (DCCEEW 2023, MAC 2021 as cited in Woodside 2023). It necessarily follows that an impact to marine ecosystems has the potential to impact cultural features where the impact is detectable in Sea Country – the seascape which Traditional Custodians view, interact with or hold knowledge of. The EMBA is known to include habitat for culturally important species such as whales, whale sharks, turtles, dugongs, plankton and seagrass (<b>Sections 4.5.1 and 4.5.2</b>). In the event of a worst-case release of hydrocarbons, individual fauna may be directly impacted or impacted through temporary degradation of their habitats, however, no population level impacts are expected. Impacts are not expected to occur to ecologically significant proportions of the populations of the species, nor 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.</li> <li>• <b>Heritage Sites:</b> Hydrocarbons that reach the shoreline have the potential to impact on Indigenous heritage places along the coastline, including registered sites, noting that there are no registered Aboriginal Heritage Sites in the EMBA. There is a low probability (&lt;0.5%) of dissolved hydrocarbons reaching the Montebello Islands and no shoreline accumulation is predicted therefore any potential artefacts, scatter and rock shelters on the Islands are not expected to be impacted by a hydrocarbon spill.</li> <li>• <b>Marine Parks:</b> The EMBA overlaps 3 AMPs and 3 State protected areas. Management Plans for several of these parks recognise cultural values of Indigenous groups (<b>Section 4.6.1.4</b>). Due to the low maximum concentrations predicted to reach any protected areas, cultural values of these areas are expected to be maintained.</li> <li>• <b>Intangible cultural heritage:</b> Impacts may occur to intangible cultural values such as songlines, creation/ dreaming sites, sacred sites, ancestral beings, cultural obligations to care for Country, knowledge of Country/ customary law and transfer of knowledge, connection to Country, access to Country, kinship systems and totemic species and resource collection. 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 result in reduced sightings (e.g., through a 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). In the unlikely event of a hydrocarbon release, intangible cultural heritage values may be impacted.</li> </ul> |
|   | <p><b>Historic Underwater Heritage</b></p> <p>There are a number of historic shipwrecks identified in the vicinity of the Operational Area (Table 4-8). The closest known wrecks are those of the McDermott Derrick Barge No. 20, and the McCormack, near the Montebello Islands and about 43 km from the Operational Area, at the closest point. 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</p>   |

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**Summary of Potential Impacts to Socioeconomic Values**

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).

**Summary of Potential Impacts to Environmental Value(s)**

In the highly unlikely event of a major hydrocarbon spill due to a loss of well integrity, the EMBA includes the areas listed in **Table 6-12**, including the sensitive offshore marine environments and associated receptors of the Montebello AMP, Ningaloo AMP and Rankin Bank. 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 well intervention activities within the Operational Area. However, no shoreline contact is predicted as a result of a major spill and therefore no impacts are expected at sensitive shoreline habitats or terrestrial areas of cultural heritage.

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'.

| <b>Demonstration of ALARP</b>  |  |  |                                   |  |
|--|--|--|-----------------------------------|--|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>24</sup></b>  | <b>Benefit in Impact/Risk Reduction</b>  | <b>Proportionality</b>            | <b>Control Adopted</b>                                 |
| <b>Legislation, Codes and Standards</b>  |  |  |                                   |  |
| 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.   | F: Yes.<br>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 loss of well control would not be reduced, the reduction in likelihood reduces the overall risk. | Benefits outweigh cost/sacrifice. | Yes<br><b>C 9.1</b>                                    |
| Maintain well mechanical integrity to contain reservoir fluids within the well envelope in compliance with Woodside Performance Standards for Safety Critical Elements.  | F: Yes<br>CS: Costs associated are standard practice.  | This control ensures well barriers (downhole and Xmas tree) are in place and verified, reducing the likelihood and overall risk of a loss of well control occurring.   | Benefits outweigh cost/sacrifice. | Yes<br>In accordance with Regulation 31.<br>See below. |
| In accordance with Regulation 31 of the Environment Regulations, the SCE technical Performance Standard(s) to prevent environment risk relevant for an unplanned loss of well containment, is provided for in Woodside's current <a href="#">Goodwyn Alpha (GWA) Facility Operations Environment Plan</a> , accepted by NOPSEMA on 3 March 2022. The relevant control, PS 13.1, is P10 – Wells to – ensure that a well retains the mechanical integrity to contain reservoir fluids within the well envelope at all times. |  |  |                                   |  |
| In the event of a spill, emergency response activities implemented in accordance with the OPEP (per <b>Table 7-5</b> ).  | F: Yes.<br>CS: Costs associated with implementing response strategies, vary dependant on nature and scale of spill event. Standard practice. | This control would not reduce the likelihood, but response activities may reduce the consequence.  | Benefits outweigh cost/sacrifice. | Yes<br><b>C 9.2</b>                                    |
| Arrangements supporting the activities in the OPEP (per <b>Table 7-5</b> ) will be tested to ensure the OPEP can be implemented as planned.  | F: Yes.<br>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<br><b>C 9.3</b>                                    |
| <b>Good Practice</b>   |  |  |                                   |  |

<sup>24</sup> Qualitative measure.

| <b>Demonstration of ALARP</b>  |   |   |  |                         |
|--|---|---|--|-------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>24</sup></b>                                       | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>   | <b>Control Adopted</b>  |
| Subsea WCP installed, and function tested during well intervention activities. The WCP shall meet the Woodside Well Control Procedure, Woodside Engineering Standard Riserless Well Intervention Equipment and Services and shall be subject to NORSOK D-010 Risk Assessment.  | F: Yes.<br><br>CS: Standard practice. Required by Woodside standards.                                     | Testing of the WCP will reduce the likelihood of a loss of well control resulting in release of hydrocarbons to the marine environment. In the event of a loss of well control, this control would not reduce the consequence, although the reduction in likelihood reduces the overall risk ranking. | Benefits outweigh cost/sacrifice.  | Yes<br><br><b>C 9.4</b> |
| Mitigation: Oil Spill Response   | Refer to <b>Appendix D</b>  |   |  |                         |
| <b>Professional Judgement – Eliminate</b>  |   |   |  |                         |
| Do not intervene with well   | F: No<br><br>CS: Intervention is required to maintain production to end of field life for Tidepole field. | All risk would be eliminated.   | 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 well intervention activities, the cost/ sacrifice outweighs the benefit gained. | No                      |
| <b>Professional Judgement – Substitute</b>   |   |   |  |                         |
| No additional controls identified.   |   |   |  |                         |
| <b>Professional Judgement – Engineered Solution</b>  |   |   |  |                         |
| No additional controls identified.   |   |   |  |                         |
| <b>Risk Based Analysis</b>   |   |   |  |                         |
| A quantitative spill risk assessment was performed (refer <b>Section 6.7.1</b> ).  |   |   |  |                         |
| <b>ALARP Statement</b>   |   |   |  |                         |
| 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, <b>Section 2.6.1</b> ), 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

#### 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 Activities Program 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 Health and Safety and Environment and Biodiversity Policy (APPENDIX A)
- Woodside Risk Management Policy (APPENDIX A)
- Engineering Standards – Well Barriers
- Well Acceptance Criteria Procedure
- Drilling and Completions – Well Control Procedure
- Woodside Specification for MODU Deployed Subsea Installation or Workover Equipment and Services Source Control Emergency Response Planning Guideline (SCERP Guidelines)
- 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 D).

#### External Context

During consultation with relevant persons, DoT requested to be consulted on spill risks with a potential to impact State Waters (**Section 5**). Woodside has also consulted with AMSA on spill response strategies. In accordance with the MoU between Woodside and AMSA, a copy of the Oil Pollution First Strike Plan was provided to AMSA and DoT. No additional queries or concerns relating to a loss of well integrity hydrocarbon spill risk were raised during consultation.

#### 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:

- NORSOK D-010 for WCP function testing
- APPEA 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 D).
- OPGGS (Resource Management and Administration) Regulations 2011 to have an accepted WOMP and application for well intervention activities
- NOPSEMA will be notified of reportable and recordable incidents, if required, in accordance with Section 7.9. 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. As demonstrated in **Section 6.8**, 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 Activities Program is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice (**Section 6.8**).

### 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. BIAs within the Operational Area include flatback turtle, interesting, whale shark foraging, and wedge-tailed shearwater breeding BIA. Relevant recovery plans and conservation

advice have been considered during the impact assessment, and the Petroleum Activities Program is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice.

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 6.8**, the potential impacts of 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 during the assessment of potential risks.

On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in **Section 2.7.2**, this is considered an acceptable level of risk.

| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>  |  |   |   |   |   |
|--|--|---|---|---|---|
| <b>Outcomes</b>  | <b>Controls</b>  | <b>Standards</b>  | <b>Measurement Criteria</b>   |   |   |
| <b>EPO 9</b><br>No loss of well integrity resulting in loss of hydrocarbons to the marine environment during the Petroleum Activities Program.                 | <b>C 9.1</b><br>Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011: Accepted Well Operations Management Plan (WOMP). The WOMP 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. | <b>PS 9.1.1</b><br>Wells intervened in compliance with the accepted WOMP                      | <b>MC 9.1.1</b><br>Acceptance letter from NOPSEMA demonstrates the WOMP was accepted by NOPSEMA before the activity commenced.                              |   |   |
|  |  |   | <b>MC 9.1.2</b><br>Records demonstrate the verification documentation as listed in the WOMP is available.   |   |   |
|  |  |   | <b>C 9.2</b><br>In the event of a spill emergency response activities implemented in accordance with the OPEP (per <b>Table 7-5</b> ).                      | <b>PS 9.2.1</b><br>In the event of a spill the OPEP (per <b>Table 7-5</b> ) requirements are implemented.             | <b>MC 9.2.1</b><br>Completed incident documentation.  |
|  |  |   | <b>C 9.3</b><br>Arrangements supporting the activities in the OPEP (per <b>Table 7-5</b> ) will be tested to ensure the OPEP can be implemented as planned. | <b>PS 9.3.1</b><br>Exercises/tests will be conducted in alignment with the frequency identified in <b>Table 7-7</b> . | <b>MC 9.3.1</b><br>Testing of arrangement records confirm that emergency response capability has been maintained. |
| <b>PS 9.3.2</b><br>Woodside’s procedure demonstrates a minimum level of trained personnel, for core roles in the OPEP (per <b>Table 7-5</b> ), are maintained. | <b>MC 9.3.2</b><br>Emergency Management dashboard confirms that minimum level of personnel trained for core OPEP roles are available.  |   |   |   |   |
|  | <b>C 9.4</b>   | <b>PS 9.4.1</b><br>Subsea WCP specification, installation and function testing compliant with | <b>MC 9.4.1</b><br>Records demonstrate that WCP specifications and function testing were in   |   |   |

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|  |   |   |   |
|--|---|---|---|
|  | Subsea WCP installed and function tested during well intervention operations. | internal Woodside Standards and international requirements (NORSOK D-010) as agreed by Woodside and WIV contractor. | accordance with minimum standards for the expected well intervention conditions as agreed by Woodside and WIV contractor. |
| For oil spill response outcomes, standards and MC refer to <b>Appendix D</b> . |   |   |   |

### 6.7.3 Unplanned Hydrocarbon Release: Vessel Collision

| Context  |   |                 |               |                          |                    |         |                                 |               |             |            |                     |                 |                    |           |
|--|---|-----------------|---------------|--------------------------|--------------------|---------|---------------------------------|---------------|-------------|------------|---------------------|-----------------|--------------------|-----------|
| Project vessels – <b>Section 3.7</b>   | Physical environment – <b>Section 4.4</b><br>Biological environment – <b>Section 4.5</b><br>Socio-economic environment – <b>Section 4.6</b> |                 |               |                          |                    |         | Consultation – <b>Section 5</b> |               |             |            |                     |                 |                    |           |
| Impacts and Risks Evaluation Summary   |   |                 |               |                          |                    |         |                                 |               |             |            |                     |                 |                    |           |
| Source of Risk   | Environmental Value Potentially Impacted  |                 |               |                          |                    |         | Evaluation                      |               |             |            |                     |                 |                    |           |
|  | Soil and Groundwater  | Marine Sediment | Water Quality | Air Quality (incl Odour) | Ecosystems/Habitat | Species | Socio-Economic                  | Decision Type | Consequence | Likelihood | Current Risk Rating | ALARP Tools     | Acceptability      | Outcome   |
| Loss of hydrocarbons to marine environment due to a vessel collision (e.g. support vessels or other marine users)  |   |                 | X             |                          | X                  | X       | X                               | A             | D           | 1          | M                   | LCS<br>GP<br>PJ | Broadly Acceptable | EPO<br>10 |
| Description of Source of Risk  |   |                 |               |                          |                    |         |                                 |               |             |            |                     |                 |                    |           |
| <p><b>Background</b></p> <p>The temporary presence of the WIV and support vessels in the Operational Area will result in a navigational hazard for commercial shipping within the immediate area (as discussed in <b>Section 6.6.1</b>). This navigational hazard could result in a third party vessel colliding with the WIV or a support vessel which could release hydrocarbons.</p> <p>The largest fuel storage tank considered in suitable WIVs is 492 m<sup>3</sup>, with all fuel storage tanks located on the inboard side of the pontoons below the water line. As such, a spill from those tanks as a result of a vessel collision is not credible.</p> <p>The marine diesel storage capacity of a subsea support vessel can be in the order of 1000 m<sup>3</sup> (total), which is typically distributed throughout the hull of the vessel in multiple, isolated tanks. Individual fuel tanks range in size from 22-250 m<sup>3</sup> in volume. These vessels typically have double walled tanks, which are located midship (not bow or stern). Vessels are not anchored and travel at low speeds when relocating within the Operational Area or providing support.</p> <p><b>Industry Experience</b></p> <p>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).</p> <p>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 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.</p> <p>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.</p> |   |                 |               |                          |                    |         |                                 |               |             |            |                     |                 |                    |           |

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**Credible Scenario**

For a vessel collision to result 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 (Table 6-13). The scenarios considered damage to single and multiple fuel storage tanks in a project vessel and WIV due to dropped objects and various combinations of vessel to vessel and vessel to WIV collisions. In summary:

- It is not a credible scenario that a fuel storage tank on the suitable WIVs considered would be damaged due to the location of the tanks on the inboard side of the pontoons, below the waterline.
- It is not a credible scenario that a collision between the project support vessel and WIV would damage any storage tanks, due to the location of the tanks on both vessel types, and secondary containment.
- It is credible that the fuel tanks of a project support vessel would rupture following collision with third party vessels (i.e. commercial shipping, other petroleum related vessels and commercial fishing vessels). However, this situation was assessed as being highly unlikely given the standard vessel operations and equipment in place to prevent collision at sea, the standby role of a support vessel (low vessel speed) and its operation in close proximity to the WIV (exclusion areas), and the construction and placement of storage tanks. In this situation, the full volume of the largest storage tank on a support vessel would be lost. The largest tank of the support vessel is unlikely to exceed 250 m<sup>3</sup>.

Given the offshore location of the Operational Area, vessel grounding is not considered a credible risk.

**Table 6-13: Summary of credible hydrocarbon spill scenario as a result of vessel collision**

| Scenario  | Hydrocarbon Volumes   | Preventative and Mitigation Controls   | Credibility   |
|---|---|--|---|
| Breach of WIV fuel tanks due to support vessel collision.   | The largest fuel oil storage tank onboard the suitable WIVs considered have a capacity of 492 m <sup>3</sup> .    | Fuel tanks are located on the inside of pontoons and protected by location below water line, protection from other tanks, e.g. bilge tanks.<br><br>The draught of vessel and location of tanks in terms of water line prevent the tanks from being breached. | Not credible<br><br>Due to location of tanks.   |
| Breach of support vessel fuel tanks due to collision with WIV.  | Activity support vessel has multiple marine diesel tanks typically ranging between 22 to 105 m <sup>3</sup> each. | Typically, double wall tanks that are located mid ship (not bow or stern).<br><br>Slow support vessel speeds when in proximity to WIV.   | Not credible<br><br>Collision with WIV at slow speeds is highly unlikely and, if it did occur, is highly unlikely to result in a breach of support vessel (low energy contact from slow moving vessel). |
| Breach of project 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 to 250 m <sup>3</sup> each. | Typically, double wall tanks that are located midship (not bow or stern).<br><br>Vessels are not anchored and steam at low speeds when relocating within the Operational Area or providing stand-by cover. Normal maritime procedures would                  | Credible<br><br>Activity support vessel – other vessel collision could potentially result in the release from a fuel tank.  |

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|   |   |  |  |
|---|---|--|--|
|   |   | apply during such vessel movements.                    |  |
| Loss of well control due to third party vessel (e.g. large bulk carrier) collision with WIV during well intervention activities | Loss of containment of reservoir fluids – see <b>Section 6.7.2</b> for estimated volumes. | Refer to <b>Section 6.7.2</b> for mitigation controls. | Credible<br>See <b>Section 6.7.2</b> . |

**Quantitative Hydrocarbon Risk Assessment**

Modelling of a 250 m<sup>3</sup> surface release of marine diesel was conducted at the TPA03 well location.

The modelling assessed the extent of a marine diesel spill volume of 250 m<sup>3</sup> for all seasons, using an historic sample of wind and current data for the region. The modelling was conducted by RPS using a three-dimensional hydrocarbon spill trajectory and weathering model (SIMAP, Spill Impact Mapping and Analysis Program) (RPS, 2023).

**Hydrocarbon Characteristics**

Marine diesel is a mixture of both volatile and persistent hydrocarbons. Predicted weathering of marine diesel, based on typical (variable) conditions in the region, indicates that about 24% by mass would be expected to evaporate over the first 24 hours (Figure 6-2) (RPS, 2023). After this time the majority of the remaining hydrocarbon is entrained into the upper water column, leaving only a small proportion of the oil floating on the water surface (<1%). Given the large proportion of entrained oil and the tendency for it to remain mixed in the water column, the remaining hydrocarbons will decay and/or evaporate over time scales of several weeks to a few months, thereby extending the area of potential effect.

Given the environmental conditions experienced in the Operational Area, marine diesel is expected to undergo rapid spreading and this, together with evaporative loss, is likely to result in a rapid dissipation of the spill. Marine diesel distillates tend not to form emulsions at the temperatures found in the region. The characteristics of the marine diesel are given in **Table 6-14**.

**Table 6-14: Characteristics of the marine diesel**

| Hydrocarbon type | Initial density (g/cm <sup>3</sup> ) at 25 °C | Viscosity (cP @ 25 °C) | Component BP (°C) | Volatiles %<180 | Semi volatiles % 180–265 | Low volatility (%) 265-380 | Residual (%) >380 |
|------------------|---|------------------------|-------------------|-----------------|--------------------------|----------------------------|-------------------|
|                  |   |                        |                   | Non-Persistent  |                          |                            | Persistent        |
| Marine diesel    | 0.829   | 4.0                    | % of total        | 6               | 34.6                     | 54.4                       | 5                 |
|                  |   |                        | % of aromatics    | 1.8             | 1.0                      | 0.2                        | -                 |

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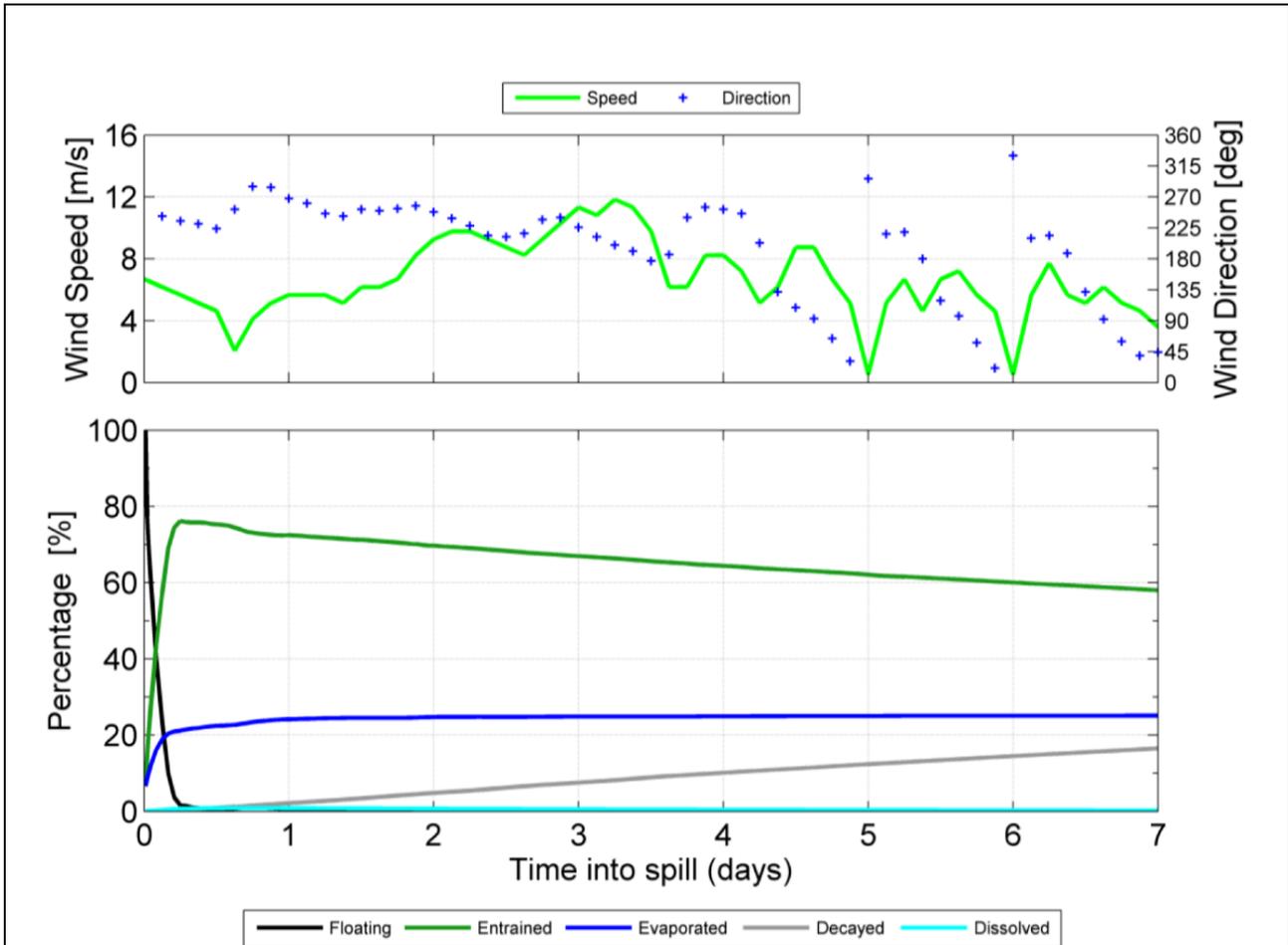


Figure 6-2: Proportional mass balance plot representing the weathering of marine diesel spilled onto the water surface as a one-off release (50 m<sup>3</sup> over one hour) and subject to variable wind at 27°C water temperature and 25°C air temperature.

### Consequence Assessment

#### Potential Impacts Overview

##### Environment that May Be Affected

**Surface Hydrocarbons:** The probability contour figures for floating hydrocarbons indicate that concentrations equal to or greater than the 1 g/m<sup>2</sup> and 10 g/m<sup>2</sup> thresholds could potentially be found, in the form of slicks, up to 18 km and 7 km from the spill site, respectively. Floating hydrocarbons at concentrations equal to or greater than 10 g/m<sup>2</sup> is not forecast to contact any of the assessed shoreline receptors (**Table 6-15**).

**Entrained Hydrocarbons:** Entrained oil at concentrations equal to or greater than the 100 ppb threshold is predicted to be found up to around 119 km from the spill site. Contact by entrained hydrocarbons at concentrations equal to or greater than 100 ppb is predicted at Montebello AMP (14.5%) as well as a few other sensitive receptors with probabilities of equal to or less than 5% (**Table 6-15**). The maximum entrained oil concentration forecast for any receptor is predicted to be 1,293 ppb at Montebello MP.

**Dissolved Hydrocarbons:** Dissolved aromatic hydrocarbons at concentrations equal to or greater than the 50 ppb threshold are predicted to be found up to 290 km from the spill site. Contact by dissolved hydrocarbons at concentrations equal or greater than 50 ppb is predicted at Rankin Bank (2.5%) and Montebello AMP (1.5%).

**Accumulated Hydrocarbons:** Accumulated hydrocarbons above threshold concentrations (≥100 g/m<sup>2</sup>) were not predicted by the modelling to occur at any location.





### Summary of Potential Impacts to Protected Species, Other Habitats and Communities, Water Quality and Socio-economic Values

Modelling of a 250 m<sup>3</sup> release of marine diesel spill due to vessel collision predicts that no receptors will be contacted by accumulated shoreline oil concentrations equal to or greater than 100 g/m<sup>2</sup>.

The Montebello AMP is predicted to contact entrained hydrocarbons >100 ppb (14.5%), as is the Ningaloo AMP (1.5%), Gascoyne AMP (0.5%), and the Montebello Islands (1%). The submerged Rankin Bank, Montebello Shoals, Tryal Rocks, and a number of State managed Marine Parks, are also predicted to be contacted entrained hydrocarbons above this threshold (≤5%) (**Table 6-12**).

Surface hydrocarbons >10 g/m<sup>2</sup> will not occur at any receptor, and the probability of surface hydrocarbons >1 g/m<sup>2</sup> at 0.5% or greater is not predicted.

There is a low possibility of dissolved hydrocarbons ≥50 ppb will occur at Montebello AMP (1.5%) and Rankin Bank (2.5%).

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 6.7.2**. The marine diesel EMBA is spatially similar to the loss of well integrity EMBA; therefore, the potential impacts of hydrocarbons provided in **Section 6.7.2**, and the scale of impact described, provides a comparable assessment for potential impacts of a 250 m<sup>3</sup> 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 low magnitude and temporary in nature.

#### Protected Species

As identified in **Section 4.5.2**, protected species including migrating pygmy blue whales and humpback 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.

The EMBA overlaps with habitat critical to the survival of flatback turtles for internesting and BIAs identified in **Section 4.5.2.2**, particularly the internesting BIAs for flatback turtles which extend for ~80 km from known nesting locations. The Operational Area also overlaps with an internesting BIA for flatback turtles and is approximately 36 km from designated habitat critical to the survival of flatback turtles for internesting at the Montebello Islands (with peak nesting in December and January). However, it is noted that the BIA and habitat critical to the survival of flatback turtles are considered very conservative as they are based on the maximum range of internesting females and many turtles are more likely to remain near their nesting beaches. In the event of a worst case vessel spill of MDO, there is a potential that surface and entrained hydrocarbons exceeding impact threshold concentrations (10 g/m<sup>2</sup> and 100 ppb respectively) will be present in offshore waters extending up to 7 km and 119 km respectively, from the release site. Toxicity of hydrocarbons will be significantly reduced by weathering at over such distances, with the volatile and water soluble (often the most toxic) components expected to have dissipated beyond the vicinity of the spill site. Dissolved aromatic hydrocarbons at concentrations equal to or greater than the 50 ppb threshold are predicted to be limited to the vicinity of the spill site. Low concentrations are only capable of causing sublethal impacts to the most sensitive marine organisms and no lethal or sub-lethal impacts to marine turtles are expected in the BIAs. 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. The EMBA overlaps the whale shark foraging BIA along the North-west shelf, but does not overlap the foraging (high density prey) BIA along the Ningaloo coast. 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 low numbers of animals that may transit through the area during the short period when spilled hydrocarbons are present.

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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 or dissolved hydrocarbon threshold concentrations are exceeded. A range of lethal and sublethal impacts may occur to plankton exposed to entrained or dissolved hydrocarbons within the EMBA. Communities are expected to recover quickly (weeks/months) due to high population turnover (ITOPF, 2011a). It is therefore considered that any potential impacts would be low magnitude and temporary in nature.

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 4.5.3**) occur within the EMBA, however they will not be directly exposed or impacted by a marine diesel spill as hydrocarbons are confined to the upper layers of the water column.

#### **Water Quality**

It is likely 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 low.

#### **Protected Areas**

Entrained and dissolved hydrocarbons at or exceeding impact thresholds have a low probability of contacting the Montebello AMP, Gascoyne AMP, and the Argo-Rowley Terrace AMP. Entrained hydrocarbons are mostly only predicted within the deep open waters of these protected areas, with no contact to seabed habitats or to shorelines above the ecological impact threshold values. Potential impacts to water quality and the natural values (e.g. mobile protected species) in these areas would be temporary and localised in nature due to the rapid dispersion and weathering of the marine diesel, as described above. Dissolved hydrocarbons (at or exceeding 50 ppb) are predicted to reach the Montebello AMP and the Montebello Islands State Marine Park.

#### **Socio-economic**

A marine diesel spill is considered unlikely to cause significant direct impacts on the target species fished by Commonwealth and State fisheries (see **Section 4.6.2**) 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 negligible impacts, considering that hydrocarbons are confined to the upper layers of the water column. Visible surface hydrocarbons at or exceeding 1 g/m<sup>2</sup> may also occur up to 18 km from the release site, which may result in fouling of fishing gear and a perception of impacts to fish stocks by fisheries and the public. There is the potential that a fishing exclusion zone would be applied in the area of the spill, which would put a temporary ban on fishing activities and 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 Features and Heritage Values**

Through consultation and review of available literature (**Section 4.6.1**), Woodside understands that Sea Country, including marine ecosystems and species, archaeological heritage and heritage sites, marine parks as well as intangible cultural heritage may be impacted in the event of a hydrocarbon release from a vessel collision. Cultural features and heritage values that have the potential to be impacted include:

- Marine ecosystems and species: Marine ecosystems may hold both cultural and environmental value to Traditional Custodians (see **Section 4.6.1**), with cultural and environmental values intrinsically linked (DCCEEW 2023, MAC 2021 as cited in Woodside 2023). It necessarily follows that an impact to marine ecosystems has the potential to impact cultural features where the impact is detectable within Sea Country—the seascape which Traditional Custodians view, interact with or hold knowledge of. The EMBA is known to include habitat for culturally important species such as whales, whale sharks, turtles, dugongs, plankton, and seagrass (**Sections 4.5.1 and 4.5.2**). In the event of a worst-case release of MDO individual fauna may be directly impacted or impacted through temporary degradation of their habitats, however, no population level impacts as expected. Impacts are not expected to occur to ecologically significant proportions of the populations of the species, nor 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.
- Heritage Sites: Hydrocarbons that reach the shoreline have the potential to impact on Indigenous heritage places along the coastline, including registered sites, noting that there are no registered Aboriginal Heritage Sites in the EMBA.

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- Marine Parks: Management Plans for several of the Australian and state marine parks located within the EMBA recognise cultural values of Indigenous groups (**Section 4.6.1.4**). Due to the low maximum concentrations predicted to reach any protected areas, cultural values of these areas are expected to be maintained.
- Intangible cultural heritage: Impacts may occur to intangible cultural values such as songlines; creation/dreaming sites, sacred sites, ancestral beings; cultural obligations to care for Country; knowledge of Country/customary law and transfer of knowledge; connection to Country; Access to Country; kinship systems and totemic species, resource collection. 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). In the unlikely event of a hydrocarbon release, intangible cultural heritage values may be impacted.

**Summary of Potential Impacts to Environmental Values**

In the unlikely event of an unplanned hydrocarbon release to the marine environment due to vessel collision, combined with the adopted controls, it is considered that any potential impact to water quality would be minor, localised and temporary in nature in comparison to background levels and/or international standards, with localised and temporary impacts to habitats, populations and shipping/fishing concerns.

The highest environmental consequence identified for the assessment of an unplanned hydrocarbon release to the marine environment due to vessel collision, as classified in **Table 2-3**, is defined as D, which equates to minor, short-term impact (1–2 years) on species, habitat (but not affecting ecosystems), physical or biological attributes.

| <b>Demonstration of ALARP</b>  |   |   |   |                        |
|--|---|---|---|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>25</sup></b> | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>  | <b>Control Adopted</b> |
| <b>Legislation, Codes and Standards</b>  |   |   |   |                        |
| Marine Order 30 (prevention of collisions) 2016, including: <ul style="list-style-type: none"> <li>• adherence to steering and sailing rules including maintaining lookouts (e.g. visual, hearing, radar, etc.), proceeding at safe speeds, assessing risk of collision and taking action to avoid collision (monitoring radar)</li> <li>• adherence to navigation light display requirements, including visibility, light position/shape appropriate to activity</li> <li>• adherence to navigation noise signals as required.</li> </ul> | F: Yes.<br>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<br><b>C 10.1</b>   |
| Marine Order 21 (safety and emergency arrangements) 2016, including: <ul style="list-style-type: none"> <li>• adherence to minimum safe manning levels</li> <li>• maintenance of navigation equipment in efficient working order (compass/radar)</li> <li>• navigational systems and equipment required are those</li> </ul>   | F: Yes.<br>CS: Minimal cost. Standard practice.                     | Legislative requirements to be followed reduce the likelihood of interference with other marine users and thus the likelihood of a collision. | Controls based on legislative requirements – must be adopted. | Yes<br><b>C 10.2</b>   |

<sup>25</sup> Qualitative measure

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| <b>Demonstration of ALARP</b>   |   |  |  |                        |
|---|---|--|--|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>25</sup></b>         | <b>Benefit in Impact/ Risk Reduction</b>   | <b>Proportionality</b>   | <b>Control Adopted</b> |
| specified in Regulation 19 of Chapter V of <i>Safety of Life at Sea</i> <ul style="list-style-type: none"> <li>Automatic Identification System (AIS) that provides other users with information about the vessel's identity, type, position, course, speed, navigational status and other safety-related data.</li> </ul> |   |  |  |                        |
| Establishment of a 500 m safety exclusion zone around WIV and communicated to marine users.   | F: Yes.<br>CS: Minimal cost. Standard practice.                             | Legislative requirements to be followed reduce the likelihood of a collision with a third party vessel.  | Controls based on legislative requirements – must be adopted.        | Yes<br><b>C 1.2</b>    |
| Arrangements supporting the activities in the OPEP will be tested to ensure the OPEP can be implemented as planned.   | F: Yes.<br>CS: Moderate costs associated with exercises. Standard practice. | No change to impact or risk however ensures OPEP can be implemented in the event of a hydrocarbon spill thereby potentially reducing the consequence.  | Control based on regulatory requirement – must be adopted.           | Yes<br><b>C 9.3</b>    |
| <b>Good Practice</b>  |   |  |  |                        |
| AHO notified of activities and movements no less than four working weeks prior to scheduled activity commencement date of well intervention activities.   | F: Yes.<br>CS: Minimal cost. Standard practice.                             | Notification to AHO will enable them to generate navigation warnings (Maritime Safety Information Notifications (MSIN) and Notice to Mariners (NTM) (including AUSCOAST warnings where relevant)). | Benefits outweigh cost/sacrifice. Control is also Standard Practice. | Yes<br><b>C 1.3</b>    |
| Notify AMSA JRCC upon commencement and completion of well intervention activities.  | F: Yes.<br>CS: Minimal cost. Standard practice.                             | Communication of the Petroleum Activities Program to other marine users ensures they are informed and aware, thereby reducing the likelihood of a collision with a third party vessel.             | Benefits outweigh cost/sacrifice. Control is also Standard Practice. | Yes<br><b>C 1.5</b>    |
| Notify AHO and AMSA JRCC of any extended delay in the timing of the Petroleum Activities Program.   | F: Yes<br>CS: Minimal cost. Standard practice.                              | Communicating the Petroleum Activities Program to other marine users ensures they are informed and aware, thereby reducing the likelihood of   | Benefits outweigh cost/sacrifice. Control is also Standard Practice. | Yes<br><b>C 1.6</b>    |
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| Demonstration of ALARP  |  |  |  |                 |
|---|--|--|--|-----------------|
| Control Considered  | Control Feasibility (F) and Cost/Sacrifice (CS) <sup>25</sup>  | Benefit in Impact/Risk Reduction       | Proportionality                        | Control Adopted |
|   |  | interfering with other marine users.   |  |                 |
| Mitigation: Oil spill response.   | Refer to <b>APPENDIX D</b> .   |  |  |                 |
| Professional Judgement – Eliminate  |  |  |  |                 |
| Eliminate use of vessels.   | F: No. The use of vessels is required to conduct the Petroleum Activities Program.<br><br>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.  |  |  |  |                 |
| Risk Based Analysis   |  |  |  |                 |
| A quantitative spill risk assessment was performed (see detail above).  |  |  |  |                 |
| ALARP Statement   |  |  |  |                 |
| <p>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, <b>Section 2.6.1</b>), Woodside considers the adopted controls appropriate to manage the impacts and risks of an unplanned loss of hydrocarbon as a result of vessel collision. As no reasonable additional/alternative controls were identified that would further reduce the impacts and risks without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.</p>  |  |  |  |                 |
| Demonstration of Acceptability  |  |  |  |                 |
| Acceptability Statement   |  |  |  |                 |
| <p>The impact assessment has determined that an accidental hydrocarbon release as a result of a vessel collision represents a Minor current risk rating and may result in minor, short-term impact (1-2 years) on species, habitat (but not affecting ecosystems function), physical or biological attributes and communities. BIAs within the Operational Area include flatback turtle internesting, whale shark foraging, and wedge-tailed shearwater breeding and foraging BIAs. Relevant recovery plans and conservation advice have been considered during the impact assessment, and the Petroleum Activities Program is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice.</p> <p>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. On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in <b>Section 2.7.2</b>, this is considered an acceptable level of risk.</p> |  |  |  |                 |

| Environmental Performance Outcomes, Standards and Measurement Criteria   |   |  |  |
|--|---|--|--|
| Outcomes   | Controls  | Standards  | Measurement Criteria   |
| <b>EPO 10</b><br>No release of hydrocarbons to the marine environment due to a vessel collision during the Petroleum activities Program. | <b>C 10.1</b><br>Marine Order 30 (prevention of collisions) 2016, including: <ul style="list-style-type: none"> <li>adherence to steering and sailing rules including maintaining lookouts (e.g. visual, hearing, radar, etc.), proceeding at safe speeds,</li> </ul> | <b>PS 10.1.1</b><br>Support vessels and WIV compliant with Marine Order 30 (which requires vessels to be visible at all times) to prevent unplanned interaction with marine users. | <b>MC 10.1.1</b><br>Marine Assurance inspection records demonstrate compliance with standard maritime safety procedures (Marine Orders 21 and 30). |

| Environmental Performance Outcomes, Standards and Measurement Criteria  |   |  |   |
|---|---|--|---|
| Outcomes  | Controls  | Standards  | Measurement Criteria                        |
|   | assessing risk of collision and taking action to avoid collision (monitoring radar) <ul style="list-style-type: none"> <li>adherence to navigation light display requirements, including visibility, light position/shape appropriate to activity</li> <li>adherence to navigation noise signals as required.</li> </ul>  |  |   |
|   | <b>C 10.2</b><br>Marine Order 21 (safety and emergency arrangements) 2016, including: <ul style="list-style-type: none"> <li>adherence to minimum safe manning levels</li> <li>maintenance of navigation equipment in efficient working order (compass/ radar)</li> <li>navigational systems and equipment required are those specified in Regulation 19 of Chapter V of <i>Safety of Life at Sea</i></li> <li>AIS that provides other users with information about the vessel's identity, type, position, course, speed, navigational status and other safety-related data.</li> </ul> | <b>PS 10.2.1</b><br>Support vessels and WIV compliant with Marine Order 21 to prevent unplanned interaction with other marine users, |   |
|   | <b>C 1.2</b><br>See <b>Section 6.6.1</b>  | <b>PS 1.2.1</b><br>See <b>Section 6.6.1</b>  | <b>MC 1.2.1</b><br>See <b>Section 6.6.1</b> |
|   |   |  | <b>MC 1.2.2</b><br>See <b>Section 6.6.1</b> |
|   | <b>C 9.3</b><br>See <b>Section 6.7.2</b>  | <b>PS 9.3.1</b><br>See <b>Section 6.7.2</b>  | <b>MC 9.3.1</b><br>See <b>Section 6.7.2</b> |
|   | <b>C 1.3</b><br>see <b>Section 6.6.1</b>  | <b>PS 1.3</b><br>see <b>Section 6.6.1</b>  | <b>MC 1.3</b><br>see <b>Section 6.6.1</b>   |
|   | <b>C 1.5</b><br>see <b>Section 6.6.1</b>  | <b>PS 1.5</b><br>see <b>Section 6.6.1</b>  | <b>MC 1.5</b><br>see <b>Section 6.6.1</b>   |
|   | <b>C 1.6</b><br>see <b>Section 6.6.1</b>  | <b>PS 1.6</b><br>see <b>Section 6.6.1</b>  | <b>MC 1.6.1</b><br>see <b>Section 6.6.1</b> |
| Detailed preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activities Program are presented in <b>APPENDIX D</b> . |   |  |   |

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### 6.7.4 Unplanned Discharges: Deck and Subsea Spills

| Context  |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
|--|--|-----------------|---|--------------------------|---------------------|---------|---------------------------------|---------------|--------------------|------------|-------------|-----------------|--------------------|-----------|
| Project Fluids – <b>Section 3.7</b>  |  |                 | Physical Environment – <b>Section 4.4</b>   |                          |                     |         | Consultation – <b>Section 5</b> |               |                    |            |             |                 |                    |           |
| Project Vessels – <b>Section 3.7</b>   |  |                 | Biological Environment – <b>Section 4.5</b> |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| Risk Evaluation Summary  |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| Source of Risk   | Environmental Value Potentially Impacted |                 |   |                          |                     |         |                                 | Evaluation    |                    |            |             |                 |                    |           |
|  | Soil and Groundwater                     | Marine Sediment | Water Quality                               | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic                   | Decision Type | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools     | Acceptability      | Outcome   |
| Accidental discharge of hydrocarbons/ chemicals from WIV and project vessels deck activities and equipment (e.g. cranes) and from subsea ROV hydraulic leaks within the Operational Area   |  | X               |   |                          | X                   |         |                                 | A             | F                  | 2          | L           | LCS<br>GP<br>PJ | Broadly acceptable | EPO<br>11 |
| Description of Source of Risk  |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| <p><b>Unplanned hydrocarbon and chemical spills</b></p> <p>Deck spills can result from spills from stored hydrocarbons/chemicals or equipment. Project vessels typically store hydrocarbon/chemicals in various volumes (20 L, 205 L; up to approximately 4000–6000 L). Storage areas are typically set up with effective primary and secondary bunding to contain any deck spills. Releases from equipment are predominantly from the failure of hydraulic hoses, which can either be located within bunded areas or outside of bunded or deck areas (e.g. over water on cranes). Helicopter refuelling may also take place within the Operational Area, on the helipad of the WIV and support vessels.</p> <p>Minor leaks during wire line activities (i.e. well intervention activities) with a live well are described to include leaks such as:</p> <ul style="list-style-type: none"> <li>leaks from the lubricator, stuffing box and hose or fitting failure, which are expected to be less than 10 L (0.01 m3)</li> <li>loss of containment – fluids – surface holding tanks</li> <li>stuffing box leak / under pressure</li> <li>draining of lubricator contents</li> <li>excess grease / lubricant leaking from the grease injection head</li> <li>wind-blown lubricant dripping from cable / on deck</li> <li>lubricant used to lubricate hole.</li> </ul> <p>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 &lt;10 L.</p> <p>Subsea spills can result from a loss of containment of fluids from subsea equipment including the WCP or ROVs. A review of these spills to the marine environment in the past 12 months showed subsea spills did not exceed approximately 26 L in Woodside’s Drilling function.</p> <p>The ROV hydraulic fluid is supplied through hoses containing approximately 20 L of fluid. Hydraulic lines to the ROV arms and other tooling may become caught resulting in minor leaks to the marine environment. Small volume hydraulic leaks may occur from equipment operating via hydraulic controls subsea (subsea control fluid). These include the diamond wire cutter, bolt tensioning eq-ipment, ROV tooling etc.</p> <p><b>Bulk Fluids - Transfers</b></p> |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
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A support vessel may bulk transfer brine/MEG to the WIV, if and when required. Failure of a transfer hose or fittings during a transfer or backload, as a result of an integrity or fatigue issue, could result in a spill of fluids to either the banded deck or into the marine environment. The most likely spill volume of brine/MEG is likely to be less than 0.2 m<sup>3</sup>, based on the volume of the transfer hose and the immediate shutoff of the pumps by personnel involved in the bulk transfer process. However, the worst-case credible spill scenario could result in up to 8 m<sup>3</sup> of brine/MEG 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 failure to immediately shut off pumps (e.g. fluids pumped through a failed transfer hose for a period of—about five minutes).

**Drilling Fluids - Emergency Shut Down and Disconnect**

The ESD is an emergency system that provides a rapid means of shutting in the well. The ESD could be manually activated due to an identified threat to the safety of the WIV, including loss of WIV station keeping, potential collision by a third-party vessel or a loss of well control. An ESD could result in a small release of drill water, brine/MEG and gas based on the contents of the lubricator and umbilicals at the time of the EDS (<50L).

On loss of position the system will perform an autonomous Emergency Disconnect. This could result in a subsurface release of drill water, brine/MEG and gas based on the contents of the lubricator and umbilicals at the time of the EDS. The volume of material released would be up to 1 m<sup>3</sup> (i.e. the Flush Return hose and lubricator volume above upper shear valve).

All chemicals that may be released or discharged to the marine environment during the Petroleum Activities Program 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.

**Consequence Assessment**

Accidental spills of hydrocarbons or chemicals from the WIV and support vessels, bulk transfer hose, or potential release of hydrocarbons during Emergency Disconnect, will decrease the water quality in the immediate area of the spill; however, the impacts are expected to be temporary and very localised due to dispersion and dilution in the open ocean environment.

The potential biological and ecological impacts associated with hydrocarbon spills are presented in **Sections 6.7.2 to 6.7.3**. A minor loss of hydrocarbons from deck and subsea spills will be much reduced in terms of spatial and temporal scales from impacts described in **Section 6.7.2 to 6.7.3**. Given the small area of the potential spill and the dilution and weathering of any spill, the likelihood of ecological impacts to marine fauna (including protected species), other communities and habitats will be limited to no lasting effect and restricted to individual animals, and temporary, localised contamination of water.

**Summary of Potential Impacts to Environmental Value(s)**

Given the adopted controls, it is considered that minor hydrocarbon/chemical spills to the marine environment will not result in a potential impact to water quality greater than localised contamination above background levels with no lasting effect, quality standards or known effect concentrations and will not result in a potential impact greater than localised disruption to a small proportion of biological populations with no impact on protected species.

**Demonstration of ALARP**

| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>26</sup></b> | <b>Benefit in Impact/Risk Reduction</b>  | <b>Proportionality</b>  | <b>Control Adopted</b> |
|--|---|--|---|------------------------|
| <b>Legislation, Codes and Standards</b>  |   |  |   |                        |
| Marine Order 91 (marine pollution prevention – oil) 2014, requires Ship Oil Pollution Emergency Plan (SOPEP)/Spill Monitoring Programme Execution Plan (SMPEP) (as appropriate to vessel class). | F: Yes.<br>CS: Minimal cost. Standard practice.                     | Legislative requirements to be followed reduce the likelihood of an unplanned release. The consequence is unchanged. | Controls based on legislative requirements – must be adopted. | Yes<br><b>C 11.1</b>   |
| Liquid chemical and fuel storage areas are banded or secondarily   | F: Yes.<br>CS: Minimal cost. Standard practice.                     | Reduces the likelihood of contaminated deck drainage water being   | Controls based on legislative                                 | Yes<br><b>C 11.2</b>   |

<sup>26</sup> Qualitative measure

| <b>Demonstration of ALARP</b>   |   |   |                                   |                        |
|---|---|---|-----------------------------------|------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>26</sup></b> | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>            | <b>Control Adopted</b> |
| contained when they are not being handled/moved temporarily.  |   | discharged to the marine environment.   | requirements – must be adopted.   |                        |
| <b>Good Practice</b>  |   |   |                                   |                        |
| Where there is potential for loss of primary containment of oil and chemicals on the WIV, deck drainage will be collected via a closed drainage system. E.g. drill floor. | F: Yes.<br>CS: Minimal cost.<br>Standard practice.                  | Reduces the likelihood of contaminated deck drainage water being discharged to the marine environment.  | Benefits outweigh cost/sacrifice. | Yes<br><b>C 5.3</b>    |
| Spill kits positioned in high risk locations around the WIV and support vessels (near potential spill points such as transfer stations).                                  | F: Yes.<br>CS: Minimal cost.<br>Standard practice.                  | Reduces the likelihood of a deck spill from entering the marine environment. The consequence is unchanged.  | Benefits outweigh cost/sacrifice. | Yes<br><b>C 11.3</b>   |
| Project vessels have self-containing hydraulic oil drip tray management system.   | F: Yes.<br>CS: Minimal cost.<br>Standard practice.                  | Reduces the likelihood of a deck spill from entering the marine environment. The consequence is unchanged.  | Benefits outweigh cost/sacrifice. | Yes<br><b>C 11.4</b>   |
| Fluids and additives intended or likely to be discharged to the marine environment will have an environmental assessment completed before use.                            | F: Yes. CS: Minimal cost. Standard practice                         | Environmental assessment of chemicals will reduce the consequence of impacts resulting from discharges to the marine environment by ensuring chemicals have been assessed for environmental acceptability. Planned discharges are required for the safe execution of activities and therefore no reduction in likelihood can occur. | Benefits outweigh cost/sacrifice. | Yes<br><b>C 6.1</b>    |

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| <b>Demonstration of ALARP</b>  |  |  |   |                              |
|--|--|--|---|------------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>26</sup></b>  | <b>Benefit in Impact/Risk Reduction</b>  | <b>Proportionality</b>                        | <b>Control Adopted</b>       |
| <p>Contractor procedure for managing bulk fluids transfers, around the WIV, which requires:</p> <ul style="list-style-type: none"> <li>• emergency shutdown systems for stopping losses of containment (e.g. burst hoses)</li> <li>• the valve line-up to be checked prior to commencing transfers</li> <li>• constant monitoring of the transfer process</li> <li>• direct radio communications</li> <li>• completed PTW and JSA showing contractor procedures are implemented</li> <li>• recording and verification of volumes moved to identify any losses</li> </ul> | <p>F: Yes.<br/>CS: Minimal cost. Standard practice for Woodside to review contractor systems prior to performing activity.</p>   | <p>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.</p> | <p>Benefits outweigh cost/sacrifice</p>       | <p>Yes<br/><b>C 11.5</b></p> |
| <b>Professional Judgement – Eliminate</b>  |  |  |   |                              |
| No additional controls identified.   |  |  |   |                              |
| <b>Professional Judgement – Substitute</b>   |  |  |   |                              |
| No additional controls identified.   |  |  |   |                              |
| <b>Professional Judgement – Engineered Solution</b>  |  |  |   |                              |
| <p>Below-deck storage of all hydrocarbons and chemicals.</p>   | <p>F: Not feasible. During operations there is a need to keep small volumes near activities and within equipment requiring use of hydrocarbons and chemicals and can result in increased risk of leaks from transfers via hose or smaller containers.<br/>CS: Not considered – control not feasible.</p> | <p>Not considered – control not feasible.</p>  | <p>Not considered – control not feasible.</p> | <p>No</p>                    |
| <p>A reduction in the volumes of chemicals</p>   | <p>F: Yes. Increases the risks associated with</p>   | <p>No reduction in likelihood or</p>   | <p>Disproportionate. The cost/sacrifice</p>   | <p>No</p>                    |
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| Demonstration of ALARP                      |  |   |                               |                 |
|---|--|---|-------------------------------|-----------------|
| Control Considered                          | Control Feasibility (F) and Cost/Sacrifice (CS) <sup>26</sup>  | Benefit in Impact/Risk Reduction  | Proportionality               | Control Adopted |
| and hydrocarbons stored onboard the vessel. | transportation and lifting operations.<br>CS: Project delays if required chemicals not on board.<br>Increases the risks associated with transportation and lifting operations. | consequence since chemicals will still be required to enable activities to occur. | outweighs the benefit gained. |                 |

**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, **Section 2.6.1**), Woodside considers the adopted controls appropriate to manage the impacts and risks of the potential unplanned accidental deck and subsea spills described above. As no reasonable additional/alternative controls were identified that would further reduce the impacts and risks without grossly disproportionate sacrifice, the impacts and risks are considered ALARP.

**Demonstration of Acceptability**

**Acceptability Statement**

The risk assessment has determined that an unplanned minor discharge of hydrocarbons as a result of minor deck and subsea spills represents a low risk that is unlikely to result in potential impact greater than localised and temporary disruption but not impacting on ecosystem function. BIAs within the Operational Area include flatback turtle interesting, whale shark foraging, and wedge-tailed shearwater breeding BIA. However, these species are not expected to be impacted.

The adopted controls are consistent with industry legislation, codes and standards, good practice and professional judgement and meet the expectations of Australian Marine Orders. On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in **Section 2.7.2**, this is considered an acceptable level of risk.

**Environmental Performance Outcomes, Standards and Measurement Criteria**

| Outcomes  | Controls  | Standards  | Measurement Criteria   |
|---|---|--|--|
| EPO 11<br>No unplanned spills to the marine environment from deck activities greater than a consequence level of F <sup>27</sup> during the Petroleum Activities Program. | <b>C 11.1</b><br>Marine Order 91 (Marine pollution prevention – oil) 2014, requires SOPEP/SMPEP (as appropriate to vessel class).               | <b>PS 11.1.1</b><br>Appropriate initial responses prearranged and exercised for response to a hydrocarbon spill, as appropriate to vessel class. | <b>MC 11.1.1</b><br>Marine Assurance inspection records demonstrate compliance with Marine Order 91.   |
|   | <b>C 11.2</b><br>Liquid chemical and fuel storage areas are bunded or secondarily contained when they are not being handled/ moved temporarily. | <b>PS 11.2.1</b><br>Failure of primary containment in storage areas does not result in loss to the marine environment.                           | <b>MC 11.2.1</b><br>Records confirms all liquid chemicals and fuel are stored in bunded/ secondarily contained areas when not being handled/moved temporarily. |
|   | <b>C 5.3</b><br>See <b>Section 6.6.4</b>  | <b>PS 5.3.1</b><br>See <b>Section 6.6.4</b>  | <b>MC 5.3.1</b><br>See <b>Section 6.6.4</b>  |
|   | <b>C 11.3</b><br>Spill kits positioned in high risk locations around the rig (near  | <b>PS 11.3.1</b><br>Spill kits to be available for use to clean up deck spills.  | <b>MC 11.3.1</b><br>Records confirms spill kits are present, maintained and suitably stocked.  |

<sup>27</sup> Defined as ‘No lasting effect (<1 month). Localised impact not significant to environmental receptor’.

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| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>   |   |   |   |
|---|---|---|---|
| <b>Outcomes</b>   | <b>Controls</b>   | <b>Standards</b>  | <b>Measurement Criteria</b>   |
|   | potential spill points such as transfer stations).  |   |   |
|   | <p><b>C 11.4</b><br/>Project vessels have self-containing hydraulic oil drip tray management system.</p>  | <p><b>PS 11.4.1</b><br/>Contain any on-deck spills of hydraulic oil.</p>  | <p><b>MC 11.4.1</b><br/>Records demonstrate Project vessels are equipped with a self-containing hydraulic oil drip tray management system.</p>  |
|   | <p><b>C 6.1</b><br/>See <b>Section 6.6.5</b></p>  | <p><b>PS 6.1.1</b><br/>See <b>Section 6.6.5</b></p>   | <p><b>MC 6.1.1</b><br/>See <b>Section 6.6.5</b></p>   |
|   | <p><b>C 11.5</b><br/>Contractor procedure for managing well intervention bulk fluids transfers around the WIV, which requires:</p> <ul style="list-style-type: none"> <li>• emergency shutdown systems for stopping losses of containment (e.g. burst hoses)</li> <li>• the valve line-up to be checked prior to commencing transfers</li> <li>• constant monitoring of the transfer process</li> <li>• direct radio communications</li> <li>• completed PTW and JSA showing contractor procedures are implemented</li> <li>• recording and verification of volumes moved to identify any losses</li> </ul> | <p><b>PS 11.5.1</b><br/>Compliance with contractor procedures to limit accidental loss to the marine environment.</p> | <p><b>MC 11.5.1</b><br/>Records demonstrate drilling fluid transfers are performed in accordance with the applicable contractor procedures.</p> |
| <p>Detailed preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activities Program are present in <b>APPENDIX D</b>.</p> |   |   |   |

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### 6.7.5 Unplanned Discharges: Release of Solid Hazardous and Non-hazardous Wastes

| Context  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
|--|--|-----------------|--|--------------------------|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-----------------|--------------------|---------|
| Project Vessels and Support Activities– <b>Section 3.7</b>   |  |                 | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b> |                          |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |                 |                    |         |
| Risk Evaluation Summary  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
| Source of Risk   | Environmental Value Potentially Impacted |                 |  |                          |                     |         |               | Evaluation                      |                    |            |             |                 |                    |         |
|  | Soil and Groundwater                     | Marine Sediment | Water Quality  | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools     | Acceptability      | Outcome |
| Accidental loss of hazardous or non-hazardous wastes to the marine environment (excludes sewage, grey water, putrescible waste and bilge water)  |  | X               | X  |                          | X                   | X       |               | A                               | F                  | 2          | L           | LCS<br>GP<br>PJ | Broadly Acceptable | EPO 12  |
| Description of Source of Risk  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
| <p>The WIV 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 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.</p>  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
| Consequence Assessment   |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
| Potential Impacts to Water Quality, Other Habitats and Communities, and Protected Species  |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
| <p>The potential impacts of solid wastes accidentally discharged to the marine environment include direct pollution and contamination of the environment and secondary impacts relating to potential contact of marine fauna with wastes, resulting in entanglement or ingestion and leading to injury and death of individual animals. The temporary or permanent loss of waste materials into the marine environment is not likely to have a significant environmental impact, based on the location of the Operational Area, the types, size and frequency of wastes that could occur, and species present.</p> <p><b>Water Quality</b><br/> <u>Change in Water Quality</u><br/>                     Hazardous solid wastes such as paint cans, oily rags, etc., can cause localised contamination of the water through a release of toxins and chemicals. Given the likely small volumes of any unplanned solid waste discharge, and the occasional nature of the event, these would result in temporary and highly localised changes to the water quality</p> <p><b>Seabirds and Migratory Shorebirds, Fish, Marine Reptiles and Marine Mammals</b><br/> <u>Injury/Mortality to Fauna</u><br/>                     The unplanned discharge of solid wastes can result in mortality to fauna, either through contamination or physical injury depending on the nature of the waste. Marine fauna, including fish, seabirds and shorebirds, marine mammals and marine reptiles may be impacted through ingestion or entanglement of waste or through exposure to toxic chemicals. Ingestion or entanglement of marine fauna has the potential for physical harm which may limit feeding/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</p> |  |                 |  |                          |                     |         |               |                                 |                    |            |             |                 |                    |         |
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(Commonwealth of Australia, 2018). The Threat Abatement Plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans (Commonwealth of Australia, 2018) identifies EPBC Act-listed species for which there are scientifically documented adverse impacts resulting from marine debris. Marine turtles and seabirds 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 (Commonwealth of Australia, 2018) management controls will reduce the risk of unplanned discharge of solid waste.

The temporary or permanent loss of waste materials into the marine environment will have no lasting effect on any species or water quality, based on the types, size and frequency of wastes that could occur.

**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 localised impacts not significant to environmental receptors, with no lasting effect (i.e. Environment Impact – F).

| <b>Demonstration of ALARP</b>   |   |  |   |                          |
|---|---|--|---|--------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>28</sup></b> | <b>Benefit in Impact/Risk Reduction</b>  | <b>Proportionality</b>  | <b>Control Adopted</b>   |
| <b>Legislation, Codes and Standards</b>   |   |  |   |                          |
| Project vessels compliant with Marine Orders for safe vessel operations: <ul style="list-style-type: none"> <li>Marine Order 94 (Marine pollution prevention – packaged harmful substances) 2014</li> <li>Marine Order 95 (Pollution prevention –Garbage).</li> </ul> | F: Yes.<br><br>CS: Minimal cost. Standard practice.                 | Legislative requirements to be followed reduce the likelihood of an unplanned release. The consequence is unchanged. | Controls based on legislative requirements – must be adopted. | Yes<br><br><b>C 12.1</b> |
| <b>Good Practice</b>  |   |  |   |                          |

<sup>28</sup> Qualitative measure

| <b>Demonstration of ALARP</b>  |   |   |  |                              |
|--|---|---|--|------------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>28</sup></b> | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>                   | <b>Control Adopted</b>       |
| <p>Vessel waste arrangements, which require:</p> <ul style="list-style-type: none"> <li>dedicated space for waste segregation bins and/or skips to be provided on the WIV</li> <li>records of all waste to be disposed, treated or recycled</li> <li>waste streams to be handled and managed according to their hazard and recyclability class</li> <li>all non-putrescible waste (excludes all food, greywater or sewage waste) to be transported from the WIV and disposed onshore.</li> </ul> | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>             | <p>Reduces the likelihood of an unplanned release. The consequence is unchanged.</p>              | <p>Benefit outweighs cost/sacrifice.</p> | <p>Yes<br/><b>C 12.2</b></p> |
| <p>Project vessel waste arrangements, which require:</p> <ul style="list-style-type: none"> <li>dedicated waste segregation bins</li> <li>records of all waste to be disposed, treated or recycled</li> <li>waste streams to be handled and managed according to their hazard and recyclability class.</li> </ul>  | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>             | <p>Reduces the likelihood of an unplanned release. The consequence is unchanged.</p>              | <p>Benefit outweighs cost/sacrifice.</p> | <p>Yes<br/><b>C 12.3</b></p> |
| <p>If safe and practicable to do so, vessel, ROV, or crane will be used to attempt recovery of material<sup>29</sup> environmentally hazardous or non-hazardous solid object/waste lost overboard. This activity will consider:</p> <ul style="list-style-type: none"> <li>risk to personnel to retrieve object</li> <li>whether the location of the object is in</li> </ul>   | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>             | <p>Potentially reduces consequence by recovering object/waste container from the environment.</p> | <p>Benefit outweighs cost/sacrifice.</p> | <p>Yes<br/><b>C 12.4</b></p> |

<sup>29</sup> For this control /performance standard, 'material' is defined as unplanned releases of environmentally hazardous or non-hazardous solid object/waste events with an environmental consequence of >F

| <b>Demonstration of ALARP</b>  |   |   |                        |                        |
|--|---|---|------------------------|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>28</sup></b> | <b>Benefit in Impact/Risk Reduction</b> | <b>Proportionality</b> | <b>Control Adopted</b> |
| recoverable water depths <ul style="list-style-type: none"> <li>object's proximity to subsea infrastructure</li> <li>ability to recover the object (i.e. nature of object, lifting equipment or, ROV availability and suitable weather)</li> </ul>   |   |   |                        |                        |
| <b>Professional Judgement – Eliminate</b>  |   |   |                        |                        |
| No additional controls identified.   |   |   |                        |                        |
| <b>Professional Judgement – Substitute</b>   |   |   |                        |                        |
| No additional controls identified.   |   |   |                        |                        |
| <b>Professional Judgement – Engineered Solution</b>  |   |   |                        |                        |
| No additional controls identified.   |   |   |                        |                        |
| <b>ALARP Statement</b>   |   |   |                        |                        |
| 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, <b>Section 2.6.1</b> ), Woodside considers the adopted controls appropriate to manage the risks and consequences of accidental discharges of waste. 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.  |   |   |                        |                        |
| <b>Demonstration of Acceptability</b>  |   |   |                        |                        |
| <b>Acceptability Statement</b>   |   |   |                        |                        |
| The impact assessment has determined that unplanned discharges from a release of solid hazardous and non-hazardous wastes represent a low current risk rating and may result in localised impacts with no lasting effect (<1 month) to water quality, habitats (but not ecosystems) and species. BIAs within the Operational Area include flatback turtle interesting buffer, whale shark foraging, and wedge-tailed shearwater breeding BIA. Relevant recovery plans and conservation advice have been considered during the impact assessment, and the Petroleum Activities Program 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 expectations of Australian Marine Orders. On the basis of the environmental impact assessment outcomes and Woodside's criteria for acceptability outlined in <b>Section 2.7.2</b> , this is considered an acceptable level of risk.   |   |   |                        |                        |

| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>  |  |   |  |
|--|--|---|--|
| <b>Outcomes</b>  | <b>Controls</b>  | <b>Standards</b>  | <b>Measurement Criteria</b>  |
| <b>EPO 12</b><br>No unplanned release of solid hazardous or non-hazardous waste to the marine environment greater than a consequence level | <b>C 12.1</b><br>Project vessels compliant with Marine Orders for safe vessel operations: <ul style="list-style-type: none"> <li>Marine Order 94 (Marine pollution prevention – packaged harmful substances) 2014</li> </ul> | <b>PS 12.1.1</b><br>WIV and project vessels compliant with Marine Orders 94 and 95. | <b>MC 12.1.1</b><br>Records demonstrate compliance with Marine Orders 94 and 95. |

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| Environmental Performance Outcomes, Standards and Measurement Criteria |   |   |   |
|--|---|---|---|
| Outcomes   | Controls  | Standards   | Measurement Criteria  |
| of F <sup>30</sup> during the Petroleum Activities Program.            | <ul style="list-style-type: none"> <li>Marine Order 95 (Pollution prevention –Garbage).</li> </ul>  |   |   |
|  | <p><b>C 12.2</b></p> <p>Vessel waste arrangements will be applied, which require:</p> <ul style="list-style-type: none"> <li>dedicated space for waste segregation bins and/or skips to be provided on the WIV</li> <li>records of all waste to be disposed, treated or recycled</li> <li>waste streams to be handled and managed according to their hazard and recyclability class</li> <li>all non-putrescible waste (excludes all food, greywater or sewage waste) to be transported from the WIV and disposed onshore.</li> </ul> | <p><b>PS 12.2.1</b></p> <p>Hazardous and non-hazardous waste will be managed in accordance with the Vessel waste arrangements.</p>  | <p><b>MC 12.2.1</b></p> <p>Records demonstrate compliance against Vessel waste arrangements.</p>  |
|  | <p><b>C 12.3</b></p> <p>Support vessel waste arrangements will be applied, which require:</p> <ul style="list-style-type: none"> <li>dedicated waste segregation bins</li> <li>records of all waste to be disposed, treated or recycled</li> <li>waste streams to be handled and managed according to their hazard and recyclability class.</li> </ul>  | <p><b>PS 12.3.1</b></p> <p>Hazardous and non-hazardous waste managed in accordance with the support vessels' waste arrangements</p>   | <p><b>MC 12.3.1</b></p> <p>Records demonstrate compliance against support vessels' waste arrangements.</p>                                      |
|  | <p><b>C 12.4</b></p> <p>If safe and practicable to do so, vessel, ROV, or crane will be used to attempt recovery of solid object/waste lost overboard.</p>  | <p><b>PS 12.4.1</b></p> <p>Material solid waste or object/waste dropped to the marine environment will be recovered where safe and practicable to do so, considering:</p> <ul style="list-style-type: none"> <li>risk to personnel to retrieve object</li> <li>whether the location of the object is in recoverable water depths</li> </ul> | <p><b>MC 12.4.1</b></p> <p>Records detail the recovery attempt consideration and status of any object/waste lost to the marine environment.</p> |

<sup>30</sup> Defined as 'No lasting effect (less than one month). Localised impact not significant to areas or items of cultural significance)'.

| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b> |                 |   |                             |
|---|-----------------|---|-----------------------------|
| <b>Outcomes</b>   | <b>Controls</b> | <b>Standards</b>  | <b>Measurement Criteria</b> |
|   |                 | <ul style="list-style-type: none"> <li>object's proximity to subsea infrastructure</li> <li>ability to recover the object (i.e. nature of object, lifting equipment, ROV availability and suitable weather).</li> </ul> |                             |

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### 6.7.6 Physical Presence Vessel Collision with Marine Fauna

| Context   |  |                 |               |   |                     |         |               |                                 |                    |            |             |                 |                    |           |
|---|--|-----------------|---------------|---|---------------------|---------|---------------|---------------------------------|--------------------|------------|-------------|-----------------|--------------------|-----------|
| Project Vessels and Support Activities – <b>Section 3.7</b>   |  |                 |               | Biological Environment – <b>Section 4.5</b> |                     |         |               | Consultation – <b>Section 5</b> |                    |            |             |                 |                    |           |
| Risk Evaluation Summary   |  |                 |               |   |                     |         |               |                                 |                    |            |             |                 |                    |           |
| Source of Risk  | Environmental Value Potentially Impacted |                 |               |   |                     |         |               | Evaluation                      |                    |            |             |                 |                    |           |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality | Air Quality (incl Odour)                    | Ecosystems/ Habitat | Species | Socioeconomic | Decision Type                   | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools     | Acceptability      | Outcome   |
| Accidental collision between project vessels/WIV and protected marine fauna within the Operational Area   |  |                 |               |   |                     | X       |               | A                               | E                  | 1          | L           | LCS<br>GP<br>PJ | Broadly Acceptable | EPO<br>13 |
| Description of Source of Risk   |  |                 |               |   |                     |         |               |                                 |                    |            |             |                 |                    |           |
| <p>The project vessels operating in and around the Operational Area may present a potential hazard to cetaceans (e.g. humpback whales, fin whales) and other protected marine fauna, such as marine turtles and whale sharks. Vessel movements can result in collisions between the vessel (hull and propellers) and marine fauna, potentially resulting in superficial injury, serious injury that may affect life functions (e.g. movement and reproduction) and mortality.</p> <p>The factors that contribute to the frequency and severity of impacts due to collisions vary greatly due to vessel type, vessel operation (specific activity, speed), physical environment (e.g. water depth), the type of animal potentially present and their behaviours.</p> <p>Vessels used during the Petroleum Activities Program may include subsea support vessels, with multiple vessels likely to be used to support WIV. Vessels would typically be stationary or slow moving while supporting the Petroleum Activities Program. Support vessels are used to transport equipment and materials between the WIV and port (e.g. Dampier, Onslow, Exmouth). If required, one of the vessels may be present at the WIV to perform standby duties, and others will make regular trips between the Operational Area to port for routine, non-routine and emergency operations. Support vessels do not anchor within the Operational Area during the activities due to water depth; therefore, vessels will utilise DP.</p>   |  |                 |               |   |                     |         |               |                                 |                    |            |             |                 |                    |           |
| Consequence Assessment  |  |                 |               |   |                     |         |               |                                 |                    |            |             |                 |                    |           |
| <p>Vessel collisions with marine fauna have potential to occur within the Operational Area. Vessel disturbance is a key threat to a number of migratory and threatened species identified as occurring within the Operational Area including cetaceans, marine turtles and whale sharks. Three species have BIAs that intercept the Operational Area:</p> <ul style="list-style-type: none"> <li>• flatback turtle interesting buffer BIA;</li> <li>• whale shark foraging BIA; and</li> <li>• wedge-tailed shearwater breeding BIA.</li> </ul> <p>Refer to <b>Section 4.5.2</b> for more information about these species and details of seasonal timings.</p> <p>The likelihood of vessel/fauna collision being lethal is influenced by vessel speed—the greater the speed at impact, the greater the risk of mortality (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 about 20% at 8.6 knots to 80% at 15 knots. According to the data of Vanderlaan and Taggart (2007), it is estimated that the risk is less than 10% at a speed of 4 knots. Vessel-whale collisions at this speed are uncommon and, based on reported data contained in the US National Ocean and Atmospheric Administration database (Jensen and Silber 2004) there only two known instances of collisions when the vessel was travelling at less than 6 knots, both of these were from whale watching vessels that were deliberately placed amongst whales.</p> <p>Project vessels within the Operational Area are likely to be travelling &lt;8 knots, (and will often be stationary), unless operating in an emergency. Therefore, the chance of a vessel collision with protected species resulting in a lethal outcome is considered unlikely.</p> |  |                 |               |   |                     |         |               |                                 |                    |            |             |                 |                    |           |

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The risk of marine life getting caught in operating thrusters is unlikely, given the low presence of individuals, combined with the avoidance behaviour commonly displayed during dynamic positioning operations.

#### **Cetaceans**

The nearest recognised BIAs for cetaceans (considered to be at risk due to relatively slow movement and proportion of time spent at or near the sea surface) is the humpback whale migration BIA, which lies approximately 25 km south-east of the Operational Area (refer to **Section 4.5.2.3**). The pygmy blue whale migration BIA also lies beyond the Operational Area (approximately 43 km north-west). However, migrating pygmy blue whales are not necessarily confined to the designated migratory corridor (Thums et al., 2022). Therefore, individuals may transit through the Operational Area and increased numbers may occur during whale migration periods (**Section 4.5.2.3**). Adverse interactions between vessels and humpback or pygmy blue whales are considered to be unlikely due to the slow speeds of project vessels within the Operational Area, and the distance of the Operational Area from these known BIAs.

According to the data of Vanderlaan and Taggart (2007), it is estimated that the risk of lethal injury to a large whale as a result of a vessel strike is less than 10% at a speed of 4 knots. Vessel-whale collisions at this speed are uncommon and, based on reported data contained in the NOAA database (Jensen and Silber, 2004) there are only two known instances of collisions when the vessel was travelling at less than 6 knots; both of these were from whale-watching vessels that were deliberately positioned amongst whales. Given the duration of activities within the Operational Area and the slow speeds at which project vessels operate, collisions with cetaceans such as pygmy blue and humpback whales are considered very unlikely.

Smaller cetaceans, such as dolphins, comprise a lower proportion of vessel collision records (DoEE, 2016), though it is difficult to determine if this is due to a lower collision rate or lower detection rate of incidents. Dolphins often engage in bow riding which may make them more vulnerable to entanglement with propellers or thrusters compared to larger cetaceans.

#### **Whale sharks**

Whale sharks are at risk from vessel strikes when feeding at the surface or in shallow waters (where there is limited option to dive). Whale sharks may traverse offshore North West Shelf waters including the Operational Area during their migrations to and from Ningaloo Reef. However, it is expected that whale shark presence within the Operational Area would not comprise high numbers and their presence would be transitory and of a short duration. There are no constraints preventing whale sharks from moving away from vessels (e.g. shallow water or shorelines).

#### **Marine turtles**

The Recovery Plan for Marine Turtles in Australia recognises turtles are at risk from vessel strikes, particularly in shallow coastal foraging habitats and interesting areas where there are high numbers of recreational and commercial vessels (Commonwealth of Australia, 2017). Considering the distance of the Operational Area from the nearest nesting beaches (Montebello Islands are approximately 75 km away), it is expected that the presence of marine turtles, including flatback turtles, would be very unlikely and only comprise individuals transiting the open, offshore waters for short periods of time. It is acknowledged, however, that there are significant nesting sites along the WA mainland coast and islands of the region and that turtles may occur within the Operational Area in low numbers. There is an interesting BIA for the flatback turtle which overlaps the Operational Area, which is associated with the Montebello Islands (see **Section 4.5.2.2**). The Montebello Islands themselves are located about 75 km south of the Operational Area and this interesting area is a spatially assigned buffer for marine turtles nesting at the Montebello Islands. Therefore, it is unlikely that flatback turtles nesting at the Montebello Islands will be found to aggregate in significant numbers more than 50 km away and within the Operational Area. Notably, the typical response from turtles on the surface to the presence of vessels is to dive (a potential "startle" response), which decreases the risk of collisions (Hazel et al. 2007). As with cetaceans, the risk of collisions between turtles and vessels increases with vessel speed (Hazel et al. 2007). Given the low speeds of vessels undertaking the Petroleum Activities Program, along with the expected low numbers of turtles within the Operational Area, interactions between vessels and turtles are considered to be highly unlikely.

It is not deemed credible, that vessel movement associated with the Petroleum Activities Program could have a significant impact on marine fauna populations given (1) the low presence of transiting individuals, (2) avoidance behaviour commonly displayed by whales, whale sharks and marine turtles and (3) low operating speed of the activity support vessels (generally less than 8 knots or stationary, unless operating in an emergency). Activities are considered unlikely to result in a consequence greater than slight short-term disruption to individuals or a small proportion of the population and no impact on critical habitat or fauna activity.

#### **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).

| <b>Demonstration of ALARP</b>   |  |   |  |                             |
|---|--|---|--|-----------------------------|
| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>31</sup></b>  | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>   | <b>Control Adopted</b>      |
| <b>Legislation, Codes and Standards</b>   |  |   |  |                             |
| <p>EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans, including the following measures<sup>32</sup>:</p> <ul style="list-style-type: none"> <li>Project vessels will not travel greater than six knots within 300 m of a cetacean or turtle (caution zone) and not approach closer than 100 m from a whale.</li> <li>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).</li> <li>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.</li> <li>Project vessels will not travel greater 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.</li> </ul> | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>  | <p>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.</p> | <p>Controls based on legislative requirements – must be adopted.</p> | <p>Yes<br/><b>C 4.1</b></p> |
| <b>Good Practice</b>  |  |   |  |                             |
| <p>Variation of the timing of the Petroleum Activities Program to avoid migration and foraging periods.</p>   | <p>F: No. Timing of activities is linked to WIV schedule. Timing of all activities is currently not determined and, due to WIV availability and operational requirements, performing activities during migration</p> | <p>Not considered, control not feasible.</p>  | <p>Not considered, control not feasible.</p>                         | <p>No</p>                   |

<sup>31</sup> Qualitative measure

<sup>32</sup>For safety reasons, the distance requirements below are not applied for a vessel holding station or with limited manoeuvrability, e.g. anchor handling, loading, back-loading, bunkering, close standby cover for overside working and emergency situations.

| <b>Demonstration of ALARP</b>  |   |   |   |                        |
|--|---|---|---|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>31</sup></b>   | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>  | <b>Control Adopted</b> |
|  | seasons may not be able to be avoided.<br><br>CS: Not considered, control not feasible.   |   |   |                        |
| <b>Professional Judgement – Eliminate</b>  |   |   |   |                        |
| No additional controls identified.   |   |   |   |                        |
| <b>Professional Judgement – Substitute</b>   |   |   |   |                        |
| No additional controls identified.   |   |   |   |                        |
| <b>Professional Judgement – Engineered Solution</b>  |   |   |   |                        |
| The use of dedicated MFOs on support vessels for the duration of each activity to watch for whales and provide direction about and monitor compliance with Part 8 of the EPBC Regulations.   | F: Yes. However, vessel bridge crews already maintain a constant watch during operations in compliance with the Woodside Marine – Charterers Instructions on the requirements of vessel and whale interactions, and crew perform specific cetacean observation training.<br><br>CS: Additional cost of MFOs considered unnecessary. | Given that support vessel bridge crews already maintain a constant watch during operations in compliance with the Woodside Marine – Charterers Instructions, additional MFOs would not significantly further reduce the risk. | Disproportionate. The cost/ sacrifice outweighs the benefit gained. | No                     |
| <b>ALARP Statement</b>   |   |   |   |                        |
| 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, <b>Section 2.6.1</b> ), Woodside considers the adopted controls appropriate to manage the risks and consequences of potential vessel collision with protected marine fauna. 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.  |   |   |   |                        |
| <b>Demonstration of Acceptability</b>  |   |   |   |                        |
| <b>Acceptability Statement</b>   |   |   |   |                        |
| The impact assessment has determined that, given the adopted controls, a vessel collision with marine fauna represents a low current risk rating that may result in slight, short-term impacts (<1 year) to species. Relevant BIAs overlapping the Operational Area interesting include flatback turtle interesting and whale shark foraging BIAs. Relevant recovery plans and conservation advice have been considered during the impact assessment, and the Petroleum Activities Program is not considered to be inconsistent with the overall recovery objectives and actions of these recovery plans and conservation advice ( <b>Section 6.8</b> ). |   |   |   |                        |
| The adopted controls are considered consistent with industry good practice and professional judgement and meet the requirements of Part 8 (Division 8.1) of the EPBC Regulations 2000. On the basis of the environmental impact assessment outcomes and Woodside’s criteria for acceptability outlined in <b>Section 2.7.2</b> , this is considered an acceptable level of risk.   |   |   |   |                        |

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| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>   |  |   |   |
|---|--|---|---|
| <b>Outcomes</b>   | <b>Controls</b>                          | <b>Standards</b>                            | <b>Measurement Criteria</b>                 |
| <b>EPO 13</b><br>No vessel strikes with protected marine fauna (whales, whale sharks, turtles) during the Petroleum Activities Program. | <b>C 4.1</b><br>See <b>Section 6.6.3</b> | <b>PS 4.1.1</b><br>See <b>Section 6.6.3</b> | <b>MC 4.1.1</b><br>See <b>Section 6.6.3</b> |
|   |  |   | <b>MC 4.1.2</b><br>See <b>Section 6.6.3</b> |

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### 6.7.7 Physical Presence: Dropped Object Resulting in Seabed Disturbance

| Context   |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
|---|--|-----------------|---|--------------------------|---------------------|---------|---------------------------------|---------------|--------------------|------------|-------------|-----------------|--------------------|-----------|
| Project Vessels and Support Activities – <b>Section 3.7</b><br>Subsea Intervention Activities – <b>Section 3.6</b>  |  |                 | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b><br>Cultural Values and Heritage – <b>Section 4.6.1</b> |                          |                     |         | Consultation – <b>Section 5</b> |               |                    |            |             |                 |                    |           |
| Risk Evaluation Summary   |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| Source of Risk  | Environmental Value Potentially Impacted |                 |   |                          |                     |         |                                 | Evaluation    |                    |            |             |                 |                    |           |
|   | Soil and Groundwater                     | Marine Sediment | Water Quality   | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic                   | Decision Type | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools     | Acceptability      | Outcome   |
| Dropped objects resulting in the disturbance of benthic habitat   |  | X               |   |                          | X                   |         | X                               | A             | F                  | 2          | L           | LCS<br>GP<br>PJ | Broadly Acceptable | EPO<br>14 |
| Description of Source of Risk   |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| <p>There is the potential for objects to be dropped overboard from the WIV 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) and hardware fixtures (e.g. umbilical clamp); 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 Operational Area.</p>  |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| Consequence Assessment  |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| Potential Impacts to Benthic Communities  |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |
| <p>In the unlikely event of loss of an object being dropped into the marine environment, potential environmental effects would include localised physical impacts on benthic communities and possible heritage features on the Ancient Landscape. In most cases, objects will be able to be recovered and therefore impacts to benthic communities will 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. Impacts to heritage features may be temporary or permanent depending on the nature of the associated values. When dropped objects are unable to be recovered, the impact will continue to be localised but would also be long-term.</p> <p>The temporary or permanent loss of dropped objects into the marine environment is likely to result in a localised impact to benthic communities only, as the benthic communities associated with the Operational Area are of low sensitivity and are broadly represented throughout the NWMR. As described in <b>Section 4.5.3</b>, the Ancient Coastline at 125 m Depth Contour KEF is located within the Operational Area. The habitat types associated with the hard substrate that characterises the Ancient Coastline at 125 m Depth Contour KEF are not considered to be unique by Falkner et al. (2009) in their review of KEFs in the NWMR. Furthermore, benthic habitats in the Operational Area are expected to consist of bare unconsolidated sediments dominated by silt and clay fractions (<b>Section 4.5.3</b>). Given the nature and scale of risks and consequences from dropped objects, no lasting effect is expected to seabed sensitivities associated with the Operational Area. Further, considering the types, size and frequency of dropped objects that could occur, it is unlikely that a dropped object would have a significant impact on any benthic community.</p> |  |                 |   |                          |                     |         |                                 |               |                    |            |             |                 |                    |           |

**Cultural Heritage**

As described in **Section 4.6.1** the activity occurs on the Ancient Landscape and therefore there is the potential that Indigenous Cultural features may exist and these may potentially be disturbed in the event of a dropped object to the seabed. Archaeological assessment of the area where seabed disturbance may occur (500 m radius around the TPA03 well) by a qualified and experienced maritime archaeologist, including review of remote sensing data, has not identified any underwater cultural heritage that will be affected by the proposed activity (Nutley 2023).

Consultation with Traditional Custodians has not identified any cultural features or heritage values that will be affected by the project activities.

**Summary of Potential Impacts to Environmental Value(s)**

Given the adopted controls and the predicted small footprint of a dropped object, it is considered that a dropped object will result in only localised impacts to a small area of the seabed and a small proportion of the benthic population; however, no significant impact to environmental receptors, and with no lasting effect (i.e. Environment Impact – F).

**Demonstration of ALARP**

| <b>Control Considered</b>   | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>33</sup></b> | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>            | <b>Control Adopted</b> |
|---|---|---|-----------------------------------|------------------------|
| <b>Legislation, Codes and Standards</b>   |   |   |                                   |                        |
| No additional controls identified.  |   |   |                                   |                        |
| <b>Good Practice</b>  |   |   |                                   |                        |
| The WIV and project vessels' work procedures for lifts, bulk transfers and cargo loading, which require: <ul style="list-style-type: none"> <li>The security of loads shall be checked before commencing lifts.</li> <li>Loads shall be covered if there is a risk of loss of loose materials.</li> <li>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.</li> </ul> | F: Yes.<br>CS: Minimal cost. Standard practice.                     | By implementing WIV and project vessels' work procedures for lifts, bulk transfers and cargo loading, the likelihood of a dropped object event is reduced. Since the object may be recovered, a reduction in consequence is possible. | Benefits outweigh cost/sacrifice. | Yes<br><b>C 14.1</b>   |
| WIV and project vessel inductions include control measures and training for crew in dropped object prevention.  | F: Yes.<br>CS: Minimal cost. Standard practice.                     | By ensuring crew are appropriately trained in dropped object prevention, the likelihood of a dropped object event is reduced. Since the object may be recovered, a reduction in consequence is possible.                              | Benefits outweigh cost/sacrifice. | Yes<br><b>C 14.2</b>   |

<sup>33</sup> Qualitative measure

| <b>Demonstration of ALARP</b>  |   |   |  |                              |
|--|---|---|--|------------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>33</sup></b> | <b>Benefit in Impact/Risk Reduction</b>   | <b>Proportionality</b>                   | <b>Control Adopted</b>       |
| <p>If safe and practicable to do so, vessel, ROV, or crane will be used to attempt recovery of material environmentally hazardous or non-hazardous solid object/waste lost overboard.</p> <ul style="list-style-type: none"> <li>• This activity will consider:</li> <li>• risk to personnel to retrieve object</li> <li>• whether the location of the object is in recoverable water depths</li> <li>• object's proximity to subsea infrastructure</li> </ul>   | <p>F: Yes.<br/>CS: Minimal cost. Standard practice.</p>             | <p>Potentially reduces consequence by recovering object/waste container from the environment.</p> | <p>Benefit outweighs cost/sacrifice.</p> | <p>Yes<br/><b>C 12.4</b></p> |
| <b>Professional Judgement – Eliminate</b>  |   |   |  |                              |
| No additional controls identified.   |   |   |  |                              |
| <b>Professional Judgement – Substitute</b>   |   |   |  |                              |
| No additional controls identified.   |   |   |  |                              |
| <b>Professional Judgement – Engineered Solution</b>  |   |   |  |                              |
| No additional controls identified.   |   |   |  |                              |
| <b>ALARP Statement</b>   |   |   |  |                              |
| <p>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, <b>Section 2.6.1</b>), Woodside considers the adopted controls appropriate to manage the risks and consequences of seabed disturbance from dropped objects. As no reasonable additional/alternative controls were identified that would further reduce the risks and consequences without disproportionate sacrifice, the risks and consequences are considered ALARP.</p> |   |   |  |                              |

| <b>Demonstration of Acceptability</b>  |
|--|
| <b>Acceptability Statement</b>   |
| <p>The impact assessment has determined that a dropped object resulting in seabed disturbance represents a low current risk rating and may result in localised impacts with no lasting effect (&lt;1 month) to environmental receptors.</p> <p>The adopted controls are considered consistent with industry good practice and professional judgement. On the basis of the environmental impact assessment outcomes and Woodside's criteria for acceptability outlined in <b>Section 2.7.2</b>, this is considered an acceptable level of risk.</p> |

| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b>   |  |   |   |
|---|--|---|---|
| <b>Outcomes</b>   | <b>Controls</b>  | <b>Standards</b>  | <b>Measurement Criteria</b>   |
| <b>EPO 14</b><br>No incidents of dropped objects to the marine environment greater than a consequence level of F <sup>34</sup> during the Petroleum Activities Program. | <b>C 14.1</b><br>The WIV and project vessels' work procedures for lifts, bulk transfers around vessel and cargo loading, which require: <ul style="list-style-type: none"> <li>• the security of loads to be checked before commencing lifts</li> <li>• loads to be covered if there is a risk of losing loose materials</li> <li>• lifting operations to be conducted using the PTW and JSA systems to manage the specific risks of that lift, including consideration of weather and sea state.</li> </ul> | <b>PS 14.1.1</b><br>All lifts conducted in accordance with applicable WIV/ project vessels' work procedures to limit potential for dropped objects. | <b>MC 14.1.1</b><br>Records show lifts conducted in accordance with the applicable WIV/ project vessels' work procedures. |
|   | <b>C 14.2</b><br>WIV and project vessel inductions include control measures and training for crew in dropped object prevention.  | <b>PS 14.2.1</b><br>WIV and project vessels crews aware of requirements for dropped object prevention.  | <b>MC 14.2.1</b><br>Records show dropped object prevention training is provided to the WIV/ project vessels.              |
|   | <b>C 12.4</b><br>See <b>Section 6.7.5</b>  | <b>PS 12.4.1</b><br>See <b>Section 6.7.5</b>  | <b>MC 12.4.1</b><br>See <b>Section 6.7.5</b>  |

<sup>34</sup> Defined as 'No lasting effect (less than one month). Localised impact not significant to areas or items of cultural significance)'.

### 6.7.8 Physical Presence: Accidental Introduction and Establishment of Invasive Marine Species

| Context  |  |                 |  |                          |                     |         |                                 |               |                    |            |             |             |                    |           |
|--|--|-----------------|--|--------------------------|---------------------|---------|---------------------------------|---------------|--------------------|------------|-------------|-------------|--------------------|-----------|
| Project Vessels– <b>Section 3.7</b>  |  |                 | Physical Environment – <b>Section 4.4</b><br>Biological Environment – <b>Section 4.5</b> |                          |                     |         | Consultation – <b>Section 5</b> |               |                    |            |             |             |                    |           |
| Risk Evaluation Summary  |  |                 |  |                          |                     |         |                                 |               |                    |            |             |             |                    |           |
| Source of Risk   | Environmental Value Potentially Impacted |                 |  |                          |                     |         |                                 | Evaluation    |                    |            |             |             |                    |           |
|  | Soil and Groundwater                     | Marine Sediment | Water Quality  | Air Quality (incl Odour) | Ecosystems/ Habitat | Species | Socioeconomic                   | Decision Type | Consequence/Impact | Likelihood | Risk Rating | ALARP Tools | Acceptability      | Outcome   |
| Introduction of invasive marine species within the Operational Area.   |  |                 |  |                          | X                   | X       | X                               | A             | F                  | 0          | L           | LC<br>S     | Broadly Acceptable | EPO<br>15 |
| Description of Source of Risk  |  |                 |  |                          |                     |         |                                 |               |                    |            |             |             |                    |           |
| <p>During the Petroleum Activities Program, vessels will be transiting to and from the Operational Area, potentially including traffic mobilising from beyond Australian waters. Vessels may mobilise from the nearest Australian port or staging area (e.g. Dampier, Onslow, Exmouth, King Bay Supply Base) or directly from international waters to the Operational Area, in accordance with biosecurity and marine assurance requirements. These project vessels may include the WIV and general support vessels (<b>Section 3.7</b>).</p> <p>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.</p> <p>During the Petroleum Activities Program, 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. There is also potential for introduction of IMS through vessel interactions nearby (approximately 12 km) to fixed infrastructure/GWA platform.</p> <p>The WIV may mobilise from outside of Australian waters. The support vessels are typically sourced from Australia and are not considered high risk for IMS introduction. All project vessels are subject to the Woodside Marine Offshore Vessel Assurance procedure (<b>Section 7.6.2.2</b>), and the Australian Ballast Water Management Requirements.</p> |  |                 |  |                          |                     |         |                                 |               |                    |            |             |             |                    |           |

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**Consequence Assessment**

**Potential Impacts to Ecosystems/Habitats, Species and Socio-economic Values**

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 are species that have the ability to survive, reproduce and establish founder populations. However, not all NIMS introduced into an area will thrive or cause demonstrable impacts; 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.

Once introduced, IMS 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 indigenous species for food, space or light and can also interbreed with local species, creating hybrids such that the endemic species is lost. These changes to the local marine environment result in changes to the natural ecosystem.

IMS have also proven economically damaging to areas where they have been introduced and established. Such impacts include direct damage to assets (fouling of vessel hulls and infrastructure) and depletion of commercially harvested marine life (e.g. shellfish stocks). IMS have proven particularly difficult to eradicate from areas once established. If the introduction is detected early, eradication may be effective but is likely to be expensive, disruptive and, depending on the method of eradication, harmful to other local marine life.

Potential IMS have historically been introduced and translocated around Australia by a variety of natural and human means, including marine fouling and ballast water. Potential IMS vary from one region to another depending on various environmental factors such as water temperature, salinity, nutrient levels and habitat type, which dictate their survival and invasive capabilities. IMS typically require hard substrate in the photic zone; therefore, requiring shallow waters to become established. Highly-disturbed, shallow-water environments such as shallow coastal waters, ports and marinas are more susceptible to IMS colonisation, whereas IMS are generally unable to successfully establish in deep-water ecosystems and 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).

While project vessels have the potential to introduce IMS into the Operational Area, the deep offshore open waters of the Operational Area (~ 113 m deep) are not conducive to the settlement and establishment of IMS. Furthermore, the Operational Area are away from shorelines and/or critical habitat. The likelihood of IMS being introduced and establishing viable populations within the Operational Area or immediate surrounds is considered highly unlikely and considered manageable given the ballast water and biofouling controls that will be implemented.

**Summary of Potential Impacts to Environmental Value(s)**

In support of Woodside’s assessment of the impacts and risks of IMS introduction associated with the petroleum activity program, risk and impact evaluations of the different aspects of marine pest translocation associated with the activity are undertaken. The results of this assessment are presented in **Table 6-16**. As a result of this assessment Woodside has presented the highest potential consequence as a E (Environment) and likelihood as Highly Unlikely (1), resulting in an overall Low risk following the implementation of identified controls.

**Table 6-16: Evaluation of risks and impacts from IMS translocation**

| <b>IMS Introduction Aspect</b>   | <b>Credibility Introduction</b>  | <b>Consequence of Introduction</b>   | <b>Likelihood</b>   |
|--|--|--|---|
| Transfer of IMS from infected vessel to Operational Area and establishment on the seafloor or subsea infrastructure. | <b>Not Credible</b><br>The deep offshore open waters of the Operational Area, away from shorelines and/or critical habitat, approximately 226 km from a shore and in waters 113 m deep are not conducive to the settlement and establishment of IMS. |  |   |
| Transfer of IMS from infected vessel to and subsequent establishment on the GWA Platform.                            | <b>Credible</b><br>There is potential for the transfer of marine pests to occur.   | If IMS were to establish this would potentially result in fouling of intakes (depending on the pest introduced), and would likely result in the quarantine of the GWA facility until eradication | <b>Remote (0)</b><br>Interactions between the GWA facility and project vessels will be limited during the petroleum activity program, given TPA03 is located 13 km from the facility. |

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|  |  |  |  |
|--|--|--|--|
|  |  | <p>could occur (through cleaning and treatment of infected areas), which could be costly to undertake.</p> <p><b>Slight (E) - Reputation and Brand</b><br/>Such introduction would be expected to have slight impact to Woodside's reputation, particularly with Woodside's contractors, and would likely have a reputational impact on future proposals. <b>Slight (E) - Environment</b><br/>Environmental consequence of introduction of IMS to the GWA platform is considered Slight (E), localised and would relate to habitat directly on the GWA facility.</p> | <p>Spread of marine pests via ballast water or spawning in these open ocean environments is considered Remote (0).</p> |
| <p>Transfer of IMS from infected vessel to and subsequent establishment on GWA Platform, then transfer of IMS to a secondary vessel from the GWA facility.</p> | <p><b>Not Credible</b><br/>Risk is considered so remote that it is not credible for the purposes of the Petroleum Activity Program.<br/>The transfer of a marine pest from an injected activity vessel to the GWA facility was already considered highly unlikely given the offshore open ocean environment.<br/>For marine pests to then establish into a mature spawning population on GWA and then transfer to another support vessel is not considered credible (i.e. beyond the Woodside risk matrix).<br/>The GWA facility is located in an offshore, open ocean, deep environment.<br/>Support vessels only spend short periods of time alongside GWA (i.e. during backloading or bunkering activities).<br/>There is also no direct contact (i.e. they are not tied up alongside) during these activities.<br/>It is also noted that Woodside has been conducting marine vessel movements between the GWA facility and WA ports (such as Dampier), for a</p> |  |  |

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|  |   |  |  |
|--|---|--|--|
|  | long period of time and no IMS has been detected in these ports (DoF 2017). |  |  |
|--|---|--|--|

| <b>Demonstration of ALARP</b>  |  |  |   |                        |
|--|--|--|---|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>35</sup></b>                    | <b>Benefit in Impact/Risk Reduction</b>  | <b>Proportionality</b>  | <b>Control Adopted</b> |
| <b>Legislation, Codes and Standards</b>  |  |  |   |                        |
| Project vessels will manage their ballast water using one of the approved ballast water management options, as outlined in the Australian Ballast Water Management Requirements.   | F: Yes.<br>CS: Minimal cost. Standard practice.  | Reduces the likelihood of transferring marine pests between the WIV and project vessels within the Operational Area. No change in consequence would occur.   | Controls based on legislative requirements under the <i>Biosecurity Act 2015</i> – must be adopted. | Yes<br><b>C 15.1</b>   |
| Internationally sourced Project vessels will manage their biosecurity risk associated with biofouling as specified in the Australian Biofouling Management Requirements.   | F: Yes.<br>CS: 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 <i>Biosecurity Act 2015</i> – must be adopted. | Yes<br><b>C 15.2</b>   |
| <b>Good Practice</b>   |  |  |   |                        |
| Woodside’s IMS risk assessment process <sup>36</sup> will be applied to the WIV, project vessels and relevant immersible equipment undertaking the Petroleum Activities Program. Assessment will consider these risk factors:<br><br>For vessels/ WIV: <ul style="list-style-type: none"> <li>vessel/WIV/ type</li> <li>recent IMS inspection and cleaning history, including for internal niches</li> <li>out-of-water period before mobilisation</li> <li>age and suitability of antifouling coating at mobilisation date</li> <li>internal treatment systems and history</li> </ul> | F: Yes.<br>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<br><b>C 15.3</b>   |

<sup>35</sup> Qualitative measure

<sup>36</sup> 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).

| <b>Demonstration of ALARP</b>  |   |   |                                     |                        |
|--|---|---|-------------------------------------|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>35</sup></b>   | <b>Benefit in Impact/Risk Reduction</b> | <b>Proportionality</b>              | <b>Control Adopted</b> |
| <ul style="list-style-type: none"> <li>• origin and proposed area of operation</li> <li>• number of stationary/slow speed periods &gt;7 days</li> <li>• region of stationary or slow periods</li> <li>• type of activity – contact with seafloor.</li> </ul> <p>For immersible equipment:</p> <ul style="list-style-type: none"> <li>• region of deployment since last thorough clean, particularly coastal locations</li> <li>• duration of deployments</li> <li>• duration of time out of water since last deployment</li> <li>• transport conditions during mobilisation</li> <li>• post-retrieval maintenance regime.</li> <li>• 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.</li> </ul> |   |   |                                     |                        |
| <b>Professional Judgement – Eliminate</b>  |   |   |                                     |                        |
| No discharge of ballast water during the Petroleum Activities Program.   | F: No. Ballast water discharges are critical for maintaining vessel stability. Given the nature of the Petroleum Activities Program, the use of ballast (including the potential discharge of ballast water) is considered to be a safety-critical requirement. | Not assessed, control not feasible.     | Not assessed, control not feasible. | No                     |

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| <b>Demonstration of ALARP</b>  |   |  |  |                        |
|--|---|--|--|------------------------|
| <b>Control Considered</b>  | <b>Control Feasibility (F) and Cost/Sacrifice (CS)<sup>35</sup></b>   | <b>Benefit in Impact/Risk Reduction</b>  | <b>Proportionality</b>   | <b>Control Adopted</b> |
|  | CS: Not assessed, control not feasible.   |  |  |                        |
| Eliminate use of vessels including the WIV and support vessels.  | F: No. Given that vessels must be used to complete the Petroleum Activities Program, there is no feasible means to eliminate the source of risk.<br><br>CS: Loss of the project.  | Not assessed, control not feasible.  | Not assessed, control not feasible.  | No                     |
| <b>Professional Judgement – Substitute</b>   |   |  |  |                        |
| Source project vessels based in Australia only.  | F: Potentially.<br><br>While the project will attempt to source support vessels locally, availability is not guaranteed. There are limited project vessels based in Australian waters and sourcing Australian-based vessels only will cause increases in cost due to pressures of vessel availability.<br><br>CS: Significant cost and schedule impacts due to supply restrictions. | Sourcing vessels from within Australia will reduce the likelihood of IMS from outside Australian waters; however, it does not reduce the likelihood of introducing species native to Australia but alien to the Operational Area. It also does not prevent the translocation of IMS that have established elsewhere in Australia. Therefore, the consequence is unchanged. | Disproportionate.<br><br>Sourcing vessels from Australian waters may result in a slight reduction in the likelihood of introducing IMS to the Operational Area but it does not completely eliminate the risk. Furthermore, the potential cost of implementing this control could be high, given the potential supply issues associated with only locally sourcing vessels. | No                     |
| IMS inspection of all vessels.   | F: Yes.<br><br>CS: Significant cost and schedule impacts. In addition, Woodside's IMS risk assessment process is seen to be more cost-effective as this control allows Woodside to manage the introduction of IMS through biofouling, while targeting its efforts 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.<br><br>The cost/sacrifice outweighs the benefit gained, as other controls that are proposed to be implemented achieve an ALARP position.   | No                     |
| <b>Professional Judgement – Engineered Solution</b>  |   |  |  |                        |
| None identified.   |   |  |  |                        |
| <b>ALARP Statement</b>   |   |  |  |                        |
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| Demonstration of ALARP  |   |                                  |                 |                 |
|---|---|----------------------------------|-----------------|-----------------|
| Control Considered  | Control Feasibility (F) and Cost/Sacrifice (CS) <sup>35</sup> | Benefit in Impact/Risk Reduction | Proportionality | Control Adopted |
| <p>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, <b>Section 2.6.1</b>), Woodside considers that the adopted controls are appropriate to manage the risks and consequences of IMS introduction. As no reasonable additional/alternative controls were identified that would further reduce the risks and consequences without disproportionate cost, the risks and consequences are considered ALARP.</p>   |   |                                  |                 |                 |
| Demonstration of Acceptability  |   |                                  |                 |                 |
| <p><b>Acceptability Statement</b></p> <p>The impact assessment has determined that the accidental introduction and establishment of IMS represents a low current risk rating and may result in slight, short-term impacts (&lt;1 year) on habitat (but not affecting ecosystems function) or biological attributes. BIAs within the Operational Area include flatback turtle interesting buffer, whale shark foraging, and wedge-tailed shearwater breeding BIA. However, these species are not expected to be impacted.</p> <p>The adopted controls are considered consistent with industry legislation, codes and standards. On the basis of the environmental impact assessment outcomes and Woodside's criteria for acceptability outlined in <b>Section 2.7.2</b>, this is considered an acceptable level of risk.</p> |   |                                  |                 |                 |

| Environmental Performance Outcomes, Standards and Measurement Criteria  |   |  |   |
|---|---|--|---|
| Outcomes  | Controls  | Standards  | Measurement Criteria  |
| <p><b>EPO 15</b></p> <p>No introduction and establishment of IMS into the Operational Area as a result of the Petroleum Activities Program.</p> | <p><b>C 15.1</b></p> <p>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.</p> | <p><b>PS 15.1.1</b></p> <p>Project vessels manage ballast water in accordance with Australian Ballast Water Management Requirements.</p>   | <p><b>MC 15.1.1</b></p> <p>Ballast Water Records System maintained by vessels which verifies compliance against Australian Ballast Water Management Requirements.</p>   |
|   | <p><b>C 15.2</b></p> <p>Internationally sourced Project vessels will manage their biosecurity risk associated with biofouling as specified in the Australian Biofouling Management Requirements.</p>          | <p><b>PS 15.2</b></p> <p>Compliance with Australian Biofouling Management Requirements.</p>  | <p><b>MC 15.2.1</b></p> <p>Records of implementation of biofouling management measure and pre-arrival reporting.</p>  |
|   | <p><b>C 15.3</b></p> <p>Woodside's IMS risk assessment process<sup>37</sup> will be applied to project vessels and relevant immersible equipment undertaking the Petroleum Activities Program.</p>            | <p><b>PS 15.3.1</b></p> <p>Before entering the Operational Area, project vessels, WIV and relevant immersible equipment are determined to be low risk<sup>38</sup> of introducing IMS of concern, and maintain this low risk status to mobilisation.</p> | <p><b>MC 15.3.1</b></p> <p>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 Activities Program.</p> |

<sup>37</sup> 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).

<sup>38</sup> Low risk of introducing IMS of concern is defined as either no additional management measures required or, management measures have been applied to reduce the risk.

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| <b>Environmental Performance Outcomes, Standards and Measurement Criteria</b> |  |  |   |
|---|--|--|---|
| <b>Outcomes</b>   | <b>Controls</b>  | <b>Standards</b>   | <b>Measurement Criteria</b>   |
|   | <p>Assessment will consider these risk factors:</p> <p>For vessels/WIV:</p> <ul style="list-style-type: none"> <li>• vessel/WIV type</li> <li>• recent IMS inspection and cleaning history, including for internal niches</li> <li>• out-of-water period before mobilisation</li> <li>• age and suitability of antifouling coating at mobilisation date</li> <li>• internal treatment systems and history</li> <li>• origin and proposed area of operation</li> <li>• number of stationary/slow speed periods &gt;7 days</li> <li>• region of stationary or slow periods</li> <li>• type of activity – contact with seafloor.</li> </ul> <p>For immersible equipment:</p> <ul style="list-style-type: none"> <li>• region of deployment since last thorough clean, particularly coastal locations</li> <li>• duration of deployments</li> <li>• duration of time out of water since last deployment</li> <li>• transport conditions during mobilisation</li> <li>• post-retrieval maintenance regime.</li> </ul> <p>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.</p> | <p><b>PS 15.3.2</b></p> <p>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.</p> | <p><b>MC 15.3.2</b></p> <p>Records confirm that the IMS risk assessments undertaken by an Environment Adviser or IMS inspector (as relevant).</p> |

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## 6.8 Recovery Plan and Threat Abatement Plan Assessment

As described in **Section 1.10**, 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 Activities Program 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 marinedebris on the vertebrate wildlife of Australia's coasts and oceans 2018 (Commonwealth of Australia, 2018).

**Table 6-17** 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 Activities Program. For those objectives/action areas applicable to the Petroleum Activities Program, 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 not inconsistent with that action. The results of this assessment against relevant actions are presented in **Table 6-18** to **Table 6-22**.

The assessment of potential impacts and risks to pygmy blue whales from underwater noise emissions in **Section 6.6.3** has taken into account the definitions of terminology in the CMP, as described in the DAWE and NOPSEMA guidance released in September 2021. Similarly, the assessment against relevant actions in the CMP in **Table 6-19** has been undertaken in the context of the definitions included in the guidance note.

**Table 6-17: 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 Activities Program |
| <b>Marine Turtle Recovery Plan</b>   |                |             |                              |
| <b>Long-term Recovery Objective:</b> 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                            |
| <b>Interim Recovery Objectives</b>   |                |             |                              |
| 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           |                              |
| <b>Action Areas</b>  |                |             |                              |
| <b>A. Assessing and addressing threats</b>   |                |             |                              |
| 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              |             |                              |

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| EPBC Act Part 13 Statutory Instrument   | Applicable to: |             |                              |
|---|----------------|-------------|------------------------------|
|   | Government     | Titleholder | Petroleum Activities Program |
| <b>B. Enabling and measuring recovery</b>   |                |             |                              |
| B1. Determine trends in index beaches   | Y              | Y           |                              |
| B2. Understand population demographics at key foraging grounds  | Y              |             |                              |
| B3. Address information gaps to better facilitate the recovery of marine turtle stocks  | Y              | Y           | Y                            |
| <b>Blue Whale Conservation Management Plan</b>  |                |             |                              |
| <b>Long-term recovery objective:</b> 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                            |
| <b>Interim Recovery Objectives</b>  |                |             |                              |
| 1. The conservation status of blue whale populations is assessed using efficient and robust methodology   | Y              |             |                              |
| 2. The spatial and temporal distribution, identification of biologically important areas, and population structure of blue whales in Australian waters is described                         | Y              | Y           | Y                            |
| 3. Current levels of legal and management protection for blue whales are maintained or improved and an appropriate adaptive management regime is in place                                   | Y              |             |                              |
| 4. Anthropogenic threats are demonstrably minimised   | Y              | Y           | Y                            |
| <b>Action Areas</b>   |                |             |                              |
| <b>A. Assessing and addressing threats</b>  |                |             |                              |
| 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>B. Enabling and Measuring Recovery</b>   |                |             |                              |
| B.1: Measuring and monitoring population recovery   | Y              |             |                              |

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| EPBC Act Part 13 Statutory Instrument   | Applicable to: |             |                              |
|---|----------------|-------------|------------------------------|
|   | Government     | Titleholder | Petroleum Activities Program |
| B.2: Investigating population structure   | Y              |             |                              |
| B.3: Describing spatial and temporal distribution and defining biologically important habitat   | Y              | Y           | Y                            |
| <b>Grey Nurse Shark Recovery Plan</b>   |                |             |                              |
| <b>Overarching Objective</b>  |                |             |                              |
| To assist the recovery of the grey nurse shark in the wild, throughout its range in Australian waters, with a view to: <ul style="list-style-type: none"> <li>improving the population status, leading to future removal of the grey nurse shark from the threatened species list of the EPBC Act</li> <li>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</li> </ul> | Y              | Y           | Y                            |
| <b>Specific Objectives</b>  |                |             |                              |
| 1. Develop and apply quantitative monitoring of the population status (distribution and abundance) and potential recovery of the grey nurse shark in Australian waters  | Y              |             |                              |
| 2. Quantify and reduce the impact of commercial fishing on the grey nurse shark through incidental (accidental and/or illegal) take, throughout its range   | Y              |             |                              |
| 3. Quantify and reduce the impact of recreational fishing on the grey nurse shark through incidental (accidental and/or illegal) take, throughout its range   | Y              |             |                              |
| 4. Where practicable, minimise the impact of shark control activities on the grey nurse shark   | Y              |             |                              |
| 5. Investigate and manage the impact of ecotourism on the grey nurse shark  | Y              |             |                              |
| 6. Manage the impact of aquarium collection on the grey nurse shark   | Y              |             |                              |
| 7. Improve understanding of the threat of pollution and disease to the grey nurse shark   | Y              | Y           | Y                            |
| 8. 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           |                              |
| 9. Continue to develop and implement research programs to support the conservation of the grey nurse shark  | Y              | Y           |                              |
| 10. Promote community education and awareness in relation to grey nurse shark conservation and management   | Y              |             |                              |

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| EPBC Act Part 13 Statutory Instrument  | Applicable to: |                         |                              |
|--|----------------|-------------------------|------------------------------|
|  | Government     | Titleholder             | Petroleum Activities Program |
| <b>Sawfish and River Sharks Recovery Plan</b>  |                |                         |                              |
| <b>Primary Objective</b>   |                |                         |                              |
| To assist the recovery of sawfish and river sharks in Australian waters with a view to:<br>improving the population status leading to the removal of the sawfish and river shark species from the threatened species list of the EPBC Act<br>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                            |
| <b>Specific Objectives</b>   |                |                         |                              |
| 1. Reduce and, where possible, eliminate adverse impacts of commercial fishing on sawfish and river shark species  | Y              |                         |                              |
| 2. Reduce and, where possible, eliminate adverse impacts of recreational fishing on sawfish and river shark species  | Y              |                         |                              |
| 3. Reduce and, where possible, eliminate adverse impacts of Indigenous fishing on sawfish and river shark species  | Y              |                         |                              |
| 4. Reduce and, where possible, eliminate the impact of illegal, unregulated and unreported fishing on sawfish and river shark species  | Y              |                         |                              |
| 5. Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species  | Y              | Y                       | Y                            |
| 6. Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species noting the linkages with the Threat Abatement Plan for the Impact of Marine Debris on Vertebrate Marine Life  | Y              | Y                       | Y                            |
| 7. Reduce and, where possible, eliminate any adverse impacts of collection for public aquaria on sawfish and river shark species   | Y              |                         |                              |
| 8. 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              |                         |                              |
| 9. Develop research programs to assist conservation of sawfish and river shark species   | Y              | Y                       |                              |
| 10. Improve community understanding and awareness in relation to sawfish and river shark conservation and management   | Y              |                         |                              |
| <b>Marine Debris Threat Abatement Plan</b>   |                |                         |                              |
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| Uncontrolled when printed. Refer to electronic version for most up to date information.  |                |                         |                              |

| EPBC Act Part 13 Statutory Instrument  | Applicable to: |             |                              |
|--|----------------|-------------|------------------------------|
|  | Government     | Titleholder | Petroleum Activities Program |
| <b>Objectives</b>  |                |             |                              |
| 1. Contribute to long-term prevention of the incidence of marine debris  | Y              | Y           |                              |
| 2. Understand the scale of impacts from marine plastic and microplastic on key species, ecological communities and locations   | Y              | Y           | Y                            |
| 3. Remove existing marine debris   | Y              |             |                              |
| 4. Monitor the quantities, origins, types and hazardous chemical contaminants of marine debris, and assess the effectiveness of management arrangements for reducing marine debris | Y              |             |                              |
| 5. 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 6-18: 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  |
|---|---|---|---|---|
| <p><b>Marine Turtle Recovery Plan</b></p> | <p><b>Action Area A3:</b> Reduce the impacts from marine debris</p>       | <p><b>Action:</b> Support the implementation of the Marine Debris Threat Abatement Plan (TAP)<br/> <u>Priority actions at stock level:</u><br/>                     G-NWS – Understand the threat posed to this stock by marine debris<br/>                     LH-WA – Determine the extent to which marine debris is impacting loggerhead turtles<br/>                     F-Pil &amp; H-WA – no relevant actions</p>   | <p>Refer <b>Section 6.7.5</b><br/> <b>Not inconsistent assessment:</b> The assessment of the accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to marine turtles. Controls have been implemented to reduce the likelihood of accidental release of solid wastes for the duration of the petroleum activities program.</p> | <p>N/A</p>  |
|   | <p><b>Action Area A4:</b> Minimise chemical and terrestrial discharge</p> | <p><b>Action:</b> 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<br/> <u>Priority actions at stock level:</u><br/>                     G-NWS – Ensure that spill risk strategies and response programs include management for turtles and their habitats<br/>                     LH-WA &amp; 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<br/>                     H-WA – no relevant actions</p> | <p>Refer <b>Sections 6.7.2, 6.7.3, 6.7.4, 6.7.5</b> and <b>Appendix D</b><br/> <b>Not inconsistent assessment:</b> 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.</p>              | <p>Refer <b>Section 7.10</b><br/>                     Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activities Program are present in <b>Appendix D</b></p> |
|   | <p><b>Action Area A8:</b> Minimise light pollution</p>                    | <p><b>Action:</b> 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<br/> <u>Priority actions at stock level:</u><br/>                     G-NWS – as above<br/>                     LH-WA – no relevant actions</p>  | <p>Refer <b>Section 6.6.7</b><br/> <b>Not inconsistent assessment:</b> The assessment of light emissions has considered the potential impacts to green, flatback and hawksbill turtles. Internesting, mating, foraging or migrating turtles are not impacted by light from offshore vessels. Vessel light emissions could cause localised</p>                             | <p>N/A</p>  |

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| Part 13 Statutory Instrument | Relevant Action Areas/Objectives  | Relevant Actions   | Evaluation   | EPO, Controls and PS |
|------------------------------|---|--|--|----------------------|
|                              |   | F-Pil & H-WA – Manage artificial light from onshore and offshore sources to ensure biologically important behaviours of nesting adults and emerging/dispersing hatchlings can continue   | and temporary behavioural disturbance to isolated transient individuals, which is unlikely to result in displacement of adult turtles from internesting or nesting habitat critical to the survival of marine turtles.   |                      |
|                              | <b>Action Area B1:</b> Determine trends at index beaches  | <b>Action:</b> Maintain or establish long-term monitoring programs at index beaches to collect standardised data critical for determining stock trends, including data on hatchling production<br><u>Priority actions at stock level:</u><br>G-NWS – Continue long-term monitoring of index beaches<br>LH-WA – Continue long-term monitoring of nesting and foraging populations<br>F-Pil & H-WA – no relevant actions   | <b>Not inconsistent assessment:</b> Woodside contributes to Action Area B1 via its support of the Ningaloo Turtle Program <sup>39</sup> .  | N/A                  |
|                              | <b>Action Area B3:</b> Address information gaps to better facilitate the recovery of marine turtle stocks | <b>Action:</b> Understand the impacts of anthropogenic noise on marine turtle behaviour and biology<br><u>Priority actions at stock level:</u><br>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<br>LH-WA – no relevant actions<br>F-Pil – no relevant actions<br>H-WA – investigate mixed stock genetics at foraging grounds | Refer <b>Section 6.6.3</b><br>Not inconsistent assessment: The assessment of acoustic emissions has considered the potential impacts to marine turtles. WIV and project vessel acoustic emissions could cause localised and short-term behavioural disturbance to isolated transient individuals, which is unlikely to result in of adult turtles from internesting or nesting habitat critical to the survival of marine turtles. | N/A                  |

<sup>39</sup> [http://www.ningalooturtles.org.au/media\\_reports.html](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 |
|---|----------------------------------|------------------|------------|----------------------|
| <b>Assessment Summary</b>   |                                  |                  |            |                      |
| The Marine Turtle Recovery Plan has been considered during the assessment of impacts and risks, and the Petroleum Activities Program is not considered to be inconsistent with the relevant actions of this plan. |                                  |                  |            |                      |

**Table 6-19: Assessment against relevant actions of the Blue Whale Conservation Management Plan**

| Part 13 Statutory Instrument                   | Relevant Action Areas/Objectives  | Relevant Actions  | Evaluation   | EPO, Controls and PS |
|--|---|---|--|----------------------|
| <b>Blue Whale Conservation Management Plan</b> | <b>Action Area A.2:</b><br>Assessing and addressing anthropogenic noise | <b>Action 2:</b> Assessing the effect of anthropogenic noise on blue whale behaviour<br><br><b>Action 3:</b> 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 <b>Section 6.6.3</b><br><br><b>Not inconsistent assessment:</b> The assessment of acoustic emissions has considered the potential impacts to pygmy blue whales. Acoustic emissions from project vessels and WIV will not cause injury to any pygmy blue whale. There are no known or possible foraging areas for pygmy blue whales within or adjacent to the Operational Area. If the Petroleum Activities Program within the Operational Area overlaps with an individual northbound or southbound migration, they may deviate slightly from the migratory route, but will continue on their migration. | N/A                  |

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| Part 13 Statutory Instrument  | Relevant Action Areas/Objectives  | Relevant Actions  | Evaluation   | EPO, Controls and PS   |
|---|---|---|--|--|
|   | <p><b>Action Area A.4:</b><br/>Minimising vessel collisions</p>   | <p><b>Action 3:</b> 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</p> | <p>Refer <b>Section 6.7.6</b></p> <p><b>Not inconsistent assessment:</b> The assessment of vessel collision with marine fauna has considered the potential risks to pygmy blue whales. If the Petroleum Activities Program within the Operational Area overlaps with an individual northbound or southbound migration, they may deviate slightly from the migratory route, but will continue on their migration. Vessel collisions with pygmy blue whales are highly unlikely to occur, given the very slow vessel speeds.</p> | <p><b>EPO 19</b><br/><b>C 19.1</b><br/><b>PS 19.1.1 &amp; 19.1.2</b></p> |
|   | <p><b>Action Area B.3:</b><br/>Describing spatial and temporal distribution and defining biologically important habitat</p> | <p><b>Action 2:</b> Identify migratory pathways between breeding and feeding grounds</p> <p><b>Action 3:</b> Assess timing and residency within Biologically Important Areas</p>  | <p><b>Not inconsistent assessment:</b> Woodside contributes to Action Area B3 via its support of targeted research initiatives (e.g. satellite tracking of pygmy blue whale migratory movements<sup>40</sup>).</p>   | <p>N/A</p>   |
| <p><b>Assessment Summary</b></p> <p>The Blue Whale Conservation Management Plan has been considered during the assessment of impacts and risks, and the Petroleum Activities Program is not considered to be inconsistent with the relevant actions of this plan.</p> |   |   |  |  |

<sup>40</sup> 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

**Table 6-20: 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  |
|--|---|--|---|---|
| <p><b>Grey Nurse Shark Recovery Plan</b></p>   | <p><b>Objective 7:</b> Improve understanding of the threat of pollution and disease to the grey nurse shark</p> | <p><b>Action 7.1:</b> Review and assess the potential threat of introduced species, pathogens and pollutants</p> | <p>Refer <b>Sections 6.6.4, 6.6.5, 6.7.4 6.7.5, 6.7.8</b></p> <p><b>Not inconsistent assessment:</b> This EP includes an assessment of the impacts from accidental release of solid wastes as well as planned discharges of drilling waste on marine species.</p> | <p>N/A</p>  |
|  |   |  | <p>Refer <b>Sections 6.6.4, 6.6.5, 6.6.6, 6.7.2, 6.7.3, 6.7.4, 6.7.5, 6.7.6, 6.7.7</b></p> <p><b>Not inconsistent assessment:</b> The assessment of accidental release of chemicals / hydrocarbons has considered the potential risks to grey nurse sharks.</p>   | <p><b>Section 7.10</b></p> <p>Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activities Program are present in <b>APPENDIX D</b></p> |
| <p><b>Assessment Summary</b></p> <p>The Grey Nurse Shark Recovery Plan has been considered during the assessment of impacts and risks, and the Petroleum Activities Program is not considered to be inconsistent with the relevant actions of this plan.</p> |   |  |   |   |

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**Table 6-21: Assessment against relevant actions of the Sawfish and River Shark Recovery Plan**

| Part 13 Statutory Instrument  | Relevant Action Areas/Objectives  | Relevant Actions  | Evaluation   | EPO, Controls and PS  |
|---|---|---|--|---|
| <p><b>Sawfish and River Shark Recovery Plan</b></p>   | <p><b>Objective 5:</b> Reduce and, where possible, eliminate adverse impacts of habitat degradation and modification on sawfish and river shark species</p> | <p><b>Action 5c:</b> Identify risks to important sawfish and river shark habitat and measures needed to reduce those risks</p>                  | <p>Refer <b>Sections 6.6.4, 6.6.5, 6.6.6, 6.7.2, 6.7.3, 6.7.4, 6.7.5, 6.7.6</b></p> <p><b>Not inconsistent assessment:</b> The assessment of accidental release of chemicals / hydrocarbons has considered the potential risks to sawfish and river shark.</p>   | <p>Refer <b>Section 7.10</b></p> <p>Detailed oil spill preparedness and response performance outcomes, standards and measurement criteria for the Petroleum Activities Program are present in <b>APPENDIX D</b></p> |
|   | <p><b>Objective 6:</b> Reduce and, where possible, eliminate any adverse impacts of marine debris on sawfish and river shark species</p>                    | <p><b>Action 6a:</b> Assess the impacts of marine debris including ghost nets, fishing gear and plastics on sawfish and river shark species</p> | <p>Refer <b>Section 6.7.5</b></p> <p><b>Not inconsistent assessment:</b> The assessment of the accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to sawfish. Controls have been implemented to reduce the likelihood of accidental release of solid wastes for the duration of the petroleum activities program.</p> | <p>N/A</p>  |
| <p><b>Assessment Summary</b></p> <p>The Sawfish and River Shark Recovery Plan has been considered during the assessment of impacts and risks, and the Petroleum Activities Program is not considered to be inconsistent with the relevant actions of this plan.</p> |   |   |  |   |

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**Table 6-22: Assessment against relevant actions of the Marine Debris Threat Abatement Plan**

| Part 13 Statutory Instrument  | Relevant Action Areas/Objectives  | Relevant Actions  | Evaluation   | EPO, Controls and PS |
|---|---|---|--|----------------------|
| <i>Marine Debris TAP</i>  | <b>Objective 2:</b> Understand the scale of marine plastic and microplastic impact on key species, ecological communities and locations | <b>Action 2.04:</b> Build understanding related to plastic and microplastic pollution | Refer <b>Section 6.7.5</b><br><b>Not inconsistent assessment:</b> The assessment of the accidental release of solid hazardous and non-hazardous wastes has considered the potential risks to the marine environment. Controls have been implemented to reduce the likelihood of accidental release of solid wastes for the duration of the petroleum activities program. | N/A                  |
| <p><b>Assessment Summary</b></p> <p>The Marine Debris TAP has been considered during the assessment of impacts and risks, and the Petroleum Activities Program is not considered to be inconsistent with the relevant actions of this plan.</p> |   |   |  |                      |

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## 7 IMPLEMENTATION STRATEGY

### 7.1 Overview

Regulation 14 of the Environment Regulations requires an EP to contain an implementation strategy for the activity. The implementation strategy for the Petroleum Activities Program 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 standards outlined in this EP are achieved.

Woodside, as Operator, is responsible for ensuring that the Petroleum Activities Program is managed in accordance with this Implementation Strategy and the WMS (see **Section 2.3**).

### 7.2 Systems, Practice, 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**).

The systems, practices and procedures that will be implemented are listed in the Performance Standards (PS) contained in this EP. Document names and reference numbers may change during the statutory duration of this EP and is managed through a changes register and update process.

### 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 7-1**. Roles and responsibilities for oil spill preparation and response are outlined in **APPENDIX D** and the [Woodside Oil Pollution Emergency Arrangements \(Australia\)](#).

**Table 7-1: Roles and responsibilities**

| Title (role)                  | Environmental Responsibilities   |
|-------------------------------|--|
| <b>Office-based Personnel</b> |  |
| Woodside Superintendent       | <ul style="list-style-type: none"> <li>• Monitor and manage the activity so it is performed as per the relevant standards and commitments in this EP and approval conditions.</li> <li>• Notify the Woodside Environment Adviser in a timely manner of any scope changes.</li> <li>• Liaise with regulatory authorities as required.</li> <li>• Review this EP as necessary and manage change requests.</li> <li>• Provide sufficient resources to implement the well intervention-related management measures (i.e. controls, EPOs, PSs and MC) in this EP.</li> <li>• Ensure WIV and support vessel personnel are given an HSE Induction as per Section 7.5.2 of this EP at the start of the intervention program.</li> <li>• Verify that contractors meet environmental related contractual obligations.</li> <li>• Confirm controls and performance standards in this EP are actioned, as required, before well intervention commences.</li> <li>• Ensure the WIV start-up meets the requirements of the Drilling and Managing Rig Operations Process.</li> <li>• Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside’s HSE Reporting and Investigation Procedure.</li> <li>• Monitor and close out corrective actions identified during environmental monitoring or audits.</li> </ul> |

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| Title (role)  | Environmental Responsibilities   |
|---|--|
| Woodside Senior Operations Engineer                                 | <ul style="list-style-type: none"> <li>• Ensure the well intervention program meets the requirements detailed in this EP.</li> <li>• Ensure changes to the well intervention program are communicated to the Woodside Environmental Adviser.</li> <li>• Ensure 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 implemented.</li> <li>• Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside’s HSE Reporting and Investigation Procedure.</li> <li>• Monitor and close out corrective actions identified during environmental monitoring or audits.</li> </ul>  |
| Woodside Drilling and Subsea Engineers                              | <ul style="list-style-type: none"> <li>• Ensure changes to the well intervention program are communicated to the Woodside Environmental Adviser.</li> <li>• Ensure well intervention fluid chemical components and other fluids that may be used downhole have been reviewed by the Environmental Adviser.</li> </ul>  |
| Woodside Environmental Adviser                                      | <ul style="list-style-type: none"> <li>• Verify relevant Environmental Approvals for the activities exist before commencing activity.</li> <li>• Track compliance with performance outcomes and performance standards as per the requirements of this EP.</li> <li>• Prepare environmental component of relevant Induction Package.</li> <li>• Assist with the review, investigation and reporting of environmental incidents.</li> <li>• Ensure environmental monitoring and inspections/audits are performed as per the requirements of this EP.</li> <li>• Liaise with relevant regulatory authorities as required.</li> <li>• Assist in preparing required external regulatory reports, in line with environmental approval requirements and Woodside incident reporting procedures.</li> <li>• Monitor and close out corrective actions (Campaign Action Register) identified during environmental monitoring or audits.</li> <li>• Provide advice to relevant Woodside personnel and contractors to help them understand their environment responsibilities.</li> <li>• Liaise with 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.</li> </ul> |
| Woodside Corporate Affairs Adviser                                  | <ul style="list-style-type: none"> <li>• Prepare and implement the Consultation Plan for the Petroleum Activities Program.</li> <li>• Report on consultation.</li> <li>• Continuously liaise and provide notification as required as outlined in the EP.</li> </ul>  |
| Woodside Marine Assurance Superintendent                            | <ul style="list-style-type: none"> <li>• Conduct 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.</li> </ul>   |
| Woodside Corporate Incident Coordination Centre (CICC) Duty Manager | <p>On receiving notification of an incident, the Woodside CICC Duty Manager shall:</p> <ul style="list-style-type: none"> <li>• Establish and take control of the Incident Management Team and establish an appropriate command structure for the incident.</li> <li>• Assess the situation, identify risks and actions to minimise the risk.</li> <li>• Communicate impact, risk and progress to the Crisis Management Team and stakeholders.</li> <li>• Develop the Incident Action Plan (IAP) including objectives for action.</li> <li>• Approve, implement and manage the IAP.</li> <li>• Communicate within and beyond the incident management structure.</li> <li>• Manage and review safety of responders.</li> <li>• Address the broader public safety considerations.</li> <li>• Conclude and review activities.</li> </ul>  |

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| Title (role)                            | Environmental Responsibilities   |
|---|--|
| <b>WIV -based Personnel</b>             |  |
| WIV Offshore Installation Manager (OIM) | <ul style="list-style-type: none"> <li>• Ensure the WIV's management system and procedures are implemented.</li> <li>• Ensure personnel starting work on the WIV receive an environmental induction that meets the requirements specified in this EP.</li> <li>• Ensure personnel are competent to perform the work they have been assigned.</li> <li>• Verify that emergency drills are conducted as per the WIV's schedule.</li> <li>• Ensure the WIV's Emergency Response Team has been given sufficient training to implement the WIV's SOPEP.</li> <li>• Ensure any environmental incidents or breaches of outcomes or standards are reported immediately to the Well Site Manager.</li> <li>• Ensure corrective actions for incidents or breaches are developed, communicated to the Well Site Manager, and tracked to close-out in a timely manner.</li> </ul>  |
| Woodside Well Site Manager              | <ul style="list-style-type: none"> <li>• Ensure the well intervention program is performed as detailed in this EP.</li> <li>• Ensure the management measures (i.e. controls, EPOs, PSs and MC) detailed in this EP (relevant to offshore activities) are implemented on the WIV (other controls will be implemented onshore).</li> <li>• Ensure environmental incidents or breaches of outcomes or standards are reported as per the Woodside Corporate Event Notification Matrix. Ensure corrective actions for incidents and breaches are developed, tracked and closed out in a timely manner.</li> <li>• Ensure actions in the Well Delivery HSE Improvement Plan are performed.</li> <li>• Ensure periodic environmental inspections/reviews are completed. Ensure corrective actions from inspections are developed, tracked and closed out in a timely manner.</li> </ul>   |
| Woodside Offshore HSE Adviser           | <ul style="list-style-type: none"> <li>• Support the Well Site Manager to ensure the controls detailed in this EP relevant to offshore activities are implemented on the WIV, and help collect and record evidence of implementation (other controls are implemented and evidence collected onshore).</li> <li>• Support the Well Site Manager to ensure the EPOs are met and the PSs detailed in this EP are implemented on the WIV.</li> <li>• Confirm actions in the Well Delivery HSE Improvement Plan are performed.</li> <li>• 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.</li> <li>• Ensure periodic environmental inspections/reviews are completed and corrective actions from inspections are developed, tracked and closed out in a timely manner.</li> <li>• Review contractors' procedures, input into Toolbox talks and JSAs.</li> <li>• Provide day-to-day environmental support for activities in consultation with the Woodside Environment Adviser.</li> </ul> |
| <b>Vessel-based Personnel</b>           |  |
| Vessels Master                          | <ul style="list-style-type: none"> <li>• Ensure the vessel management system and procedures are implemented.</li> <li>• Ensure personnel commencing work on the vessel receive an environmental induction that meets the relevant requirements specified in this EP.</li> <li>• Ensure personnel are competent to perform the work they have been assigned.</li> <li>• Verify SOPEP drills are conducted as per the vessel's schedule.</li> <li>• Ensure the vessel Emergency Response Team has been given sufficient training to implement the SOPEP.</li> <li>• Ensure any environmental incidents or breaches of relevant EPOs or PSs detailed in this EP are reported immediately to the Woodside Well Site Manager.</li> <li>• Ensure corrective actions for incidents or breaches are developed, communicated to the Well Site Manager, and tracked to close-out in a timely manner. Ensure close-out of actions is communicated to the Well Site Manager.</li> </ul>  |
| Vessel Logistics Coordinators           | <ul style="list-style-type: none"> <li>• Ensure waste is managed on the relevant support vessels and sent to shore as per the relevant WMP.</li> </ul>   |

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| Title (role)               | Environmental Responsibilities   |
|----------------------------|--|
| Vessel HSE Advisers        | Refer to Woodside HSE Offshore Adviser responsibilities detailed above under WIV-based personnel.  |
| Contractor Project Manager | <ul style="list-style-type: none"> <li>• Confirm activities are performed in accordance with this EP, as detailed in the Woodside approved Contractor Environmental Management Plan.</li> <li>• Ensure personnel commencing work on the project receive a relevant environmental induction that meets the requirements specified in this EP.</li> <li>• Ensure personnel are competent to perform the work they have been assigned.</li> <li>• 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.</li> </ul> |

It is the responsibility of all Woodside employees and contractors to implement the Woodside Corporate Health and Safety and Environment and Biodiversity Policy (**APPENDIX A**) in their areas of responsibility and that the personnel are suitably trained and competent in their respective roles.

### 7.4 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:

- 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 UCH Act, Woodside’s Principal Heritage Advisor must notify the Minister responsible for the UCH Act, the DCCEEW underwater archaeology section through the Australasian Underwater Cultural Heritage Database, and the Western Australian Museum.
- If the suspected heritage object includes human remains, Woodside’s Principal Heritage Adviser must also notify:
  - 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

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Traditional Custodians and a maritime archaeologist are present during any handling of the remains; and

- The Office of the Federal Environment Minister in accordance with Section 20 of the ATSIHP Act.
- 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.

## 7.5 Training and Competency

### 7.5.1 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 Activities Program as part of the pre-mobilisation process. The assessment determines whether there is a clearly defined organisational structure that clearly defines 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 environmental management system.

### 7.5.2 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 Petroleum Activities Program induction may cover information about:

- Description of the activity.
- Ecological and socio-economic values of the activity location (including Underwater Cultural Heritage).
- Regulations relevant to the activity.
- Woodside's Environmental Management System – Health Safety, Environment and Quality Policy.
- EP importance/structure/implementation/roles and responsibilities.
- Main environmental aspects/hazards and potential environmental impacts and related performance outcomes.
- Oil spill preparedness and response.
- Monitoring and reporting on performance outcomes and standards using measurement criteria.
- Incident reporting.
- Unexpected Finds Procedure and reporting requirements (Section 7.4)

### 7.5.3 Activities Program Specific Environmental Awareness

Before commencing the subsea campaigns associated with the Petroleum Activities Program, a pre-activity meeting will be held on-board WIV and support vessels 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 on the WIV and support vessels. During these meetings, recent environmental incidents are reviewed and awareness material presented.

### 7.5.4 Management of Training Requirements

All personnel on the WIV and project vessels are required to be competent to perform their assigned positions. This may be in the form of external or 'on the job' training. The vessel Safety Training Coordinator (or equivalent) is responsible for identifying training needs, keeping records of training performed and identifying minimum training requirements.

## 7.6 Monitoring, Auditing, Management of Non-Conformance and Review

### 7.6.1 Monitoring

Woodside and its contractors will perform a program of periodic monitoring during the Petroleum Activities Program – starting at mobilisation of each activity and continuing through the duration of each activity to activity completion. This information will be collected using the tools and systems outlined below, developed based on the EPOs, controls, standards and MC in this EP. The tools and systems will collect, as a minimum, the data (evidence) referred to in the MC in **Section 6** and **APPENDIX D**.

The collection of this data (against the MC) will form part of the permanent record of compliance maintained by Woodside and will form the basis for demonstrating that the EPOs and standards are met, which will be summarised in a series of routine reporting documents.

#### 7.6.1.1 Source-based Impacts and Risks

The tools and systems to monitor environmental performance, where relevant, will include:

- Daily reports which include leading indicator compliance.
- Periodic review of waste management and recycling records.
- Use of contractor's risk identification program that requires personnel to record and submit safety and environment risk observation cards routinely (frequency varies with contractor).
- Collection of evidence of compliance with the controls detailed in the EP relevant to offshore activities by the Woodside Offshore HSE Adviser (other compliance evidence is collected onshore).
- Environmental discharge reports that record volumes of planned and unplanned discharges downhole (in the well), to ocean and atmosphere.
- Monitoring of progress against the Well Delivery function scorecard for KPIs.
- Internal auditing and assurance program as described in **Section 7.6.2**.

Throughout this activity, Woodside will continuously identify new source-based risks and impacts through the Monitoring and Auditing systems and tools described above and in **Section 7.6.2**.

### 7.6.1.2 Management of Knowledge

Review of knowledge relevant to the existing environment is undertaken in order 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). Relevant knowledge is defined as:

- 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 and environment and stakeholder information – update checks conducted via desktop reviews: scientific literature, government publications and Woodside stakeholder consultation; and,
- Environmental legislation – monitoring of emerging regulatory changes and the subsequent management of regulatory change (as outlined in the WMS Regulatory Compliance Management Procedure).

A management of knowledge tracker is maintained to record reviews and updates. Communication of relevant new knowledge is addressed at the EP Consolidation meetings and where changes in knowledge prompt a consideration of management of change, this is actioned and documented appropriately.

The frequency and documentation of reviews, communication of relevant new knowledge and consideration of management of change are documented in the WMS Environment Plan Guideline.

Any relevant new information on cultural values and heritage will be assessed using the EP Management of Change Process (refer to **Section 7.7.1**).

Under the Oil Spill 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.

### 7.6.2 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.

#### 7.6.2.1 WIV Activities

The following internal audits, inspections and reviews will be performed to review the environmental performance of the activities:

- Survey environment of equipment for a newly contracted WIV against Woodside's Engineering Standard Riserless Well Intervention Equipment. This standard covers functional and technical requirements for Woodside contracted WIV's and their associated equipment. An environment

equipment survey scope typically includes environmental discharge control (including drainage management), and loss of containment management.

- Complete a minimum of one environmental inspection during the Petroleum Activities Program (conducted by offshore Woodside personnel or a delegate) which may include verifying:
  - environment containment including chemical storage, spill response equipment and housekeeping
  - general WIV environment risks including waste management, and inspection of subsea and moonpool areas.

### 7.6.2.2 Marine Assurance

Woodside's marine assurance is managed by the Marine Assurance Team of the Logistics 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 Safety Management System assessment (OVMSA)
- DP system verification
- vessel inspections
- 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
- OCIMF OVID Inspection
- IMXA CMID 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.

Where 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 alternate means of inspection, known as a risk assessment.

### 7.6.2.3 Risk Assessment

Woodside conducts a risk assessment of vessels where either an OVMSA Verification Review and/or an OVID 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 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))
  - 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.

### 7.6.3 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 internal event recording, investigation and 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 reoccurrence 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 (as detailed in **Section 2.6.3**). Detailed investigations are completed for all categories A, B, C and high potential environmental incidents.

## 7.6.4 Review

### 7.6.4.1 Management Review

Within the HSE Function, senior management regularly monitor and review environmental performance and the effectiveness of managing environmental risks and performance. Within each Function and Business Unit Leadership Team (e.g. Well Delivery and Developments/Projects), managers review environmental performance regularly, including through quarterly HSE review meetings.

Woodside's Environment Team will perform six-monthly reviews of the effectiveness of the implementation strategy and associated tools. This will involve reviewing the:

- Well Intervention environment KPIs
- Tools and systems to monitor environmental performance (detailed in **Section 7.6.1**)
- Lessons learned about implementation tools and throughout each campaign.
- Reviews of oil spill arrangements and testing are performed in accordance with **Section 7.10**.

### 7.6.4.2 Learning and Knowledge Sharing

Learning and knowledge sharing occurs via a number of different methods, which may include:

- Event investigations.
- Event bulletins.
- After action review, including review of environmental incidents as relevant.
- Ongoing communication with WIV operators.
- Formal and informal industry benchmarking.
- Cross asset learnings.
- Engineering and technical authorities discipline communications and sharing.

## 7.7 Management of Change and Revision

### 7.7.1 Environmental Plan Management of Change

Management of changes relevant to this EP, concerning the scope of the activity description (**Section 3**) including: review of advances in technology at stages where new equipment may be selected such as vessel contracting; changes in understanding of the environment, DCCEEW EPBC Act listed threatened and migratory species status, Part 13 statutory instruments (recovery plans, threat abatement plans, conservation advice, wildlife conservation plans) and current requirements for AMPs (**Section 4**); and potential new advice from external persons / organisations (**Section 5**), will be managed in accordance with Regulation 17 of the Environment Regulations.

Risk will be assessed in accordance with the environmental risk management methodology (**Section 2.6**) 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 17 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 17 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.

### 7.7.2 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 17 to determine if EP, including OPEP, resubmission is required (see **Section 7.7.1**). Changes with potential to influence minor or technical changes to the OPEP are tracked in management of change records, project records and incorporated during internal updates of the OPEP or the five-yearly revision.

### 7.8 Record Keeping

Compliance records (outlined in MC in **Section 6**) will be maintained.

Record keeping will be in accordance with Regulation 14(7) that addresses maintaining records of emissions and discharges.

### 7.9 Reporting

To meet the EPOs and standards outlined in this EP, Woodside reports at a number of levels, as outlined in the next sections.

#### 7.9.1 Routine Reporting (Internal)

##### 7.9.1.1 Daily Progress Reports and Meetings

Daily reports for well intervention activities are prepared and issued to key support personnel and internal persons/ organisations, by relevant managers responsible for the well. The report provides

performance information about well intervention activities, health, safety and environment, and current and planned work activities.

Meetings between key personnel are used to transfer information, discuss incidents, agree plans for future activities and develop plans and accountabilities for resolving issues.

### 7.9.1.2 Regular HSE Meetings

Regular dedicated HSE meetings are held with the offshore to address targeted HSE incidents and initiatives. Minutes of these meetings are produced and distributed as appropriate.

### 7.9.1.3 Performance Reporting

Monthly and quarterly performance reports are developed and reviewed by the Function and Business Unit Leadership Teams (e.g. Global Wells and Seismic (Australia)). These reports cover a number of 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.

## 7.9.2 Routine Reporting (External)

### 7.9.2.1 Ongoing Consultation

In accordance with Regulation 14 (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's approach to ongoing consultation is that feedback and comments received from relevant persons and additional persons continue to be assessed and responded to, as required, through the life of an EP, including during EP assessment and throughout the duration of the accepted EP, in accordance with the intended outcome of consultation (as set out in **Section 5.2**).

Woodside proposes to undertake the engagements with directly impacted relevant persons and additional persons listed in **Table 7-2**. Relevant new information identified during ongoing consultation will be assessed using the EP Management of Knowledge (refer to **Section 7.6.1.2** and Management of Change Process (refer to **Section 7.7.1**).

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 present at those meetings are from community and industry and include Woodside, State Government (for instance relevant Regional Development Commissions), Local Government, Indigenous Groups, industry representative bodies, Community and industry organisations.

Relevant persons, additional persons and those who are merely interested in the activities, can otherwise remain up to date on this activity through subscribing to our website 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 a measure or control that requires implementation or update to meet the intended outcome of consultation (see **Section 5.2**), Woodside will apply its EP Management of Knowledge process (refer to **Section 7.6.1.2** and Management of Change Process (refer to **Section 7.7.1**), as appropriate.

Woodside has developed a Program of Ongoing Engagement with Traditional Custodians (**APPENDIX I**), directly informed by feedback from Traditional Custodians. It provides a mechanism for ongoing dialogue so that Traditional Custodians can, on an ongoing basis, provide Woodside with feedback relating to the possible consequences of an activity to be carried out under an Environment Plan on their functions, interests and activities as they relate to cultural values. The program enables Woodside to manage uncertainty on the impacts and risks to cultural values which may be identified at any time during Woodside’s activities via ongoing dialogue with Traditional Custodians.

The ongoing consultation engagements that Woodside intends to progress for this EP are set out in the table below.

**Table 7-2 Ongoing consultation engagements**

| Report/ Information   | Recipient  | Purpose  | Frequency  | Content   |
|---|--|--|--|---|
| Program of Ongoing Engagement with Traditional Custodians ( <b>APPENDIX I</b> ) | Relevant cultural authorities ( <b>APPENDIX I</b> )            | Ongoing engagement.  | Ongoing.<br>Responses to any feedback received by Traditional Custodian groups will be provided by Woodside within four weeks of receipt.<br>Progress on the Program will be reported in line with annual sustainability reporting via the Woodside website. | Assessment of cultural values.<br>Any relevant new information on cultural values will be assessed using the EP Management of Knowledge ( <b>Section 7.6.1.2</b> ) and Management of Change Process (refer to <b>Section 7.7.1</b> ). |
| Notification (email)<br><br>Updates (email)                                     | AHO  | As requested by AMSA during consultation.                        | No less than 4 weeks prior to commencement.<br><br>As required.  | <b>C 1.3</b><br>Date of activity start.<br><br>Changes to planned activities  |
| Notification (email)<br><br>Update (email)                                      | AMSA   | As requested by AMSA during consultation                         | At least 24-48 hours before operations commence.<br><br>Provide updates to the AHO and JRCC should there be changes to the activity.   | <b>C 1.5</b><br>Date of activity start.<br><br>Changes to planned activities  |
| Notification (email)  | DoD  | As requested by DoD during consultation                          | Five weeks prior to commencement of activities.  | <b>C 1.8</b><br>Date of activity start.   |
| Notification (email)  | DMIRS  | Good practice  | At least 10 days prior to commencement   | Date of activity start and end.   |
| Notification (email)  | DPIRD<br>WAFIC<br>Pilbara Line Fishery<br>Pilbara Trap Fishery | As requested during consultation and/or organisation expectation | At least ten days prior to commencement and following completion of activities   | <b>C 1.4</b><br>Date of activity start and end.   |

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|                      |  |   |  |  |
|----------------------|--|---|--|--|
|                      | Recfishwest  |   |  |  |
| Notification (email) | All relevant persons for the proposed activity   | Notification of significant change  | As appropriate   | Notification of significant change   |
| Emails/ Meetings     | Persons or organisations who provide feedback to Woodside post EP submission.  | Identification, assessment and consideration of feedback, claims and/ or objections | As appropriate   | Assessment of claims and/ or objections.<br><br>Relevant new information will be assessed using the EP Management of Knowledge ( <b>Section 7.6.1.2</b> ) and Management of Change Process (refer to <b>Section 7.7.1</b> ). |
| Notification (email) | Australasian Underwater Cultural Heritage Database<br><br>Any other stakeholders as required in the Unexpected Finds Procedure ( <b>Section 7.4</b> ). | Report any unexpected finds of potential Underwater Cultural Heritage.              | If triggered by Unexpected Finds Procedure ( <b>Section 7.4</b> ). | Refer to Unexpected Finds Procedure ( <b>Section 7.4</b> and <b>C 3.1</b> ).   |

### 7.9.2.2 Start and End Notifications of the Petroleum Activities Program

In accordance with Regulation 29, Woodside will notify NOPSEMA and DMIRS of the commencement of the Petroleum Activities Program at least ten days before the activity commences, and will notify NOPSEMA and DMIRS within ten days of completing the activity.

### 7.9.2.3 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 7-3**.

**Table 7-3: Routine external reporting requirements**

| Report                              | Recipient | Frequency  | Content  |
|-------------------------------------|-----------|--|--|
| Monthly Recordable Incident Reports | NOPSEMA   | Monthly, by the 15th of each month.  | Details of recordable incidents that have occurred during the Petroleum Activities Program for previous month (if applicable). |
| Environmental Performance Report    | NOPSEMA   | Annually, with the first report submitted within 12 months of the commencement of the Petroleum Activities Program covered by this EP (as per the requirements of Regulation 14(2)). | Compliance with EPOs, controls and standards outlined in this EP, in accordance with the Environment Regulations.              |

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### 7.9.2.4 End of the Environmental Plan

The EP will end when Woodside notifies NOPSEMA that the Petroleum Activities Program has ended and all of the obligations identified in this EP have been completed, and NOPSEMA has accepted the notification, in accordance with Regulation 25A of the Environment Regulations.

### 7.9.3 Incident Reporting (Internal)

The process for reporting environmental incidents is described in **Sections 7.9.3** and **7.9.4** of this EP. 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 Procedure and this section of this EP.

### 7.9.4 Incident Reporting (External) – Reportable and Recordable

#### 7.9.4.1 Reportable Incidents

##### **Definition**

A reportable incident is defined under Regulation 4 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 Activities Program is:
  - an incident that has caused environmental damage with a Consequence Level of Moderate (C) or above (as defined under Woodside’s Risk Table (**refer to Figure 2-6**)).
  - 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 (**refer to Figure 2-6**)).

The environmental risk assessment (**Section 6**) for the Petroleum Activities Program 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 loss of well integrity.

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 Regulations.

##### **Notification**

NOPSEMA will be notified of all reportable incidents, according to the requirements of Regulations 26, 26A and 26AA of the Environment Regulations. Woodside will:

- Report all reportable incidents to the regulator (orally) ASAP, but within two 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 (NOPTA) and the Department of the responsible State Minister (DMIRS) ASAP 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 ASAP, but within three days of the incident or of its detection by Woodside

- Provide a copy of the written report to the NOPTA and DMIRS, within seven days of the written report being provided to NOPSEMA.

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.

#### **7.9.4.2 Recordable Incidents**

##### **Definition**

A recordable incident as defined under Regulation 4 of the Environment Regulations is an incident arising from the activity that 'breaches an environmental performance outcome or environmental performance standard, 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 26B(4), no later than 15 days after the end of the calendar month using the NOPSEMA Form – Recordable Environmental Incident Monthly Summary Report 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 in the future.

#### **7.9.4.3 Other External Incident Reporting Requirements**

In addition to the notification and reporting of environmental incidents defined under the Environment Regulations and Woodside requirements, **Table 7-4** describes the incident reporting requirements that also apply in the Operational Area.

**Table 7-4: External Incident Reporting Requirements**

| Event  | Responsibility | Notifiable party                      | Notification requirements   | Contact                    | Contact detail   |
|--|----------------|---------------------------------------|---|----------------------------|--|
| Any marine incidents during Petroleum Activities Program   | Vessel Master  | AMSA                                  | Incident Alert Form 18 as soon as reasonably practicable*<br>Within 72 hours after becoming aware of the incident, submit Incident Report Form 19   | AMSA                       | <a href="mailto:reports@amsa.gov.au">reports@amsa.gov.au</a>   |
| Oil pollution incidents in Commonwealth waters   | Vessel Master  | AMSA Rescue Coordination Centre (RCC) | As per Article 8 and Protocol I of MARPOL within two hours via the national emergency 24-hour notification contacts and a written report within 24 hours of the request by AMSA   | AMSA RCC Australia         | If the ship is at sea, reports are to be made to:<br>Free call: 1800 641 792<br>Phone: 08 9430 2100 (Fremantle)                    |
| Oil pollution incidents in Commonwealth waters   | Vessel Master  | AMSA                                  | Without delay as per <i>Protection of the Sea Act</i> , 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:<br>1800 641 792<br>or<br>+61 2 6230 6811<br>AFTN: YSARYCYX  |
| 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   | Director of National Parks | Phone:<br>02 6274 2220   |
| Activity causes unintentional death of or injury to fauna species listed as Threatened or Migratory under the EPBC Act                                       | Vessel Master  | DCCEEW                                | Within seven days of becoming aware   | Secretary of the DCCEEW    | Phone:<br>1800 803 772<br>Email:<br><a href="mailto:protected.species@environment.gov.au">protected.species@environment.gov.au</a> |

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The pollution activities 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, etc.).
- Any loss of hazardous materials.
- For oil spill incidents, other agencies and organisations will be notified as appropriate to the nature and scale of the incident as per procedures and contact lists in the [Oil Pollution Emergency Arrangements \(Australia\)](#) and the TPA03 Well Intervention First Strike Plan (**APPENDIX H**).
- External incident reporting requirements under the *OPGGS (Safety) Regulations*, including under Subregulation 2.42, notices and reports of dangerous occurrences will be reported to NOPSEMA under the approved safety cases.

## 7.10 Emergency Preparedness and Response

### 7.10.1 Overview

Under Regulation 14(8), the implementation strategy must contain an Oil Pollution Emergency Plan (OPEP) and provide for updating the OPEP. Regulation 14(8AA) outlines the requirements for the OPEP which must include adequate arrangements for responding to and monitoring oil pollution.

A summary of how this EP and supporting documents address the various requirements of Environment Regulations relating to oil pollution response arrangements is shown in **Table 7-5**.

**Table 7-5: Oil pollution and preparedness and response overview**

| Content   | Environment Regulations Reference | Document/Section Reference  |
|---|-----------------------------------|---|
| Details of (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 13(5), (6), 14(3)      | Oil Spill Preparedness and Response Mitigation Assessment ( <b>APPENDIX D</b> )   |
| Describes the OPEP  | Regulation 14(8)                  | EP: Woodside's oil pollution emergency plan has the following components: <ul style="list-style-type: none"> <li>• Woodside Oil Pollution Emergency Arrangements (Australia)</li> <li>• Oil Pollution First Strike Plan (APPENDIX H)</li> <li>• Oil Spill Preparedness and Response Mitigation Assessment (APPENDIX D)</li> <li>• In accordance with Regulation 31 of the Environmental Regulations the Woodside Oil Pollution Emergency Arrangements (Australia) was provided with the Julimar Phase 2 Drilling and Subsea Installation EP, accepted by NOPSEMA on 8 November 2019.</li> </ul> |

| Content  | Environment Regulations Reference  | Document/Section Reference   |
|--|------------------------------------|--|
| Details the arrangements for responding to and monitoring oil pollution (to inform response activities), including control measures          | Regulation 14(8AA)                 | Oil Spill Preparedness and Response Mitigation Assessment ( <b>APPENDIX D</b> )<br>Oil Pollution First Strike Plan ( <b>APPENDIX H</b> ) |
| Details the arrangements for updating and testing the oil pollution response arrangements  | Regulation 14(8), (8A), (8B), (8C) | EP: <b>Section 7.9.5</b><br>Oil Spill Preparedness and Response Mitigation Assessment ( <b>APPENDIX D</b> )                              |
| Details of provisions for monitoring impacts to the environment from oil pollution and response activities                                   | Regulation 14(8D)                  | Oil Spill Preparedness and Response Mitigation Assessment ( <b>APPENDIX D</b> )  |
| Demonstrates that the oil pollution response arrangements are consistent with the national system for oil pollution preparedness and control | Regulation 14(8E)                  | <a href="#">Oil Pollution Emergency Arrangements (Australia)</a>   |

### 7.10.2 Emergency Response Training

Regulation 14(5) 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 7-6: Minimum levels of competency for key IMT positions**

| IMT Position                                       | Minimum Competency  |
|--|---|
| Corporate Incident Coordinate Centre (CICC) Leader | <ul style="list-style-type: none"> <li>Incident and Crisis Leadership Development Program (ICLDP)</li> <li>Oil Spill Response Skills Enhancement Course (OSREC – internal course)</li> <li>Participation in L2 oil spill exercise (initial)</li> </ul> Participation in L2 oil spill exercise (refresher) |
| Security & Emergency Manager Duty Manager          | <ul style="list-style-type: none"> <li>ICLDP</li> <li>OSREC</li> <li>IMO2 or equivalent spill response specialist level with an oil spill response organisation (OSRO)</li> <li>Participation in L2 oil spill exercise (initial)</li> </ul> Participation in L2 oil spill exercise (refresher)            |
| Operations, Planning, Logistics, Safety            | <ul style="list-style-type: none"> <li>OSREC</li> <li>ICC Fundamentals Course (internal course)</li> <li>Participation in L2 oil spill exercise (initial)</li> <li>Participation in L2 oil spill exercise (refresher)</li> </ul>  |
| Environment Coordinator                            | <ul style="list-style-type: none"> <li>ICC Fundamentals</li> <li>OSREC</li> <li>IMO2 or equivalent spill response specialist level with an OSRO</li> <li>Participation in L2 oil spill exercise (initial)</li> <li>Participation in L2 oil spill exercise (refresh)</li> </ul>                            |

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**Note on competency/equivalency**

- In 2018 Woodside undertook a review of incident and crisis systems, processes and tools to assess whether these were fit-for purpose and has rolled out a change to the Incident and Crisis Management training and the oil spill response training requirements for both ICC and field-based roles.
- The revised ICC Fundamentals training Program and Incident and Crisis Leaders Development Program (ICLDP) align with the performance requirements of the PMAOMIR320 – Manage Incident Response Information and PMAOM0R418 - Coordinate Incident Response.
- Regarding training specific equivalency;
- ICLDP is mapped to PMAOM0R418 (and which is equivalent to IMOIII when combined with Woodside's OSREC course) and ensures broader incident management principles aligned with Australasian Inter-service Incident Management System (AIIMS).
- The revised ICC Fundamentals Course is mapped to PMAOMIR320 (and which is equivalent to IMOII). The blended learning program offers modules aligned to IMOIII, IMOII, IMO I and AMOSC Core Group Training Oil Spill Response Organisation Specialist Level training.
- OSREC involves the completion of two (2) online AMSA Modules (Introduction to National Plan and Incident management; and Introduction to oil spills) as well as elements of IMO I and IMOII tailored to Woodside specific OSR capabilities.
- Woodside Learning Services (WLS) are responsible for collating and maintaining personnel training records. The HSP Dashboard reflects the competencies required for each oil spill role (IMT/operational).

**7.10.3 Emergency Response Preparation**

The Corporate Incident Coordination Centre (CICC), based in Woodside's head office in Perth, is the onshore coordination point for an offshore emergency. The CICC is staffed by a roster of appropriately skilled personnel available on call 24 hours a day. The CICC, under the leadership of the CICC Leader, supports the site-based Incident Management Team (IMT) by providing additional support in areas such as operations, logistics, planning, people management and public information (corporate affairs). A description of Woodside's Incident Command Structure and arrangements is further detailed in the [Woodside Oil Pollution Emergency Arrangements \(Australia\)](#).

Woodside will have an Emergency Response Plan (ERP) in place relevant to the Petroleum Activities Program. The ERP provides procedural guidance specific to the asset and location of operations to control, coordinate and respond to an emergency or incident. For a well intervention activity, the ERP will be a bridging document to the contracted WIV's emergency documentation. This document summarises the emergency command, control and communications processes for the integrated operation and management of an emergency. It is developed in collaboration with the contracted WIV and ensures roles and responsibilities between the contracted WIV and Woodside personnel are identified and understood. The ERPs will contain instructions for vessel emergency, medical emergency, search and rescue, reportable incidents, incident notification, contact information and activation of the contractor's emergency centre and Woodside Communication Centre (WCC).

In the event of an emergency of any type:

- On the WIV the OIM will assume overall onsite command and act as the Incident Controller (IC). All persons aboard the WIV will be required to act under the IC's directions. The WIV/vessels will maintain communications with the onshore Well Delivery 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.
- 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 WIV and support vessels will have on-board equipment for responding to emergencies including medical equipment, fire-fighting equipment and oil spill response equipment.

#### 7.10.4 Oil and Other Hazardous Materials Spill

A significant hydrocarbon spill during the proposed Petroleum Activities Program is unlikely, but should such an event occur, it has the potential to result in a serious safety or environmental incident and cause asset and reputational damage if not managed properly. The [Woodside Oil Pollution Emergency Arrangements \(Australia\)](#) document, supported by the Oil Pollution First Strike Plan (**APPENDIX H**) which provides tactical response guidance to the activity/area and **APPENDIX D** of this EP, cover spill response for this Petroleum Activities Program.

The Security and Emergency Management Function is responsible for managing Woodside's hydrocarbon spill response equipment and for maintaining oil spill preparedness and response documentation. In the event of a major spill, Woodside will request that AMSA (administrator of the National Plan) provides support to Woodside through advice and access to equipment, people and liaison. The interface and responsibilities, as defined under the National Plan, are described in the [Woodside Oil Pollution Emergency Arrangements \(Australia\)](#). AMSA and Woodside have a Memorandum of Understanding in place to support Woodside in the event of an oil spill.

The Oil Pollution First Strike Plan provide immediate actions required to commence a response (**APPENDIX H**).

The WIV and support vessels will have SOPEPs in accordance with the requirements of MARPOL 73/78 Annex I. These plans outline responsibilities, specify procedures and identify resources available in the event of a hydrocarbon or chemical spill from vessel activities. The 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, performance standards and MC to be used for oil spill response during the Petroleum Activities Program, as detailed in **APPENDIX D**.

#### 7.10.5 Emergency and Spills Response

Woodside categorises incidents and emergencies in relation to response requirements as follows:

##### 7.10.5.1 Level 1

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/regionally based teams using existing resources and functional support services.

##### 7.10.5.2 Level 2

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 CICC.

##### 7.10.5.3 Level 3

A Level 3 incident or crisis is identified as a critical event that seriously threatens the organisation's people, the environment, company assets, reputation, or livelihood. At Woodside, the Crisis Management Team (CMT) manages the strategic impacts in order to respond to and recover from the threat to the company (material impacts, litigation, legal and commercial, reputation etc.). The CICC may also be activated as required to manage the operational incident response.

### 7.10.6 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 7-7**. Emergency response testing is aligned to existing or developing risks associated with Woodside’s operations and activities. Corporate hazards/risks outlined in the corporate risk register, respective Safety Cases or project Risk Registers, are reference points developing and scheduling emergency and crisis management exercises. External participants may be invited to attend exercises (e.g. 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 and Command Teams in their ability to respond to major accident / 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, testing of arrangements register and OPEP, where appropriate.

**Table 7-7: Testing of response capability**

| Response Category       | Scope   | Response Testing Frequency   | Response Testing Objective  |
|-------------------------|---|--|---|
| <b>Level 1 Response</b> | Exercises are WIV/ vessel specific            | At least one Level 1 First Strike drill must be conducted during an activity.  | Comprehensive exercises test elements of the Oil Pollution First Strike Plan ( <b>APPENDIX H</b> ).<br>Emergency drills are scheduled to test other aspects of the Emergency Response Plan. |
| <b>Level 2 Response</b> | Exercises are WIV specific                    | Level 2 Emergency Management exercises are relevant to activities with an operational duration of one month or greater. At least one Emergency Management exercise per vessel per campaign must be conducted within the first month of commencing the activity and then at every 6 month hire period thereafter, where applicable based on duration. | Testing both the facility IMT response and/or that of the CICC following handover of incident control. Exercises may include testing of Source Control Response Strategies.                 |
| <b>Level 3 Response</b> | 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.   |

### 7.10.7 Hydrocarbon Spill Response Testing of Arrangements

There are a number of arrangements which, in the event of a spill, will underpin Woodside’s ability to implement a response across its petroleum activities. In order to ensure these arrangements are adequately tested, the Capability Development Team within Security and Emergency Management ensures tests are conducted in alignment with the Hydrocarbon Spill Testing of Arrangements Schedule.

Woodside’s arrangements for spill response are common across its Australian operating assets and activities to ensure the 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.

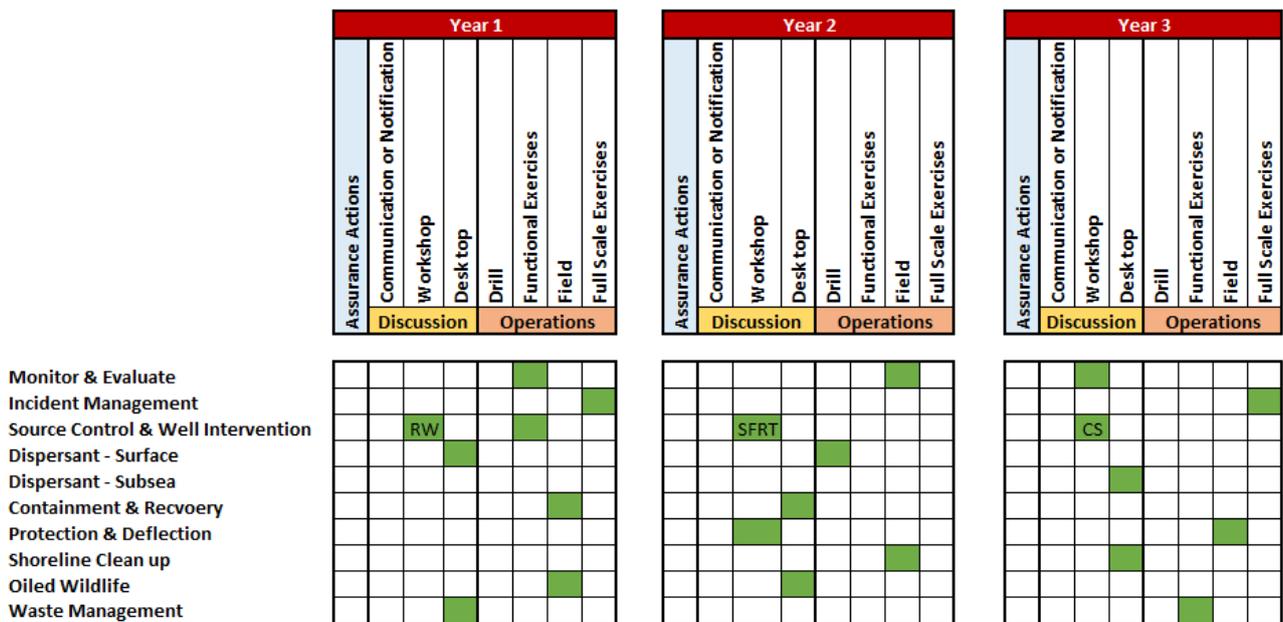
- Test response arrangements and actions to validate response plans.
- Ensure lessons learned are incorporated into Woodside's processes and procedures and improvements are made where required.

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 7-6**, up to eight formal exercises are planned annually, across Woodside, to specifically test arrangements for responding to a hydrocarbon spill to the marine environment.

### 7.10.7.1 Testing of Arrangements Schedule

Woodside's Testing of Arrangements Schedule (**Figure 7-1**) aligns with international good practice for spill preparedness and response management; the testing is compatible with the IPIECA Good Practice Guide and the Australian Institute for Disaster Resilience (AIDR) 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.



**Figure 7-1: Indicative 3-yearly testing of arrangements schedule**

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 3-year rolling schedule. The sub-heading 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).

### **7.10.8 Cyclone and Dangerous Weather Preparation**

As the timing of some activities associated with the Petroleum Activities Program are not yet determined, it is possible well intervention activities will overlap with the cyclone season (November to April, with most cyclones occurring between January and March). If undertaking activities within cyclone season, the WIV contractor and vessel contractors must have a Cyclone Contingency Plan (CCP) in place outlining the processes and procedures that would be implemented during a cyclone event, which will be reviewed and accepted by Woodside.

The WIV and support vessels will receive daily forecasts from the Bureau of Meteorology. If a cyclone (or severe weather event) is forecast, the path and its development will be plotted and monitored using the BoM data. If there is the potential for the cyclone (severe weather event) to affect the Petroleum Activities Program, the CCP will be actioned. If required, vessels can transit from the proposed track of the cyclone (severe weather event).

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## LIST OF TERMS AND ACRONYMS

| Acronym         | Description  |
|-----------------|--|
| ~               | Approximately  |
| <               | Less/fewer than  |
| >               | Greater/more than  |
| ≤               | Less than or equal to  |
| ≥               | Greater than or equal to   |
| °               | Degrees  |
| °C              | Degrees Celsius  |
| 3D              | Three-dimensional  |
| AFMA            | Australian Fisheries Management Authority                                    |
| AHO             | Australian Hydrographic Office   |
| AIS             | Automatic Identification System  |
| ALARP           | As low as reasonably practicable   |
| AMP             | Australian Marine Park   |
| AMSA            | Australian Maritime Safety Authority   |
| API             | American Petroleum Institute   |
| ASAP            | As soon as possible  |
| AS/NZS          | Australian Standard/New Zealand Standard                                     |
| ATSB            | Australian Transport Safety Bureau   |
| AusSAR          | Australian Search and Rescue   |
| bbI             | Barrel   |
| BIA             | Biologically Important Area  |
| BoM             | Bureau of Meteorology  |
| BOP             | Blowout Preventer  |
| CAES            | Catch and Effort System  |
| CCP             | Cyclone Contingency Plan   |
| CEFAS           | United Kingdom Centre for Environment, Fisheries and Aquaculture Science     |
| CHP             | Commonwealth Heritage Place  |
| CICC            | Corporate Incident Communication Centre                                      |
| cm              | Centimetre   |
| cm <sup>3</sup> | Cubic centimetre   |
| CMT             | Crisis Management Team   |
| CO <sub>2</sub> | Carbon dioxide   |
| COLREGS         | Convention on the International Regulations for Preventing Collisions at Sea |
| cP              | Centipoise   |
| CS              | Cost Sacrifice   |

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| Acronym          | Description  |
|------------------|--|
| CV               | Company Value  |
| D&C              | Drilling and Completions   |
| DAA              | Western Australian Department of Aboriginal Affairs  |
| DAWE             | Department of Agriculture, Water and the Environment   |
| DCCEEW           | Department of Climate Change, Energy, the Environment and Water (now DCCEEW)                                   |
| dB               | Decibel  |
| dB re 1 $\mu$ Pa | Decibels relative to one micropascal; the unit used to measure the intensity of an underwater sound            |
| DEC              | Department of Environment and Conservation   |
| DHNRDT           | Deepwater Horizon Natural Resource Damage Assessment Trustees  |
| DMIRS            | Western Australian Department of Mines, Industry Regulation and Safety   |
| DMP              | Western Australian Department of Mines and Petroleum (now Department of Mines, Industry Regulation and Safety) |
| DNP              | Director of National Parks   |
| DoEE             | Commonwealth Department of the Environment and Energy (now DCCEEW)   |
| DP               | Dynamic positioning  |
| DPIRD            | Western Australian Department of Primary Industries and Regional Development                                   |
| DSEWPaC          | Former Commonwealth Department of Sustainability, Environment, Water, Population and Communities (now DCCEEW)  |
| EDS              | Emergency Disconnect Sequence  |
| EEZ              | Exclusive Economic Zone  |
| EMBA             | Environment that may be affected   |
| EMS              | Environmental Management System  |
| ENVID            | Environment Identification (study)   |
| EP               | Environment Plan   |
| EPBC Act         | Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>                              |
| EPO              | Environmental Performance Objective  |
| EPS              | Environment Performance Standard   |
| ERP              | Emergency Response Plan  |
| ESD              | Ecologically Sustainable Development   |
| F                | Control feasibility  |
| F-Pil            | Flatback turtle – Pilbara stock  |
| FPSO             | Floating production, storage, and offtake  |
| g                | Gram   |
| G-NWS            | Green turtle – North West Shelf stock  |
| GP               | Good Practice  |
| GWA              | Goodwyn Alpha  |
| H-WA             | Hawksbill turtle – WA stock  |

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| <b>Acronym</b> | <b>Description</b>  |
|----------------|---|
| HAZID          | Hazard identification (study)   |
| HOCNF          | Harmonised offshore chemical notification format                        |
| HQ             | Hazard Quotient   |
| HSE            | Health, Safety, and Environment   |
| Hz             | Hertz   |
| IAP            | Incident Action Plan  |
| IAPP           | International Air Pollution Prevention                                  |
| IC             | Incident Controller   |
| IMCRA          | Integrated Marine and Coastal Regionalisation of Australia              |
| IMO            | International Maritime Organisation                                     |
| IMR            | Inspection, maintenance and repair                                      |
| IMS            | Invasive Marine Species   |
| IMT            | Incident Management Team  |
| IOGP           | International Association of Oil and Gas Producers                      |
| IOPP           | International Oil Pollution Prevention                                  |
| IPIECA         | International Petroleum Industry Environmental Conservation Association |
| IS             | Implementation Strategy   |
| ISO            | International Organization for Standardization                          |
| ITOPF          | International Tanker Owners Pollution Federation Ltd                    |
| IUCN           | International Union for the Conservation of Nature                      |
| JRCC           | Joint Rescue Coordination Centre  |
| JSA            | Job Safety Analysis   |
| KEF            | Key Ecological Feature  |
| kg             | Kilogram  |
| kHz            | Kilohertz   |
| km             | Kilometre   |
| KPI            | Key Performance Indicator   |
| L              | Litre   |
| LBL            | Long baseline   |
| lbs            | Pounds  |
| LCS            | Legislation, Codes and Standards  |
| LF             | Low-frequency   |
| LH-WA          | Logger Head turtle – WA stock   |
| LNG            | Liquefied Natural Gas   |
| LP             | Low Pressure  |
| LWI            | Light Well Intervention   |
| m              | Metre   |

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| Acronym        | Description  |
|----------------|--|
| m <sup>2</sup> | Square metre   |
| m <sup>3</sup> | Cubic metre  |
| MARPOL         | The International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. |
| MC             | Measurement Criteria   |
| MDO            | Marine diesel oil  |
| MEG            | Mono-ethylene glycol   |
| MF             | Mid-frequency  |
| MFO            | Marine Fauna Observer  |
| mg             | Milligram  |
| MNES           | Matters of National Environmental Significance   |
| MPRA           | Marine Parks and Reserves Authority  |
| MSIN           | Marine Safety Information Notification   |
| N/A            | Not Applicable   |
| NERA           | National Energy Resources Australia  |
| NHP            | National Heritage Place  |
| NIMS           | Non-indigenous Marine Species  |
| NLPG           | National Light Pollution Guidelines  |
| nm             | Nautical mile  |
| NMFS           | National Marine Fisheries Service (US)   |
| NOAA           | National Oceanic and Atmospheric Administration (US)   |
| NOPSEMA        | National Offshore Petroleum Safety and Environmental Management Authority  |
| NOPTA          | National Offshore Petroleum Titles Administrator   |
| NORM           | Naturally Occurring Radioactive Material   |
| NRC            | North Rankin Complex   |
| NT             | Northern Territory   |
| NTM            | Notices to mariners  |
| NWMR           | North-west Marine Region   |
| NWS            | North West Shelf   |
| OCNS           | Offshore Chemical Notification Scheme  |
| OIM            | Offshore Installation Manager  |
| OIW            | Oil in water   |
| OPEP           | Oil Pollution Emergency Plan   |
| OPGGS          | Commonwealth <i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i>   |
| OSPAR          | Oslo-Paris Convention for the Protection of the Marine Environment of the North East Atlantic                      |
| OSREC          | Oil Spill Response Enhancement Course  |

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| <b>Acronym</b> | <b>Description</b>                                  |
|----------------|---|
| OVID           | Off-shore Vessel Inspection Database                |
| OVMSA          | Offshore Vessel Safety Management System Assessment |
| PAH            | Polycyclic aromatic hydrocarbon                     |
| PENV           | Pendoley Environmental                              |
| PO             | Performance Outcome                                 |
| PJ             | Professional Judgement                              |
| PLF            | Pilbara Line Fishery                                |
| PMST           | Protected Matters Search Tool                       |
| ppb            | Parts per billion                                   |
| ppm            | Parts per million                                   |
| PS             | Performance Standard                                |
| PSRA           | Process Safety Risk Assessment Procedure            |
| PTS            | Permanent threshold shift                           |
| PTW            | Permit to Work                                      |
| RBA            | Risk-based Analysis                                 |
| rms            | Root Mean Square                                    |
| ROV            | Remotely operated vehicle                           |
| SCE            | Solids Control Equipment                            |
| SEL            | Sound Exposure Level                                |
| SFRT           | Subsea First Response Toolkit                       |
| SIMAP          | Spill Impact Mapping and Analysis program           |
| SIMOPS         | Simultaneous Operations                             |
| SMPEP          | Spill Monitoring Program Execution Plan             |
| SOPEP          | Ship Oil Pollution Emergency Plan                   |
| SPL            | Sound Pressure Level                                |
| SSDI           | Subsea Dispersant Injection                         |
| SSIV           | Subsea Isolation Valve                              |
| SSPL           | Subsea and Pipelines                                |
| SV             | Societal Value                                      |
| T              | Tonne   |
| TAP            | Threat Action Plan                                  |
| TEC            | Threatened Ecological Community                     |
| TSS            | Total suspended solids                              |
| TTS            | Temporary threshold shift                           |
| UK             | United Kingdom                                      |
| US             | United States                                       |
| USBL           | Ultra-short baseline                                |

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| <b>Acronym</b> | <b>Description</b>              |
|----------------|---------------------------------|
| VOC            | Volatile Organic Compound       |
| WA             | Western Australia               |
| WCC            | Woodside Communication Centre   |
| WCP            | Well Control Package            |
| WEL            | Woodside Energy Limited         |
| WHP            | World Heritage Place            |
| WIV            | Well Intervention Vessel        |
| WMP            | Waste Management Plan           |
| WMS            | Woodside Management System      |
| WOMP           | Well Operations Management Plan |

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# APPENDIX A WOODSIDE HEALTH AND SAFETY, ENVIRONMENT AND BIODIVERSITY AND RISK MANAGEMENT POLICIES

## WOODSIDE POLICY



### Health and Safety Policy

#### OBJECTIVES

At Woodside we believe that process and personal safety related incidents, and occupational illnesses are preventable. We strive to be an industry leader in health and safety and are committed to managing our activities to minimise adverse health and safety risk related impacts.

#### PRINCIPLES

Woodside will achieve this by:

- Implementing a systematic approach to health, personal safety, and process safety risk management.
- Maintaining a culture in which everybody is aware of their health and safety obligations and are empowered to speak up and intervene on health and safety issues.
- Identifying current and emerging hazards across the value chain activities to reduce risks to as low as reasonably practicable.
- Embedding health and safety management in our business planning and decision-making processes.
- Integrating health, personal safety and process safety requirements when designing, purchasing, constructing, and modifying equipment and facilities including requiring our contractors to comply with our HSE expectations in a mutually beneficial manner.
- Complying with relevant laws and regulations and applying responsible standards where laws do not exist.
- Setting targets and publicly reporting on our health and safety performance to help us continually improve.

#### 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 leaders 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 2022*

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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 exploration or development of hydrocarbons within the boundaries of natural sites on the UNESCO World Heritage List (as specified at 1 December 2022). Existing activity may continue if compatible with maintenance of the listed outstanding universal values.
- Not undertaking new exploration or development of hydrocarbons within IUCN Protected Areas (as specified at 1 December 2022) unless compatible with management plans in place for the area. Existing activity may continue if compatible with management plans in place for the area.
- Achieving net zero deforestation<sup>1</sup> associated with new projects that take a Final Investment Decision (FID) after 1 December 2022.
- Developing Biodiversity Action Plans for all new major projects (CAPEX >USD\$2 billion) that take a FID after 1 December 2022.
- Supporting positive biodiversity outcomes in regions and areas in which we operate.
- 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.

*Approved by the Woodside Energy Group Ltd Board in December 2022.*

<sup>1</sup> Definition of Forest: 'trees higher than 5 metres and a canopy cover of more than 10 percent on the land to be cleared'.

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## 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 2022.*

## 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.

### APPLICATION

The Managing Director of Woodside is accountable to the Board of Directors for ensuring this policy is effectively implemented.

Managers are responsible for promoting and applying the Risk Management Policy. Responsibility for the effective application of this policy rests with all Woodside employees, contractors and joint venturers engaged in activities under Woodside operational control.

This policy will be reviewed regularly and updated as required.

*Revised by the Woodside Petroleum Ltd Board on 4 December 2020.*

## APPENDIX B RELEVANT REQUIREMENTS

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The below table refers to Commonwealth Legislation related to the project.

| Commonwealth Legislation   | Legislation Summary   |
|--|---|
| <p><i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i></p>   | <p>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.</p> <p>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.</p> <p>Damage or interference with Aboriginal objects or places is not an offence under the ATSIHO Act except within Victoria under Section 21U.</p>  |
| <p><i>Air Navigation Act 1920</i></p> <ul style="list-style-type: none"> <li>• <i>Air Navigation Regulations 1947</i></li> <li>• <i>Air Navigation (Aerodrome Flight Corridors) Regulations 1994</i></li> <li>• <i>Air Navigation (Aircraft Engine Emissions) Regulations 1995</i></li> <li>• <i>Air Navigation (Aircraft Noise) Regulations 1984</i></li> <li>• <i>Air Navigation (Fuel Spillage) Regulations 1999</i></li> </ul> | <p>This Act relates to the management of air navigation.</p>  |
| <p><i>Australian Maritime Safety Authority Act 1990</i></p>  | <p>This Act establishes a legal framework for the Australian Maritime Safety Authority (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.</p>   |
| <p><i>Australian Radiation Protection and Nuclear Safety Act 1998</i></p>  | <p>This Act relates to the protection of the health and safety of people, and the protection of the environment from the harmful effects of radiation.</p>  |
| <p><i>Biosecurity Act 2015</i></p> <ul style="list-style-type: none"> <li>• <i>Quarantine Regulations 2000</i></li> <li>• <i>Biosecurity Regulation 2016</i></li> <li>• <i>Australian Ballast Water Management Requirements 2017</i></li> <li>• <i>Biosecurity Amendment (Biofouling Management) Regulations 2021</i></li> </ul>   | <p>This Act provides the Commonwealth with powers to take measures of quarantine, and implement related programs as are necessary, to prevent the introduction of 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 powers of entry, seizure, detention and disposal.</p> <p>This Act includes mandatory controls on the use of seawater as ballast in ships and the declaration of 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.</p> <p>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.</p> |

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| Commonwealth Legislation   | Legislation Summary   |
|--|---|
| <p><i>Environment Protection and Biodiversity Conservation Act 1999</i><br/> <i>Environment Protection and Biodiversity Conservation Regulations 2000</i></p>  | <p>This Act protects matters of national environmental significance (NES). It streamlines the national environmental assessment and approvals process, protects Australian biodiversity and integrates management of important natural and culturally significant places.</p> <p>Under this Act, actions that may be likely to have a significant impact on matters of NES must be referred to the Commonwealth Environment Minister.</p>   |
| <p><i>Environment Protection (Sea Dumping) Act 1981</i><br/> <i>Environment Protection (Sea Dumping) Regulations 1983</i></p>  | <p>This Act provides for the protection of the environment by regulating dumping matter into the sea, incineration of waste at sea and placement of artificial reefs.</p>   |
| <p><i>Industrial Chemicals (Notification and Assessment Act) 1989</i><br/> <i>Industrial Chemicals (Notification and Assessment) Regulations 1990</i></p>  | <p>This Act creates a national register of industrial chemicals. The Act also provides for restrictions on the use of certain chemicals which could have harmful effects on the environment or health.</p>  |
| <p><i>National Environment Protection Measures (Implementation) Act 1998</i><br/> <i>National Environment Protection Measures (Implementation) Regulations 1999</i></p>  | <p>This Act and Regulations provide for the implementation of National Environment Protection Measures (NEPMs) to protect, restore and enhance the quality of the environment in Australia and ensure that the community has access to relevant and meaningful information about pollution.</p> <p>The National Environment Protection Council has made NEPMs relating to ambient air quality, the movement of controlled waste between states and territories, the national pollutant inventory, and used packaging materials.</p> |
| <p><i>National Greenhouse and Energy Reporting Act 2007</i><br/> <i>National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015</i></p>   | <p>This Act and associated Rule establishes the legislative framework for the NGER scheme for reporting greenhouse gas emissions and energy consumption and production by corporations in Australia.</p>  |
| <p><i>Navigation Act 2012</i><br/> <i>Marine order 12 – Construction – subdivision and stability, machinery and electrical installations</i><br/> <i>Marine order 30 - Prevention of collisions</i><br/> <i>Marine order 47 – Offshore Industry units</i><br/> <i>Marine order 57 - Helicopter operations</i><br/> <i>Marine order 91 - Marine pollution prevention—oil</i><br/> <i>Marine order 93 - Marine pollution prevention—noxious liquid substances</i><br/> <i>Marine order 94 - Marine pollution prevention—packaged harmful substances</i><br/> <i>Marine order 96 - Marine pollution prevention—sewage</i><br/> <i>Marine order 97 - Marine pollution prevention—air pollution</i></p> | <p>This Act regulates navigation and shipping including Safety of Life at Sea (SOLAS). The Act will apply to some activities of the WIV and project vessels.</p> <p>This Act is the primary legislation that regulates ship and seafarer safety, shipboard aspects of marine environment protection and pollution prevention.</p>   |

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| Commonwealth Legislation  | Legislation Summary   |
|---|---|
| <p><i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i></p> <ul style="list-style-type: none"> <li>• <i>Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009</i></li> <li>• <i>Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011</i></li> <li>• <i>Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009</i></li> </ul>  | <p>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 Regulations listed.</p>  |
| <p><i>Ozone Protection and Synthetic Greenhouse Gas Management Act 1989</i><br/><i>Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995</i></p>  | <p>This Act provides for measures to protect ozone in the atmosphere by controlling and ultimately reducing the manufacture, import and export of ozone depleting substances (ODS) and synthetic greenhouse gases, and replacing them with suitable alternatives. The Act will only apply to Woodside if it manufactures, imports or exports ozone depleting substances.</p>  |
| <p><i>Protection of the Sea (Powers of Intervention) Act 1981</i></p>   | <p>This Act authorises the Commonwealth to take measures for the purpose of protecting the sea from pollution by oil and other noxious substances discharged from ships and provides legal immunity for persons acting under an AMSA direction.</p>   |
| <p><i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i><br/><i>Protection of the Sea (Prevention of Pollution from Ships) (Orders) Regulations 1994</i><br/><i>Marine order 91 - Marine pollution prevention—oil</i><br/><i>Marine order 93 - Marine pollution prevention—noxious liquid substances</i><br/><i>Marine order 94 - Marine pollution prevention—packaged harmful substances</i><br/><i>Marine order 95 - Marine pollution prevention—garbage</i><br/><i>Marine order 96 - Marine pollution prevention—sewage</i><br/><i>Maritime Legislation Amendment (Prevention of Air Pollution from Ships) Act 2007</i><br/>MARPOL Convention</p> | <p>This Act relates to the protection of 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.</p> <p>The Act applies to all Australian ships, regardless of their location. It applies to foreign ships operating between 3 nautical miles (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.</p> <p>All the Marine Orders listed, except for Marine Order 95, are enacted under both the <i>Navigation Act 2012</i> and the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>.</p> <p>This Act is an amendment to the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>. This amended Act provides the protection of the sea from pollution by oil and other harmful substances discharged from ships.</p> |
| <p><i>Protection of the Sea (Harmful Antifouling Systems) Act 2006</i><br/><i>Marine order 98—(Marine pollution—anti-fouling systems)</i></p>   | <p>This Act relates to the protection of the sea from the effects of harmful anti-fouling systems. It prohibits the application or reapplication of harmful anti-fouling compounds on Australian ships or foreign ships that are in an Australian shipping facility.</p>  |
| <p><i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i></p>  | <p>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.</p>  |

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| Commonwealth Legislation   | Legislation Summary  |
|--|--|
|  | <p>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.</p> <p>Damage or interference with Aboriginal objects or places is not an offence under the ATSIHO Act except within Victoria under Section 21U.</p>  |
| <p><i>Underwater Cultural Heritage Act 2018</i></p> <ul style="list-style-type: none"> <li>• Underwater Cultural Heritage Guidance for Offshore Developments</li> <li>• DRAFT Guidelines to Protect Underwater Cultural Heritage.</li> </ul> | <p>The Act prescribes penalties for damage to 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 UCH Act.</p> |

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## APPENDIX C EPBC ACT PROTECTED MATTERS SEARCH REPORTS

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Uncontrolled when printed. Refer to electronic version for most up to date information.



# 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: 09-Jun-2022

[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](#).

|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                    | None |
| <a href="#">National Heritage Places:</a>                     | None |
| <a href="#">Wetlands of International Importance (Ramsar)</a> | None |
| <a href="#">Great Barrier Reef Marine Park:</a>               | None |
| <a href="#">Commonwealth Marine Area:</a>                     | 1    |
| <a href="#">Listed Threatened Ecological Communities:</a>     | None |
| <a href="#">Listed Threatened Species:</a>                    | 19   |
| <a href="#">Listed Migratory Species:</a>                     | 33   |

## 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

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 <http://www.environment.gov.au/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.

|   |      |
|---|------|
| <a href="#">Commonwealth Lands:</a>                                 | None |
| <a href="#">Commonwealth Heritage Places:</a>                       | None |
| <a href="#">Listed Marine Species:</a>                              | 56   |
| <a href="#">Whales and Other Cetaceans:</a>                         | 23   |
| <a href="#">Critical Habitats:</a>                                  | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a>                  | None |
| <a href="#">Australian Marine Parks:</a>                            | None |
| <a href="#">Habitat Critical to the Survival of Marine Turtles:</a> | None |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

|   |      |
|---|------|
| <a href="#">State and Territory Reserves:</a>           | None |
| <a href="#">Regional Forest Agreements:</a>             | None |
| <a href="#">Nationally Important Wetlands:</a>          | None |
| <a href="#">EPBC Act Referrals:</a>                     | 23   |
| <a href="#">Key Ecological Features (Marine):</a>       | 1    |
| <a href="#">Biologically Important Areas:</a>           | 4    |
| <a href="#">Bioregional Assessments:</a>                | None |
| <a href="#">Geological and Bioregional Assessments:</a> | 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

EEZ and Territorial Sea

### 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 canutus](#)

Red Knot, Knot [855]

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

#### [Sternula nereis nereis](#)

Australian Fairy Tern [82950]

Vulnerable

Species or species habitat may occur within area

#### FISH

#### [Thunnus maccoyii](#)

Southern Bluefin Tuna [69402]

Conservation Dependent

Breeding known to occur within area

#### MAMMAL

#### [Balaenoptera borealis](#)

Sei Whale [34]

Vulnerable

Species or species habitat likely to occur within area

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]   | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Balaenoptera physalus</a><br>Fin Whale [37]  | Vulnerable          | Species or species habitat likely to occur within area |
| <b>REPTILE</b>   |                     |  |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]  | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]  | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]   | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]  | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]   | Vulnerable          | Congregation or aggregation known to occur within area |
| <b>SHARK</b>   |                     |  |
| <a href="#">Carcharias taurus (west coast population)</a><br>Grey Nurse Shark (west coast population) [68752]                            | Vulnerable          | Species or species habitat may occur within area       |
| <a href="#">Carcharodon carcharias</a><br>White Shark, Great White Shark [64470]   | Vulnerable          | Species or species habitat may occur within area       |
| <a href="#">Pristis pristis</a><br>Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable          | Species or species habitat may occur within area       |
| <a href="#">Pristis zijsron</a><br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]  | Vulnerable          | Species or species habitat known to occur within area  |

| Scientific Name  | Threatened Category    | Presence Text   |
|--|------------------------|---|
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680]         | Vulnerable             | Foraging, feeding or related behaviour known to occur within area |
| <a href="#">Sphyrna lewini</a><br>Scalloped Hammerhead [85267] | Conservation Dependent | Species or species habitat likely to occur within area            |

Listed Migratory Species [ [Resource Information](#) ]

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <b>Migratory Marine Birds</b>  |                     |  |
| <a href="#">Anous stolidus</a><br>Common Noddy [825]                           |                     | Species or species habitat may occur within area       |
| <a href="#">Calonectris leucomelas</a><br>Streaked Shearwater [1077]           |                     | Species or species habitat likely to occur within area |
| <a href="#">Fregata ariel</a><br>Lesser Frigatebird, Least Frigatebird [1012]  |                     | Species or species habitat likely to occur within area |
| <a href="#">Fregata minor</a><br>Great Frigatebird, Greater Frigatebird [1013] |                     | Species or species habitat may occur within area       |
| <a href="#">Phaethon lepturus</a><br>White-tailed Tropicbird [1014]            |                     | Species or species habitat may occur within area       |

**Migratory Marine Species**

|  |            |  |
|--|------------|--|
| <a href="#">Anoxypristis cuspidata</a><br>Narrow Sawfish, Knifetooth Sawfish [68448] |            | Species or species habitat may occur within area       |
| <a href="#">Balaenoptera borealis</a><br>Sei Whale [34]                              | Vulnerable | Species or species habitat likely to occur within area |
| <a href="#">Balaenoptera edeni</a><br>Bryde's Whale [35]                             |            | Species or species habitat likely to occur within area |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]                                 | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Balaenoptera physalus</a><br>Fin Whale [37]                                  | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Carcharhinus longimanus</a><br>Oceanic Whitetip Shark [84108]                |                     | Species or species habitat likely to occur within area |
| <a href="#">Carcharodon carcharias</a><br>White Shark, Great White Shark [64470]         | Vulnerable          | Species or species habitat may occur within area       |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]                              | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]                                    | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]                        | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Isurus oxyrinchus</a><br>Shortfin Mako, Mako Shark [79073]                   |                     | Species or species habitat likely to occur within area |
| <a href="#">Isurus paucus</a><br>Longfin Mako [82947]                                    |                     | Species or species habitat likely to occur within area |
| <a href="#">Megaptera novaeangliae</a><br>Humpback Whale [38]                            |                     | Breeding known to occur within area                    |

| Scientific Name  | Threatened Category | Presence Text   |
|--|---------------------|---|
| <a href="#">Mobula alfredi as Manta alfredi</a><br>Reef Manta Ray, Coastal Manta Ray [90033]   |                     | Species or species habitat likely to occur within area            |
| <a href="#">Mobula birostris as Manta birostris</a><br>Giant Manta Ray [90034]   |                     | Species or species habitat likely to occur within area            |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]   | Vulnerable          | Congregation or aggregation known to occur within area            |
| <a href="#">Orcinus orca</a><br>Killer Whale, Orca [46]  |                     | Species or species habitat may occur within area                  |
| <a href="#">Physeter macrocephalus</a><br>Sperm Whale [59]   |                     | Species or species habitat may occur within area                  |
| <a href="#">Pristis pristis</a><br>Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable          | Species or species habitat may occur within area                  |
| <a href="#">Pristis zijsron</a><br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]  | Vulnerable          | Species or species habitat known to occur within area             |
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680]   | Vulnerable          | Foraging, feeding or related behaviour known to occur within area |
| <a href="#">Tursiops aduncus (Arafura/Timor Sea populations)</a><br>Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]   |                     | Species or species habitat may occur within area                  |
| <b>Migratory Wetlands Species</b>  |                     |   |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]   |                     | Species or species habitat may occur within area                  |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]   |                     | Species or species habitat may occur within area                  |

| Scientific Name   | Threatened Category   | Presence Text                                    |
|---|-----------------------|--|
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]                              | Endangered            | Species or species habitat may occur within area |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                        |                       | Species or species habitat may occur within area |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area |

## Other Matters Protected by the EPBC Act

| Listed Marine Species  |                     | [ <a href="#">Resource Information</a> ]                             |
|--|---------------------|--|
| Scientific Name  | Threatened Category | Presence Text  |
| Bird   |                     |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]       |                     | Species or species habitat may occur within area                     |
| <a href="#">Anous stolidus</a><br>Common Noddy [825]                 |                     | Species or species habitat may occur within area                     |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]   |                     | Species or species habitat may occur within area                     |
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]             | Endangered          | Species or species habitat may occur within area overfly marine area |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]       |                     | Species or species habitat may occur within area overfly marine area |
| <a href="#">Calonectris leucomelas</a><br>Streaked Shearwater [1077] |                     | Species or species habitat likely to occur within area               |

| Scientific Name  | Threatened Category   | Presence Text  |
|--|-----------------------|--|
| <a href="#">Fregata ariel</a><br>Lesser Frigatebird, Least Frigatebird<br>[1012]                                       |                       | Species or species habitat likely to occur within area |
| <a href="#">Fregata minor</a><br>Great Frigatebird, Greater Frigatebird<br>[1013]                                      |                       | Species or species habitat may occur within area       |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew<br>[847]                               | Critically Endangered | Species or species habitat may occur within area       |
| <a href="#">Phaethon lepturus</a><br>White-tailed Tropicbird [1014]  |                       | Species or species habitat may occur within area       |
| <a href="#">Phaethon lepturus fulvus</a><br>Christmas Island White-tailed Tropicbird,<br>Golden Bosunbird [26021]      | Endangered            | Species or species habitat may occur within area       |
| <b>Fish</b>  |                       |  |
| <a href="#">Campichthys tricarinatus</a><br>Three-keel Pipefish [66192]  |                       | Species or species habitat may occur within area       |
| <a href="#">Choeroichthys brachysoma</a><br>Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]               |                       | Species or species habitat may occur within area       |
| <a href="#">Choeroichthys suillus</a><br>Pig-snouted Pipefish [66198]  |                       | Species or species habitat may occur within area       |
| <a href="#">Corythoichthys flavofasciatus</a><br>Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200] |                       | Species or species habitat may occur within area       |
| <a href="#">Cosmocampus banneri</a><br>Roughridge Pipefish [66206]   |                       | Species or species habitat may occur within area       |
| <a href="#">Doryrhamphus dactyliophorus</a><br>Banded Pipefish, Ringed Pipefish<br>[66210]                             |                       | Species or species habitat may occur within area       |

| Scientific Name  | Threatened Category | Presence Text                                    |
|--|---------------------|--|
| <a href="#">Doryrhamphus excisus</a><br>Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211] |                     | Species or species habitat may occur within area |
| <a href="#">Doryrhamphus janssi</a><br>Cleaner Pipefish, Janss' Pipefish [66212]   |                     | Species or species habitat may occur within area |
| <a href="#">Filicampus tigris</a><br>Tiger Pipefish [66217]  |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus brocki</a><br>Brock's Pipefish [66219]  |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus grayi</a><br>Mud Pipefish, Gray's Pipefish [66221]  |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus spinostris</a><br>Spiny-snout Pipefish [66225]  |                     | Species or species habitat may occur within area |
| <a href="#">Haliichthys taeniophorus</a><br>Ribboned Pipehorse, Ribboned Seadragon [66226]                                     |                     | Species or species habitat may occur within area |
| <a href="#">Hippichthys penicillus</a><br>Beady Pipefish, Steep-nosed Pipefish [66231]   |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus angustus</a><br>Western Spiny Seahorse, Narrow-bellied Seahorse [66234]                                |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus histrix</a><br>Spiny Seahorse, Thorny Seahorse [66236]   |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus kuda</a><br>Spotted Seahorse, Yellow Seahorse [66237]  |                     | Species or species habitat may occur within area |

| Scientific Name   | Threatened Category | Presence Text                                    |
|---|---------------------|--|
| <a href="#">Hippocampus planifrons</a><br>Flat-face Seahorse [66238]  |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus spinosissimus</a><br>Hedgehog Seahorse [66239]  |                     | Species or species habitat may occur within area |
| <a href="#">Micrognathus micronotopterus</a><br>Tidepool Pipefish [66255]   |                     | Species or species habitat may occur within area |
| <a href="#">Solegnathus hardwickii</a><br>Pallid Pipehorse, Hardwick's Pipehorse [66272]                                    |                     | Species or species habitat may occur within area |
| <a href="#">Solegnathus lettiensis</a><br>Gunther's Pipehorse, Indonesian Pipefish [66273]                                  |                     | Species or species habitat may occur within area |
| <a href="#">Solenostomus cyanopterus</a><br>Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]                       |                     | Species or species habitat may occur within area |
| <a href="#">Syngnathoides biaculeatus</a><br>Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]       |                     | Species or species habitat may occur within area |
| <a href="#">Trachyrhamphus bicoarctatus</a><br>Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]       |                     | Species or species habitat may occur within area |
| <a href="#">Trachyrhamphus longirostris</a><br>Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281] |                     | Species or species habitat may occur within area |
| <b>Reptile</b>  |                     |  |
| <a href="#">Acalyptophis peronii</a><br>Horned Seasnake [1114]  |                     | Species or species habitat may occur within area |
| <a href="#">Aipysurus duboisii</a><br>Dubois' Seasnake [1116]   |                     | Species or species habitat may occur within area |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Aipysurus eydouxii</a><br>Spine-tailed Seasnake [1117]                                     |                     | Species or species habitat may occur within area       |
| <a href="#">Aipysurus laevis</a><br>Olive Seasnake [1120]  |                     | Species or species habitat may occur within area       |
| <a href="#">Aipysurus tenuis</a><br>Brown-lined Seasnake [1121]  |                     | Species or species habitat may occur within area       |
| <a href="#">Astrotia stokesii</a><br>Stokes' Seasnake [1122]   |                     | Species or species habitat may occur within area       |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]  | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]  | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Chitulia ornata as Hydrophis ornatus</a><br>Spotted Seasnake, Ornate Reef Seasnake [87377] |                     | Species or species habitat may occur within area       |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]               | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Disteira kingii</a><br>Spectacled Seasnake [1123]  |                     | Species or species habitat may occur within area       |
| <a href="#">Disteira major</a><br>Olive-headed Seasnake [1124]   |                     | Species or species habitat may occur within area       |
| <a href="#">Ephalophis greyi</a><br>North-western Mangrove Seasnake [1127]                             |                     | Species or species habitat may occur within area       |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]  | Vulnerable          | Species or species habitat likely to occur within area |
| <a href="#">Hydrophis elegans</a><br>Elegant Seasnake [1104]   |                     | Species or species habitat may occur within area       |
| <a href="#">Hydrophis macdowelli as Hydrophis mcdowelli</a><br>Small-headed Seasnake [75601]                         |                     | Species or species habitat may occur within area       |
| <a href="#">Leioselasma czeblukovi as Hydrophis czeblukovi</a><br>Fine-spined Seasnake, Geometrical Seasnake [87374] |                     | Species or species habitat may occur within area       |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]   | Vulnerable          | Congregation or aggregation known to occur within area |
| <a href="#">Pelamis platurus</a><br>Yellow-bellied Seasnake [1091]   |                     | Species or species habitat may occur within area       |

## Whales and Other Cetaceans [ [Resource Information](#) ]

| Current Scientific Name                                  | Status     | Type of Presence                                       |
|--|------------|--|
| Mammal   |            |  |
| <a href="#">Balaenoptera borealis</a><br>Sei Whale [34]  | Vulnerable | Species or species habitat likely to occur within area |
| <a href="#">Balaenoptera edeni</a><br>Bryde's Whale [35] |            | Species or species habitat likely to occur within area |
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36] | Endangered | Species or species habitat likely to occur within area |
| <a href="#">Balaenoptera physalus</a><br>Fin Whale [37]  | Vulnerable | Species or species habitat likely to occur within area |

| Current Scientific Name  | Status | Type of Presence   |
|--|--------|--|
| <a href="#">Delphinus delphis</a><br>Common Dolphin, Short-beaked<br>Common Dolphin [60] |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Feresa attenuata</a><br>Pygmy Killer Whale [61]                              |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Globicephala macrorhynchus</a><br>Short-finned Pilot Whale [62]              |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Grampus griseus</a><br>Risso's Dolphin, Grampus [64]                         |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Kogia breviceps</a><br>Pygmy Sperm Whale [57]                                |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Kogia sima as Kogia simus</a><br>Dwarf Sperm Whale [85043]                   |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Megaptera novaeangliae</a><br>Humpback Whale [38]                            |        | Breeding known to<br>occur within area                       |
| <a href="#">Orcinus orca</a><br>Killer Whale, Orca [46]                                  |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Peponocephala electra</a><br>Melon-headed Whale [47]                         |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Physeter macrocephalus</a><br>Sperm Whale [59]                               |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Pseudorca crassidens</a><br>False Killer Whale [48]                          |        | Species or species<br>habitat likely to occur<br>within area |

| Current Scientific Name  | Status | Type of Presence                                 |
|--|--------|--|
| <a href="#">Stenella attenuata</a><br>Spotted Dolphin, Pantropical Spotted Dolphin [51]  |        | Species or species habitat may occur within area |
| <a href="#">Stenella coeruleoalba</a><br>Striped Dolphin, Euphrosyne Dolphin [52]  |        | Species or species habitat may occur within area |
| <a href="#">Stenella longirostris</a><br>Long-snouted Spinner Dolphin [29]   |        | Species or species habitat may occur within area |
| <a href="#">Steno bredanensis</a><br>Rough-toothed Dolphin [30]  |        | Species or species habitat may occur within area |
| <a href="#">Tursiops aduncus</a><br>Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]                                |        | Species or species habitat may occur within area |
| <a href="#">Tursiops aduncus (Arafura/Timor Sea populations)</a><br>Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900] |        | Species or species habitat may occur within area |
| <a href="#">Tursiops truncatus s. str.</a><br>Bottlenose Dolphin [68417]   |        | Species or species habitat may occur within area |
| <a href="#">Ziphius cavirostris</a><br>Cuvier's Beaked Whale, Goose-beaked Whale [56]  |        | Species or species habitat may occur within area |

## Extra Information

| EPBC Act Referrals   |           |                   | [ Resource Information ] |
|--|-----------|-------------------|--------------------------|
| Title of referral  | Reference | Referral Outcome  | Assessment Status        |
| Controlled action  |           |                   |                          |
| <a href="#">Browse to North West Shelf Development, Indian Ocean, WA</a> | 2018/8319 | Controlled Action | Final PER or EIS         |
| <a href="#">Equus Gas Fields Development Project, Carnarvon Basin</a>    | 2012/6301 | Controlled Action | Completed                |
| Not controlled action  |           |                   |                          |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action</b>   |           |   |                   |
| <a href="#">'Goodwyn A' Low Pressure Train Project</a>   | 2003/914  | Not Controlled Action                     | Completed         |
| <a href="#">Maia-Gaea Exploration wells</a>  | 2000/17   | Not Controlled Action                     | Completed         |
| <a href="#">North Rankin B gas compression facility</a>  | 2005/2500 | Not Controlled Action                     | Completed         |
| <a href="#">Pipeline System Modifications Project</a>  | 2000/3    | Not Controlled Action                     | Completed         |
| <a href="#">Project Highclere Geophysical Survey</a>   | 2021/9023 | Not Controlled Action                     | Completed         |
| <a href="#">Searipple gas and condensate field development</a>                                     | 2000/89   | Not Controlled Action                     | Completed         |
| <a href="#">sub-sea tieback of Perseus field wells</a>   | 2004/1326 | Not Controlled Action                     | Completed         |
| <a href="#">Telstra North Rankin Spur Fibre Optic Cable</a>  | 2016/7836 | Not Controlled Action                     | Completed         |
| <a href="#">Western Flank Gas Development</a>  | 2005/2464 | Not Controlled Action                     | Completed         |
| <b>Not controlled action (particular manner)</b>   |           |   |                   |
| <a href="#">'Tourmaline' 2D marine seismic survey, permit areas WA-323-P, WA-330-P and WA-32</a>   | 2005/2282 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D Marine Seismic Survey in WA 457-P &amp; WA 458-P, North West Shelf, offshore WA</a> | 2013/6862 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Cue Seismic Survey within WA-359-P, WA-361-P and WA-360-P</a>                          | 2007/3647 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">DAVROS MC 3D marine seismic survey northwaet of Dampier, WA</a>                        | 2013/7092 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Deep Water Northwest Shelf 2D Seismic Survey</a>                                       | 2007/3260 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Demeter 3D Seismic Survey, off Dampier, WA</a>   | 2002/900  | Not Controlled Action (Particular Manner) | Post-Approval     |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>   |           |   |                   |
| <a href="#">Foxhound 3D Non-Exclusive Marine Seismic Survey</a>                              | 2009/4703 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Greater Western Flank Phase 1 gas Development</a>                                | 2011/5980 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Santos Winchester three dimensional seismic survey - WA-323-P &amp; WA-330-P</a> | 2011/6107 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Tidepole Maz 3D Seismic Survey Campaign</a>                                      | 2007/3706 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">West Panaeus 3D seismic survey</a>   | 2006/3141 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Westralia SPAN Marine Seismic Survey, WA &amp; NT</a>                            | 2012/6463 | Not Controlled Action (Particular Manner) | Post-Approval     |

## Key Ecological Features

[ [Resource Information](#) ]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

| Name   | Region     |
|--|------------|
| <a href="#">Ancient coastline at 125 m depth contour</a> | North-west |

## Biologically Important Areas

| Scientific Name                   | Behaviour           | Presence       |
|-----------------------------------|---------------------|----------------|
| <b>Marine Turtles</b>             |                     |                |
| <a href="#">Natator depressus</a> |                     |                |
| Flatback Turtle [59257]           | Internesting buffer | Known to occur |
| <b>Seabirds</b>                   |                     |                |
| <a href="#">Ardena pacifica</a>   |                     |                |
| Wedge-tailed Shearwater [84292]   | Breeding            | Known to occur |
| <b>Sharks</b>                     |                     |                |
| <a href="#">Rhincodon typus</a>   |                     |                |
| Whale Shark [66680]               | Foraging            | Known to occur |

| Scientific Name                                  | Behaviour    | Presence       |
|--|--------------|----------------|
| Whales   |              |                |
| <a href="#">Balaenoptera musculus brevicauda</a> |              |                |
| Pygmy Blue Whale [81317]                         | Distribution | 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 are 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

## 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

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

## 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
- 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: 06-Feb-2023

[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](#).

|   |      |
|---|------|
| <a href="#">World Heritage Properties:</a>                    | 1    |
| <a href="#">National Heritage Places:</a>                     | 1    |
| <a href="#">Wetlands of International Importance (Ramsar)</a> | None |
| <a href="#">Great Barrier Reef Marine Park:</a>               | None |
| <a href="#">Commonwealth Marine Area:</a>                     | 1    |
| <a href="#">Listed Threatened Ecological Communities:</a>     | None |
| <a href="#">Listed Threatened Species:</a>                    | 45   |
| <a href="#">Listed Migratory Species:</a>                     | 60   |

## 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.

|   |      |
|---|------|
| <a href="#">Commonwealth Lands:</a>                                 | 1    |
| <a href="#">Commonwealth Heritage Places:</a>                       | 1    |
| <a href="#">Listed Marine Species:</a>                              | 101  |
| <a href="#">Whales and Other Cetaceans:</a>                         | 30   |
| <a href="#">Critical Habitats:</a>                                  | None |
| <a href="#">Commonwealth Reserves Terrestrial:</a>                  | None |
| <a href="#">Australian Marine Parks:</a>                            | 3    |
| <a href="#">Habitat Critical to the Survival of Marine Turtles:</a> | 4    |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

|   |      |
|---|------|
| <a href="#">State and Territory Reserves:</a>           | 10   |
| <a href="#">Regional Forest Agreements:</a>             | None |
| <a href="#">Nationally Important Wetlands:</a>          | 1    |
| <a href="#">EPBC Act Referrals:</a>                     | 151  |
| <a href="#">Key Ecological Features (Marine):</a>       | 6    |
| <a href="#">Biologically Important Areas:</a>           | 33   |
| <a href="#">Bioregional Assessments:</a>                | None |
| <a href="#">Geological and Bioregional Assessments:</a> | None |

# Details

## Matters of National Environmental Significance

### World Heritage Properties [\[ Resource Information \]](#)

| Name                               | State | Legal Status      |
|------------------------------------|-------|-------------------|
| <a href="#">The Ningaloo Coast</a> | WA    | Declared property |

### National Heritage Places [\[ Resource Information \]](#)

| Name                               | State | Legal Status |
|------------------------------------|-------|--------------|
| Natural                            |       |              |
| <a href="#">The Ningaloo Coast</a> | 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            |
|-------------------------|
| EEZ and Territorial Sea |

### 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   |                       |   |
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]                                 | Endangered            | Species or species habitat known to occur within area |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                            | Critically Endangered | Species or species habitat known to occur within area |
| <a href="#">Charadrius leschenaultii</a><br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable            | Species or species habitat known to occur within area |
| <a href="#">Erythrotriorchis radiatus</a><br>Red Goshawk [942]                           | Vulnerable            | Species or species habitat may occur within area      |

| Scientific Name   | Threatened Category   | Presence Text  |
|---|-----------------------|--|
| <a href="#">Falco hypoleucos</a><br>Grey Falcon [929]   | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Limosa lapponica menzbieri</a><br>Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]                     | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Macronectes giganteus</a><br>Southern Giant-Petrel, Southern Giant Petrel [1060]  | Endangered            | Species or species habitat may occur within area       |
| <a href="#">Malurus leucopterus edouardi</a><br>White-winged Fairy-wren (Barrow Island), Barrow Island Black-and-white Fairy-wren [26194] | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]   | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Pezoporus occidentalis</a><br>Night Parrot [59350]  | Endangered            | Species or species habitat may occur within area       |
| <a href="#">Phaethon lepturus fulvus</a><br>Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]                            | Endangered            | Species or species habitat may occur within area       |
| <a href="#">Pterodroma mollis</a><br>Soft-plumaged Petrel [1036]  | Vulnerable            | Species or species habitat may occur within area       |
| <a href="#">Rostratula australis</a><br>Australian Painted Snipe [77037]  | Endangered            | Species or species habitat likely to occur within area |
| <a href="#">Sternula nereis nereis</a><br>Australian Fairy Tern [82950]   | Vulnerable            | Breeding known to occur within area                    |
| <a href="#">Thalassarche carteri</a><br>Indian Yellow-nosed Albatross [64464]   | Vulnerable            | Species or species habitat may occur within area       |

## FISH

| Scientific Name   | Threatened Category    | Presence Text  |
|---|------------------------|--|
| <a href="#">Milyeringa veritas</a><br>Cape Range Cave Gudgeon, Blind Gudgeon [66676]  | Vulnerable             | Species or species habitat may occur within area                   |
| <a href="#">Thunnus maccoyii</a><br>Southern Bluefin Tuna [69402]   | Conservation Dependent | Breeding known to occur within area                                |
| <b>MAMMAL</b>   |                        |  |
| <a href="#">Balaenoptera borealis</a><br>Sei Whale [34]   | Vulnerable             | Foraging, feeding or related behaviour likely to occur within area |
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]  | Endangered             | Migration route known to occur within area                         |
| <a href="#">Balaenoptera physalus</a><br>Fin Whale [37]   | Vulnerable             | Foraging, feeding or related behaviour likely to occur within area |
| <a href="#">Bettongia lesueur Barrow and Boodie Islands subspecies</a><br>Boodie, Burrowing Bettong (Barrow and Boodie Islands) [88021] | Vulnerable             | Translocated population known to occur within area                 |
| <a href="#">Dasyurus hallucatus</a><br>Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]           | Endangered             | Species or species habitat may occur within area                   |
| <a href="#">Eubalaena australis</a><br>Southern Right Whale [40]  | Endangered             | Species or species habitat likely to occur within area             |
| <a href="#">Isoodon auratus barrowensis</a><br>Golden Bandicoot (Barrow Island) [66666]   | Vulnerable             | Species or species habitat known to occur within area              |
| <a href="#">Lagorchestes conspicillatus conspicillatus</a><br>Spectacled Hare-wallaby (Barrow Island) [66661]                           | Vulnerable             | Species or species habitat known to occur within area              |
| <a href="#">Lagorchestes hirsutus Central Australian subspecies</a><br>Mala, Rufous Hare-Wallaby (Central Australia) [88019]            | Endangered             | Translocated population known to occur within area                 |

| Scientific Name   | Threatened Category   | Presence Text  |
|---|-----------------------|--|
| <a href="#">Macroderma gigas</a><br>Ghost Bat [174]   | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Osphranter robustus isabellinus</a><br>Barrow Island Wallaroo, Barrow Island Euro [89262]                     | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Petrogale lateralis lateralis</a><br>Black-flanked Rock-wallaby, Moororong, Black-footed Rock Wallaby [66647] | Endangered            | Species or species habitat known to occur within area  |
| <a href="#">Rhinonicteris aurantia (Pilbara form)</a><br>Pilbara Leaf-nosed Bat [82790]                                   | Vulnerable            | Species or species habitat may occur within area       |
| <b>REPTILE</b>  |                       |  |
| <a href="#">Aipysurus apraefrontalis</a><br>Short-nosed Seasnake [1115]   | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Aipysurus foliosquama</a><br>Leaf-scaled Seasnake [1118]  | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]   | Endangered            | Breeding known to occur within area                    |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]   | Vulnerable            | Breeding known to occur within area                    |
| <a href="#">Ctenotus zasticus</a><br>Hamelin Ctenotus [25570]   | Vulnerable            | Species or species habitat likely to occur within area |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]                                  | Endangered            | Species or species habitat known to occur within area  |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]   | Vulnerable            | Breeding known to occur within area                    |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]  | Vulnerable            | Breeding known to occur within area                    |

## SHARK

| Scientific Name  | Threatened Category    | Presence Text   |
|--|------------------------|---|
| <a href="#">Carcharias taurus (west coast population)</a><br>Grey Nurse Shark (west coast population) [68752]                            | Vulnerable             | Species or species habitat known to occur within area             |
| <a href="#">Carcharodon carcharias</a><br>White Shark, Great White Shark [64470]   | Vulnerable             | Species or species habitat known to occur within area             |
| <a href="#">Pristis clavata</a><br>Dwarf Sawfish, Queensland Sawfish [68447]   | Vulnerable             | Species or species habitat known to occur within area             |
| <a href="#">Pristis pristis</a><br>Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable             | Species or species habitat likely to occur within area            |
| <a href="#">Pristis zijsron</a><br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]  | Vulnerable             | Species or species habitat known to occur within area             |
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680]   | Vulnerable             | Foraging, feeding or related behaviour known to occur within area |
| <a href="#">Sphyrna lewini</a><br>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  |
|--|---------------------|--|
| <b>Migratory Marine Birds</b>  |                     |  |
| <a href="#">Anous stolidus</a><br>Common Noddy [825]   |                     | Species or species habitat likely to occur within area |
| <a href="#">Apus pacificus</a><br>Fork-tailed Swift [678]                                      |                     | Species or species habitat likely to occur within area |
| <a href="#">Ardenna carneipes</a><br>Flesh-footed Shearwater, Fleshy-footed Shearwater [82404] |                     | Species or species habitat likely to occur within area |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Ardenna pacifica</a><br>Wedge-tailed Shearwater [84292]                          |                     | Breeding known to occur within area                    |
| <a href="#">Calonectris leucomelas</a><br>Streaked Shearwater [1077]                         |                     | Species or species habitat likely to occur within area |
| <a href="#">Fregata ariel</a><br>Lesser Frigatebird, Least Frigatebird [1012]                |                     | Species or species habitat likely to occur within area |
| <a href="#">Fregata minor</a><br>Great Frigatebird, Greater Frigatebird [1013]               |                     | Species or species habitat may occur within area       |
| <a href="#">Hydroprogne caspia</a><br>Caspian Tern [808]                                     |                     | Breeding known to occur within area                    |
| <a href="#">Macronectes giganteus</a><br>Southern Giant-Petrel, Southern Giant Petrel [1060] | Endangered          | Species or species habitat may occur within area       |
| <a href="#">Onychoprion anaethetus</a><br>Bridled Tern [82845]                               |                     | Breeding known to occur within area                    |
| <a href="#">Phaethon lepturus</a><br>White-tailed Tropicbird [1014]                          |                     | Species or species habitat known to occur within area  |
| <a href="#">Sterna dougallii</a><br>Roseate Tern [817]                                       |                     | Breeding known to occur within area                    |
| <a href="#">Sternula albifrons</a><br>Little Tern [82849]                                    |                     | Species or species habitat may occur within area       |
| <a href="#">Thalassarche carteri</a><br>Indian Yellow-nosed Albatross [64464]                | Vulnerable          | Species or species habitat may occur within area       |
| <b>Migratory Marine Species</b>  |                     |  |
| <a href="#">Anoxypristis cuspidata</a><br>Narrow Sawfish, Knifetooth Sawfish [68448]         |                     | Species or species habitat known to occur within area  |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Balaenoptera bonaerensis</a><br>Antarctic Minke Whale, Dark-shoulder Minke Whale [67812] |                     | Species or species habitat likely to occur within area             |
| <a href="#">Balaenoptera borealis</a><br>Sei Whale [34]  | Vulnerable          | Foraging, feeding or related behaviour likely to occur within area |
| <a href="#">Balaenoptera edeni</a><br>Bryde's Whale [35]   |                     | Species or species habitat likely to occur within area             |
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]   | Endangered          | Migration route known to occur within area                         |
| <a href="#">Balaenoptera physalus</a><br>Fin Whale [37]  | Vulnerable          | Foraging, feeding or related behaviour likely to occur within area |
| <a href="#">Carcharhinus longimanus</a><br>Oceanic Whitetip Shark [84108]                            |                     | Species or species habitat likely to occur within area             |
| <a href="#">Carcharodon carcharias</a><br>White Shark, Great White Shark [64470]                     | Vulnerable          | Species or species habitat known to occur within area              |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]  | Endangered          | Breeding known to occur within area                                |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]  | Vulnerable          | Breeding known to occur within area                                |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]             | Endangered          | Species or species habitat known to occur within area              |
| <a href="#">Dugong dugon</a><br>Dugong [28]  |                     | Breeding known to occur within area                                |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]                                    | Vulnerable          | Breeding known to occur within area                                |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Eubalaena australis</a> as <a href="#">Balaena glacialis australis</a><br>Southern Right Whale [40]                          | Endangered          | Species or species habitat likely to occur within area |
| <a href="#">Isurus oxyrinchus</a><br>Shortfin Mako, Mako Shark [79073]   |                     | Species or species habitat likely to occur within area |
| <a href="#">Isurus paucus</a><br>Longfin Mako [82947]  |                     | Species or species habitat likely to occur within area |
| <a href="#">Megaptera novaeangliae</a><br>Humpback Whale [38]  |                     | Breeding known to occur within area                    |
| <a href="#">Mobula alfredi</a> as <a href="#">Manta alfredi</a><br>Reef Manta Ray, Coastal Manta Ray [90033]                             |                     | Species or species habitat known to occur within area  |
| <a href="#">Mobula birostris</a> as <a href="#">Manta birostris</a><br>Giant Manta Ray [90034]   |                     | Species or species habitat known to occur within area  |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]   | Vulnerable          | Breeding known to occur within area                    |
| <a href="#">Orcaella heinsohni</a><br>Australian Snubfin Dolphin [81322]   |                     | Species or species habitat known to occur within area  |
| <a href="#">Orcinus orca</a><br>Killer Whale, Orca [46]  |                     | Species or species habitat may occur within area       |
| <a href="#">Physeter macrocephalus</a><br>Sperm Whale [59]   |                     | Species or species habitat may occur within area       |
| <a href="#">Pristis clavata</a><br>Dwarf Sawfish, Queensland Sawfish [68447]   | Vulnerable          | Species or species habitat known to occur within area  |
| <a href="#">Pristis pristis</a><br>Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable          | Species or species habitat likely to occur within area |

| Scientific Name   | Threatened Category   | Presence Text  |
|---|-----------------------|--|
| <a href="#">Pristis zijsron</a><br>Green Sawfish, Dindagubba,<br>Narrowsnout Sawfish [68442]  | Vulnerable            | Species or species<br>habitat known to<br>occur within area                |
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680]  | Vulnerable            | Foraging, feeding or<br>related behaviour<br>known to occur within<br>area |
| <a href="#">Sousa sahalensis as Sousa chinensis</a><br>Australian Humpback Dolphin [87942]  |                       | Species or species<br>habitat known to<br>occur within area                |
| <a href="#">Tursiops aduncus (Arafura/Timor Sea populations)</a><br>Spotted Bottlenose Dolphin<br>(Arafura/Timor Sea populations) [78900] |                       | Species or species<br>habitat known to<br>occur within area                |
| <b>Migratory Terrestrial Species</b>  |                       |  |
| <a href="#">Hirundo rustica</a><br>Barn Swallow [662]   |                       | Species or species<br>habitat may occur<br>within area                     |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]   |                       | Species or species<br>habitat may occur<br>within area                     |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]   |                       | Species or species<br>habitat may occur<br>within area                     |
| <b>Migratory Wetlands Species</b>   |                       |  |
| <a href="#">Actitis hypoleucos</a><br>Common Sandpiper [59309]  |                       | Species or species<br>habitat known to<br>occur within area                |
| <a href="#">Calidris acuminata</a><br>Sharp-tailed Sandpiper [874]  |                       | Species or species<br>habitat known to<br>occur within area                |
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]  | Endangered            | Species or species<br>habitat known to<br>occur within area                |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]   | Critically Endangered | Species or species<br>habitat known to<br>occur within area                |

| Scientific Name  | Threatened Category   | Presence Text  |
|--|-----------------------|--|
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                           |                       | Species or species habitat may occur within area       |
| <a href="#">Charadrius leschenaultii</a><br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable            | Species or species habitat known to occur within area  |
| <a href="#">Charadrius veredus</a><br>Oriental Plover, Oriental Dotterel [882]           |                       | Species or species habitat may occur within area       |
| <a href="#">Glareola maldivarum</a><br>Oriental Pratincole [840]                         |                       | Species or species habitat may occur within area       |
| <a href="#">Limnodromus semipalmatus</a><br>Asian Dowitcher [843]                        |                       | Species or species habitat may occur within area       |
| <a href="#">Limosa lapponica</a><br>Bar-tailed Godwit [844]                              |                       | Species or species habitat known to occur within area  |
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]    | Critically Endangered | Species or species habitat known to occur within area  |
| <a href="#">Pandion haliaetus</a><br>Osprey [952]  |                       | Breeding known to occur within area                    |
| <a href="#">Thalasseus bergii</a><br>Greater Crested Tern [83000]                        |                       | Breeding known to occur within area                    |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832]                  |                       | 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

#### Defence

Defence - EXMOUTH VLF TRANSMITTER STATION [50123]

WA

### Commonwealth Heritage Places

[\[ Resource Information \]](#)

#### Name

#### State

#### Status

#### Natural

[Ningaloo Marine Area - Commonwealth Waters](#)

WA

Listed place

### Listed Marine Species

[\[ Resource Information \]](#)

#### Scientific Name

#### Threatened Category

#### Presence Text

#### Bird

[Actitis hypoleucos](#)

Common Sandpiper [59309]

Species or species habitat 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

[Ardena carneipes as Puffinus carneipes](#)

Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]

Species or species habitat likely to occur within area

[Ardena 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]

Species or species habitat known to occur within area

| Scientific Name   | Threatened Category   | Presence Text  |
|---|-----------------------|--|
| <a href="#">Calidris canutus</a><br>Red Knot, Knot [855]  | Endangered            | Species or species habitat known to occur within area overfly marine area  |
| <a href="#">Calidris ferruginea</a><br>Curlew Sandpiper [856]                                   | Critically Endangered | Species or species habitat known to occur within area overfly marine area  |
| <a href="#">Calidris melanotos</a><br>Pectoral Sandpiper [858]                                  |                       | Species or species habitat may occur within area overfly marine area       |
| <a href="#">Calonectris leucomelas</a><br>Streaked Shearwater [1077]                            |                       | Species or species habitat likely to occur within area                     |
| <a href="#">Chalcites osculans as Chrysococcyx osculans</a><br>Black-eared Cuckoo [83425]       |                       | Species or species habitat likely to occur within area overfly marine area |
| <a href="#">Charadrius leschenaultii</a><br>Greater Sand Plover, Large Sand Plover [877]        | Vulnerable            | Species or species habitat known to occur within area                      |
| <a href="#">Charadrius veredus</a><br>Oriental Plover, Oriental Dotterel [882]                  |                       | Species or species habitat may occur within area overfly marine area       |
| <a href="#">Chroicocephalus novaehollandiae as Larus novaehollandiae</a><br>Silver Gull [82326] |                       | Breeding known to occur within area  |
| <a href="#">Fregata ariel</a><br>Lesser Frigatebird, Least Frigatebird [1012]                   |                       | Species or species habitat likely to occur within area                     |
| <a href="#">Fregata minor</a><br>Great Frigatebird, Greater Frigatebird [1013]                  |                       | Species or species habitat may occur within area                           |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Glareola maldivarum</a><br>Oriental Pratincole [840]                             |                     | Species or species habitat may occur within area overfly marine area |
| <a href="#">Haliaeetus leucogaster</a><br>White-bellied Sea-Eagle [943]                      |                     | Species or species habitat likely to occur within area               |
| <a href="#">Hirundo rustica</a><br>Barn Swallow [662]  |                     | Species or species habitat may occur within area overfly marine area |
| <a href="#">Hydroprogne caspia as Sterna caspia</a><br>Caspian Tern [808]                    |                     | Breeding known to occur within area                                  |
| <a href="#">Limnodromus semipalmatus</a><br>Asian Dowitcher [843]                            |                     | Species or species habitat may occur within area overfly marine area |
| <a href="#">Limosa lapponica</a><br>Bar-tailed Godwit [844]                                  |                     | Species or species habitat known to occur within area                |
| <a href="#">Macronectes giganteus</a><br>Southern Giant-Petrel, Southern Giant Petrel [1060] | Endangered          | Species or species habitat may occur within area                     |
| <a href="#">Merops ornatus</a><br>Rainbow Bee-eater [670]                                    |                     | Species or species habitat may occur within area overfly marine area |
| <a href="#">Motacilla cinerea</a><br>Grey Wagtail [642]                                      |                     | Species or species habitat may occur within area overfly marine area |
| <a href="#">Motacilla flava</a><br>Yellow Wagtail [644]                                      |                     | Species or species habitat may occur within area overfly marine area |

| Scientific Name  | Threatened Category   | Presence Text  |
|--|-----------------------|--|
| <a href="#">Numenius madagascariensis</a><br>Eastern Curlew, Far Eastern Curlew [847]                            | Critically Endangered | Species or species habitat known to occur within area                      |
| <a href="#">Onychoprion anaethetus as Sterna anaethetus</a><br>Bridled Tern [82845]                              |                       | Breeding known to occur within area  |
| <a href="#">Onychoprion fuscatus as Sterna fuscata</a><br>Sooty Tern [90682]                                     |                       | Breeding known to occur within area  |
| <a href="#">Pandion haliaetus</a><br>Osprey [952]  |                       | Breeding known to occur within area  |
| <a href="#">Phaethon lepturus</a><br>White-tailed Tropicbird [1014]  |                       | Species or species habitat known to occur within area                      |
| <a href="#">Phaethon lepturus fulvus</a><br>Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]   | Endangered            | Species or species habitat may occur within area                           |
| <a href="#">Pterodroma mollis</a><br>Soft-plumaged Petrel [1036]   | Vulnerable            | Species or species habitat may occur within area                           |
| <a href="#">Rostratula australis as Rostratula benghalensis (sensu lato)</a><br>Australian Painted Snipe [77037] | Endangered            | Species or species habitat likely to occur within area overfly marine area |
| <a href="#">Sterna dougallii</a><br>Roseate Tern [817]   |                       | Breeding known to occur within area  |
| <a href="#">Sternula albifrons as Sterna albifrons</a><br>Little Tern [82849]                                    |                       | Species or species habitat may occur within area                           |
| <a href="#">Sternula nereis as Sterna nereis</a><br>Fairy Tern [82949]   |                       | Breeding known to occur within area  |
| <a href="#">Thalassarche carteri</a><br>Indian Yellow-nosed Albatross [64464]                                    | Vulnerable            | Species or species habitat may occur within area                           |

| Scientific Name  | Threatened Category | Presence Text  |
|--|---------------------|--|
| <a href="#">Thalasseus bengalensis as Sterna bengalensis</a><br>Lesser Crested Tern [66546]                            |                     | Breeding known to occur within area  |
| <a href="#">Thalasseus bergii as Sterna bergii</a><br>Greater Crested Tern [83000]                                     |                     | Breeding known to occur within area  |
| <a href="#">Tringa nebularia</a><br>Common Greenshank, Greenshank [832]  |                     | Species or species habitat likely to occur within area overfly marine area |
| <b>Fish</b>  |                     |  |
| <a href="#">Acentronura larsonae</a><br>Helen's Pygmy Pipehorse [66186]  |                     | Species or species habitat may occur within area                           |
| <a href="#">Bulbonaricus brauni</a><br>Braun's Pughead Pipefish, Pug-headed Pipefish [66189]                           |                     | Species or species habitat may occur within area                           |
| <a href="#">Campichthys tricarinatus</a><br>Three-keel Pipefish [66192]  |                     | Species or species habitat may occur within area                           |
| <a href="#">Choeroichthys brachysoma</a><br>Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]               |                     | Species or species habitat may occur within area                           |
| <a href="#">Choeroichthys latispinosus</a><br>Muiron Island Pipefish [66196]   |                     | Species or species habitat may occur within area                           |
| <a href="#">Choeroichthys suillus</a><br>Pig-snouted Pipefish [66198]  |                     | Species or species habitat may occur within area                           |
| <a href="#">Corythoichthys flavofasciatus</a><br>Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200] |                     | Species or species habitat may occur within area                           |
| <a href="#">Cosmocampus banneri</a><br>Roughridge Pipefish [66206]   |                     | Species or species habitat may occur within area                           |

| Scientific Name   | Threatened Category | Presence Text                                    |
|---|---------------------|--|
| <a href="#">Doryrhamphus dactyliophorus</a><br>Banded Pipefish, Ringed Pipefish<br>[66210]  |                     | Species or species habitat may occur within area |
| <a href="#">Doryrhamphus excisus</a><br>Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish<br>[66211] |                     | Species or species habitat may occur within area |
| <a href="#">Doryrhamphus janssi</a><br>Cleaner Pipefish, Janss' Pipefish<br>[66212]   |                     | Species or species habitat may occur within area |
| <a href="#">Doryrhamphus multiannulatus</a><br>Many-banded Pipefish [66717]   |                     | Species or species habitat may occur within area |
| <a href="#">Doryrhamphus negrosensis</a><br>Flagtail Pipefish, Masthead Island Pipefish [66213]                                   |                     | Species or species habitat may occur within area |
| <a href="#">Festucalex scalaris</a><br>Ladder Pipefish [66216]  |                     | Species or species habitat may occur within area |
| <a href="#">Filicampus tigris</a><br>Tiger Pipefish [66217]   |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus brocki</a><br>Brock's Pipefish [66219]   |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus grayi</a><br>Mud Pipefish, Gray's Pipefish [66221]   |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus nitidus</a><br>Glittering Pipefish [66224]   |                     | Species or species habitat may occur within area |
| <a href="#">Halicampus spirostris</a><br>Spiny-snout Pipefish [66225]   |                     | Species or species habitat may occur within area |

| Scientific Name  | Threatened Category | Presence Text                                    |
|--|---------------------|--|
| <a href="#">Haliichthys taeniophorus</a><br>Ribboned Pipehorse, Ribboned Seadragon [66226]                         |                     | Species or species habitat may occur within area |
| <a href="#">Hippichthys penicillus</a><br>Beady Pipefish, Steep-nosed Pipefish [66231]                             |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus angustus</a><br>Western Spiny Seahorse, Narrow-bellied Seahorse [66234]                    |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus histrix</a><br>Spiny Seahorse, Thorny Seahorse [66236]                                     |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus kuda</a><br>Spotted Seahorse, Yellow Seahorse [66237]                                      |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus planifrons</a><br>Flat-face Seahorse [66238]   |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus spinosissimus</a><br>Hedgehog Seahorse [66239]   |                     | Species or species habitat may occur within area |
| <a href="#">Hippocampus trimaculatus</a><br>Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720] |                     | Species or species habitat may occur within area |
| <a href="#">Micrognathus micronotopterus</a><br>Tidepool Pipefish [66255]  |                     | Species or species habitat may occur within area |
| <a href="#">Phoxocampus belcheri</a><br>Black Rock Pipefish [66719]  |                     | Species or species habitat may occur within area |
| <a href="#">Solegnathus hardwickii</a><br>Pallid Pipehorse, Hardwick's Pipehorse [66272]                           |                     | Species or species habitat may occur within area |

| Scientific Name   | Threatened Category   | Presence Text   |
|---|-----------------------|---|
| <a href="#">Solegnathus lettiensis</a><br>Gunther's Pipehorse, Indonesian Pipefish [66273]                                  |                       | Species or species habitat may occur within area      |
| <a href="#">Solenostomus cyanopterus</a><br>Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]                       |                       | Species or species habitat may occur within area      |
| <a href="#">Syngnathoides biaculeatus</a><br>Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]       |                       | Species or species habitat may occur within area      |
| <a href="#">Trachyrhamphus bicoarctatus</a><br>Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]       |                       | Species or species habitat may occur within area      |
| <a href="#">Trachyrhamphus longirostris</a><br>Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281] |                       | Species or species habitat may occur within area      |
| <b>Mammal</b>   |                       |   |
| <a href="#">Dugong dugon</a><br>Dugong [28]   |                       | Breeding known to occur within area                   |
| <b>Reptile</b>  |                       |   |
| <a href="#">Acalyptophis peronii</a><br>Horned Seasnake [1114]  |                       | Species or species habitat may occur within area      |
| <a href="#">Aipysurus apraefrontalis</a><br>Short-nosed Seasnake [1115]   | Critically Endangered | Species or species habitat known to occur within area |
| <a href="#">Aipysurus duboisii</a><br>Dubois' Seasnake [1116]   |                       | Species or species habitat may occur within area      |
| <a href="#">Aipysurus eydouxii</a><br>Spine-tailed Seasnake [1117]  |                       | Species or species habitat may occur within area      |
| <a href="#">Aipysurus foliosquama</a><br>Leaf-scaled Seasnake [1118]  | Critically Endangered | Species or species habitat known to occur within area |

| Scientific Name  | Threatened Category | Presence Text   |
|--|---------------------|---|
| <a href="#">Aipysurus laevis</a><br>Olive Seasnake [1120]  |                     | Species or species habitat may occur within area      |
| <a href="#">Aipysurus tenuis</a><br>Brown-lined Seasnake [1121]  |                     | Species or species habitat may occur within area      |
| <a href="#">Astrotia stokesii</a><br>Stokes' Seasnake [1122]   |                     | Species or species habitat may occur within area      |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]  | Endangered          | Breeding known to occur within area                   |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]  | Vulnerable          | Breeding known to occur within area                   |
| <a href="#">Chitulia ornata as Hydrophis ornatus</a><br>Spotted Seasnake, Ornate Reef Seasnake [87377] |                     | Species or species habitat may occur within area      |
| <a href="#">Dermochelys coriacea</a><br>Leatherback Turtle, Leathery Turtle, Luth [1768]               | Endangered          | Species or species habitat known to occur within area |
| <a href="#">Disteira kingii</a><br>Spectacled Seasnake [1123]  |                     | Species or species habitat may occur within area      |
| <a href="#">Disteira major</a><br>Olive-headed Seasnake [1124]   |                     | Species or species habitat may occur within area      |
| <a href="#">Emydocephalus annulatus</a><br>Turtle-headed Seasnake [1125]                               |                     | Species or species habitat may occur within area      |
| <a href="#">Ephalophis greyi</a><br>North-western Mangrove Seasnake [1127]                             |                     | Species or species habitat may occur within area      |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766]                                      | Vulnerable          | Breeding known to occur within area                   |

| Scientific Name  | Threatened Category | Presence Text                                    |
|--|---------------------|--|
| <a href="#">Hydrelaps darwiniensis</a><br>Black-ringed Seasnake [1100]   |                     | Species or species habitat may occur within area |
| <a href="#">Hydrophis elegans</a><br>Elegant Seasnake [1104]   |                     | Species or species habitat may occur within area |
| <a href="#">Hydrophis macdowelli as Hydrophis mcdowelli</a><br>Small-headed Seasnake [75601]                         |                     | Species or species habitat may occur within area |
| <a href="#">Leioselasma czeblukovi as Hydrophis czeblukovi</a><br>Fine-spined Seasnake, Geometrical Seasnake [87374] |                     | Species or species habitat may occur within area |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]   | Vulnerable          | Breeding known to occur within area              |
| <a href="#">Pelamis platurus</a><br>Yellow-bellied Seasnake [1091]   |                     | Species or species habitat may occur within area |

## Whales and Other Cetaceans [ [Resource Information](#) ]

| Current Scientific Name  | Status     | Type of Presence   |
|--|------------|--|
| Mammal   |            |  |
| <a href="#">Balaenoptera acutorostrata</a><br>Minke Whale [33]                                       |            | Species or species habitat may occur within area                   |
| <a href="#">Balaenoptera bonaerensis</a><br>Antarctic Minke Whale, Dark-shoulder Minke Whale [67812] |            | Species or species habitat likely to occur within area             |
| <a href="#">Balaenoptera borealis</a><br>Sei Whale [34]  | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| <a href="#">Balaenoptera edeni</a><br>Bryde's Whale [35]   |            | Species or species habitat likely to occur within area             |

| Current Scientific Name   | Status     | Type of Presence   |
|---|------------|--|
| <a href="#">Balaenoptera musculus</a><br>Blue Whale [36]                              | Endangered | Migration route known to occur within area                         |
| <a href="#">Balaenoptera physalus</a><br>Fin Whale [37]                               | Vulnerable | Foraging, feeding or related behaviour likely to occur within area |
| <a href="#">Delphinus delphis</a><br>Common Dolphin, Short-beaked Common Dolphin [60] |            | Species or species habitat may occur within area                   |
| <a href="#">Eubalaena australis</a><br>Southern Right Whale [40]                      | Endangered | Species or species habitat likely to occur within area             |
| <a href="#">Feresa attenuata</a><br>Pygmy Killer Whale [61]                           |            | Species or species habitat may occur within area                   |
| <a href="#">Globicephala macrorhynchus</a><br>Short-finned Pilot Whale [62]           |            | Species or species habitat may occur within area                   |
| <a href="#">Grampus griseus</a><br>Risso's Dolphin, Grampus [64]                      |            | Species or species habitat may occur within area                   |
| <a href="#">Kogia breviceps</a><br>Pygmy Sperm Whale [57]                             |            | Species or species habitat may occur within area                   |
| <a href="#">Kogia sima as Kogia simus</a><br>Dwarf Sperm Whale [85043]                |            | Species or species habitat may occur within area                   |
| <a href="#">Lagenodelphis hosei</a><br>Fraser's Dolphin, Sarawak Dolphin [41]         |            | Species or species habitat may occur within area                   |
| <a href="#">Megaptera novaeangliae</a><br>Humpback Whale [38]                         |            | Breeding known to occur within area                                |

| Current Scientific Name   | Status | Type of Presence                                       |
|---|--------|--|
| <a href="#">Mesoplodon densirostris</a><br>Blainville's Beaked Whale, Dense-beaked Whale [74]     |        | Species or species habitat may occur within area       |
| <a href="#">Orcaella heinsohni as Orcaella brevirostris</a><br>Australian Snubfin Dolphin [81322] |        | Species or species habitat known to occur within area  |
| <a href="#">Orcinus orca</a><br>Killer Whale, Orca [46]   |        | Species or species habitat may occur within area       |
| <a href="#">Peponocephala electra</a><br>Melon-headed Whale [47]                                  |        | Species or species habitat may occur within area       |
| <a href="#">Physeter macrocephalus</a><br>Sperm Whale [59]  |        | Species or species habitat may occur within area       |
| <a href="#">Pseudorca crassidens</a><br>False Killer Whale [48]                                   |        | Species or species habitat likely to occur within area |
| <a href="#">Sousa sahalensis as Sousa chinensis</a><br>Australian Humpback Dolphin [87942]        |        | Species or species habitat known to occur within area  |
| <a href="#">Stenella attenuata</a><br>Spotted Dolphin, Pantropical Spotted Dolphin [51]           |        | Species or species habitat may occur within area       |
| <a href="#">Stenella coeruleoalba</a><br>Striped Dolphin, Euphrosyne Dolphin [52]                 |        | Species or species habitat may occur within area       |
| <a href="#">Stenella longirostris</a><br>Long-snouted Spinner Dolphin [29]                        |        | Species or species habitat may occur within area       |
| <a href="#">Steno bredanensis</a><br>Rough-toothed Dolphin [30]                                   |        | Species or species habitat may occur within area       |

| Current Scientific Name   | Status | Type of Presence   |
|---|--------|--|
| <a href="#">Tursiops aduncus</a><br>Indian Ocean Bottlenose Dolphin,<br>Spotted Bottlenose Dolphin [68418]                                |        | Species or species<br>habitat likely to occur<br>within area |
| <a href="#">Tursiops aduncus (Arafura/Timor Sea populations)</a><br>Spotted Bottlenose Dolphin<br>(Arafura/Timor Sea populations) [78900] |        | Species or species<br>habitat known to<br>occur within area  |
| <a href="#">Tursiops truncatus s. str.</a><br>Bottlenose Dolphin [68417]  |        | Species or species<br>habitat may occur<br>within area       |
| <a href="#">Ziphius cavirostris</a><br>Cuvier's Beaked Whale, Goose-beaked<br>Whale [56]  |        | Species or species<br>habitat may occur<br>within area       |

### Australian Marine Parks [ [Resource Information](#) ]

| Park Name  | Zone & IUCN Categories          |
|------------|---------------------------------|
| Gascoyne   | Multiple Use Zone (IUCN VI)     |
| Montebello | Multiple Use Zone (IUCN VI)     |
| Ningaloo   | Recreational Use Zone (IUCN IV) |

### Habitat Critical to the Survival of Marine Turtles

| Scientific Name   | Behaviour | Presence       |
|---|-----------|----------------|
| Aug - Sep   |           |                |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Nesting   | Known to occur |
| Dec - Jan   |           |                |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]             | Nesting   | Known to occur |
| Nov-Feb   |           |                |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763]       | Nesting   | Known to occur |
| Nov - May   |           |                |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766] | Nesting   | Known to occur |

## Extra Information

| State and Territory Reserves |                        |       | [ <a href="#">Resource Information</a> ] |
|------------------------------|------------------------|-------|--|
| Protected Area Name          | Reserve Type           | State |  |
| Barrow Island                | Nature Reserve         | WA    |  |
| Barrow Island                | Marine Management Area | WA    |  |
| Barrow Island                | Marine Park            | WA    |  |
| Montebello Islands           | Conservation Park      | WA    |  |
| Montebello Islands           | Conservation Park      | WA    |  |
| Montebello Islands           | Marine Park            | WA    |  |
| Muiron Islands               | Nature Reserve         | WA    |  |
| Muiron Islands               | Marine Management Area | WA    |  |
| Ningaloo                     | Marine Park            | WA    |  |
| Unnamed WA41080              | 5(1)(h) Reserve        | WA    |  |

| Nationally Important Wetlands                     |       | [ <a href="#">Resource Information</a> ] |
|---|-------|--|
| Wetland Name                                      | State |  |
| <a href="#">Cape Range Subterranean Waterways</a> | WA    |  |

| EPBC Act Referrals   |            |                             |                   | [ <a href="#">Resource Information</a> ] |
|--|------------|-----------------------------|-------------------|--|
| Title of referral  | Reference  | Referral Outcome            | Assessment Status |  |
| <a href="#">Browse to North West Shelf Development, Indian Ocean, WA</a>   | 2018/8319  |                             | Approval          |  |
| <a href="#">Project Highclere Cable Lay and Operation</a>  | 2022/09203 |                             | Completed         |  |
| Action clearly unacceptable  |            |                             |                   |  |
| <a href="#">Highlands 3D Marine Seismic Survey</a>   | 2012/6680  | Action Clearly Unacceptable | Completed         |  |
| Controlled action  |            |                             |                   |  |
| <a href="#">'Van Gogh' Petroleum Field Development</a>   | 2007/3213  | Controlled Action           | Post-Approval     |  |
| <a href="#">Construct and operate LNG &amp; domestic gas plant including onshore and offshore facilities - Wheatston</a> | 2008/4469  | Controlled Action           | Post-Approval     |  |

| Title of referral  | Reference | Referral Outcome  | Assessment Status |
|--|-----------|-------------------|-------------------|
| <b>Controlled action</b>   |           |                   |                   |
| <a href="#">Develop Jansz-lo deepwater gas field in Permit Areas WA-18-R, WA-25-R and WA-26-</a> | 2005/2184 | Controlled Action | Post-Approval     |
| <a href="#">Development of Angel gas and condensate field, North West Shelf</a>                  | 2004/1805 | Controlled Action | Post-Approval     |
| <a href="#">Development of Browse Basin Gas Fields (Upstream)</a>                                | 2008/4111 | Controlled Action | Completed         |
| <a href="#">Development of Coniston/Novara fields within the Exmouth Sub-basin</a>               | 2011/5995 | Controlled Action | Post-Approval     |
| <a href="#">Development of Stybarrow petroleum field incl drilling and facility installation</a> | 2004/1469 | Controlled Action | Post-Approval     |
| <a href="#">Echo-Yodel Production Wells</a>  | 2000/11   | Controlled Action | Post-Approval     |
| <a href="#">Enfield full field development</a>   | 2001/257  | Controlled Action | Post-Approval     |
| <a href="#">Equus Gas Fields Development Project, Carnarvon Basin</a>                            | 2012/6301 | Controlled Action | Completed         |
| <a href="#">Gorgon Gas Development</a>   | 2003/1294 | Controlled Action | Post-Approval     |
| <a href="#">Gorgon Gas Development 4th Train Proposal</a>  | 2011/5942 | Controlled Action | Post-Approval     |
| <a href="#">Greater Enfield (Vincent) Development</a>  | 2005/2110 | Controlled Action | Post-Approval     |
| <a href="#">Greater Gorgon Development - Optical Fibre Cable, Mainland to Barrow Island</a>      | 2005/2141 | Controlled Action | Completed         |
| <a href="#">Light Crude Oil Production</a>   | 2001/365  | Controlled Action | Post-Approval     |
| <a href="#">Pluto Gas Project</a>  | 2005/2258 | Controlled Action | Completed         |
| <a href="#">Pluto Gas Project Including Site B</a>   | 2006/2968 | Controlled Action | Post-Approval     |
| <a href="#">Pyrenees Oil Fields Development</a>  | 2005/2034 | Controlled Action | Post-Approval     |
| <a href="#">Vincent Appraisal Well</a>   | 2000/22   | Controlled Action | Post-Approval     |
| <b>Not controlled action</b>   |           |                   |                   |

| Title of referral  | Reference | Referral Outcome      | Assessment Status |
|--|-----------|-----------------------|-------------------|
| <b>Not controlled action</b>   |           |                       |                   |
| <a href="#">'Goodwyn A' Low Pressure Train Project</a>   | 2003/914  | Not Controlled Action | Completed         |
| <a href="#">'Van Gogh' Oil Appraisal Drilling Program, Exploration Permit Area WA-155-P(1)</a>                       | 2006/3148 | Not Controlled Action | Completed         |
| <a href="#">Barrow Island 2D Seismic survey</a>  | 2006/2667 | Not Controlled Action | Completed         |
| <a href="#">Bultaco-2, Laverda-2, Laverda-3 and Montesa-2 Appraisal Wells</a>  | 2000/103  | Not Controlled Action | Completed         |
| <a href="#">Carnarvon 3D Marine Seismic Survey</a>   | 2004/1890 | Not Controlled Action | Completed         |
| <a href="#">Construction and operation of an unmanned sea platform and connecting pipeline to Varanus Island for</a> | 2004/1703 | Not Controlled Action | Completed         |
| <a href="#">Development of Halyard Field off the west coast of WA</a>  | 2010/5611 | Not Controlled Action | Completed         |
| <a href="#">Development of Mutineer and Exeter petroleum fields for oil production, Permit</a>                       | 2003/1033 | Not Controlled Action | Completed         |
| <a href="#">Drilling of an exploration well Gats-1 in Permit Area WA-261-P</a>                                       | 2004/1701 | Not Controlled Action | Completed         |
| <a href="#">Eagle-1 Exploration Drilling, North West Shelf, WA</a>   | 2019/8578 | Not Controlled Action | Completed         |
| <a href="#">Echo A Development WA-23-L, WA-24-L</a>  | 2005/2042 | Not Controlled Action | Completed         |
| <a href="#">Exploration drilling well WA-155-P(1)</a>  | 2003/971  | Not Controlled Action | Completed         |
| <a href="#">Exploration of appraisal wells</a>   | 2006/3065 | Not Controlled Action | Completed         |
| <a href="#">Exploration Well in Permit Area WA-155-P(1)</a>  | 2002/759  | Not Controlled Action | Completed         |
| <a href="#">Exploratory drilling in permit area WA-225-P</a>   | 2001/490  | Not Controlled Action | Completed         |
| <a href="#">HCA05X Macedon Experimental Survey</a>   | 2004/1926 | Not Controlled Action | Completed         |
| <a href="#">Hess Exploration Drilling Programme</a>  | 2007/3566 | Not Controlled Action | Completed         |
| <a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>         | 2015/7522 | Not Controlled Action | Completed         |

| Title of referral   | Reference | Referral Outcome      | Assessment Status |
|---|-----------|-----------------------|-------------------|
| <b>Not controlled action</b>  |           |                       |                   |
| <a href="#">Infill Production Well (Griffin-9)</a>  | 2001/417  | Not Controlled Action | Completed         |
| <a href="#">Jansz-2 and 3 Appraisal Wells</a>   | 2002/754  | Not Controlled Action | Completed         |
| <a href="#">Klammer 2D Seismic Survey</a>   | 2002/868  | Not Controlled Action | Completed         |
| <a href="#">Maia-Gaea Exploration wells</a>   | 2000/17   | Not Controlled Action | Completed         |
| <a href="#">Montesa-1 and Bultaco-1 Exploration Wells</a>                                       | 2000/102  | Not Controlled Action | Completed         |
| <a href="#">North Rankin B gas compression facility</a>   | 2005/2500 | Not Controlled Action | Completed         |
| <a href="#">Pipeline System Modifications Project</a>   | 2000/3    | Not Controlled Action | Completed         |
| <a href="#">Project Highclere Geophysical Survey</a>  | 2021/9023 | Not Controlled Action | Completed         |
| <a href="#">Searipple gas and condensate field development</a>                                  | 2000/89   | Not Controlled Action | Completed         |
| <a href="#">Spool Base Facility</a>   | 2001/263  | Not Controlled Action | Completed         |
| <a href="#">Subsea Gas Pipeline From Stybarrow Field to Griffin Venture Gas Export Pipeline</a> | 2005/2033 | Not Controlled Action | Completed         |
| <a href="#">sub-sea tieback of Perseus field wells</a>  | 2004/1326 | Not Controlled Action | Completed         |
| <a href="#">Telstra North Rankin Spur Fibre Optic Cable</a>                                     | 2016/7836 | Not Controlled Action | Completed         |
| <a href="#">Thevenard Island Retirement Project</a>   | 2015/7423 | Not Controlled Action | Completed         |
| <a href="#">To construct and operate an offshore submarine fibre optic cable, WA</a>            | 2014/7373 | Not Controlled Action | Completed         |
| <a href="#">Wanda Offshore Research Project, 80 km north-east of Exmouth, WA</a>                | 2018/8293 | Not Controlled Action | Completed         |
| <a href="#">Western Flank Gas Development</a>   | 2005/2464 | Not Controlled Action | Completed         |
| <a href="#">Wheatstone 3D seismic survey, 70km north of Barrow Island</a>                       | 2004/1761 | Not Controlled Action | Completed         |
| <b>Not controlled action (particular manner)</b>  |           |                       |                   |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>   |           |   |                   |
| <a href="#">'Kate' 3D marine seismic survey, exploration permits WA-320-P and WA-345-P, 60km</a>                     | 2005/2037 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">'Tourmaline' 2D marine seismic survey, permit areas WA-323-P, WA-330-P and WA-32</a>                     | 2005/2282 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">"Leanne" offshore 3D seismic exploration, WA-356-P</a>   | 2005/1938 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">2D and 3D seismic surveys</a>  | 2005/2151 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">2D Seismic Survey</a>  | 2005/2146 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">2D Seismic Survey Permit Area WA-352-P</a>   | 2008/4628 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">2D seismic survey within permit WA-291</a>   | 2007/3265 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D marine seismic survey</a>   | 2008/4281 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">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</a> | 2003/1271 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D Marine Seismic Survey in WA 457-P &amp; WA 458-P, North West Shelf, offshore WA</a>                   | 2013/6862 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D Marine Seismic Surveys - Contos CT-13 &amp; Supertubes CT-13, offshore WA</a>                         | 2013/6901 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D seismic survey</a>  | 2006/2715 | Not Controlled Action (Particular         | Post-Approval     |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>                                     |           |   |                   |
|  |           | Manner)                                   |                   |
| <a href="#">3D Seismic Survey, WA</a>  | 2008/4428 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D Seismic Survey in the Carnarvon Basin on the North West Shelf</a>     | 2002/778  | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">3D seismic survey</a>  | 2006/2781 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Apache Northwest Shelf Van Gogh Field Appraisal Drilling Program</a>     | 2007/3495 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Aperio 3D Marine Seismic Survey, WA</a>                                  | 2012/6648 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Artemis-1 Drilling Program (WA-360-P)</a>                                | 2010/5432 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Babylon 3D Marine Seismic Survey, Commonwealth Waters, nr Exmouth WA</a> | 2013/7081 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Balnaves Condensate Field Development</a>                                | 2011/6188 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Cable Seismic Exploration Permit areas WA-323-P and WA-330-P</a>         | 2008/4227 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">CGGVERITAS 2010 2D Seismic Survey</a>                                    | 2010/5714 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Charon 3D Marine Seismic Survey</a>                                      | 2007/3477 | Not Controlled Action (Particular Manner) | Post-Approval     |

| Title of referral   | Reference | Referral Outcome                          | Assessment Status |
|---|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>                                    |           |   |                   |
| <a href="#">Cue Seismic Survey within WA-359-P, WA-361-P and WA-360-P</a>           | 2007/3647 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">CVG 3D Marine Seismic Survey</a>  | 2012/6654 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">DAVROS MC 3D marine seismic survey northwaet of Dampier, WA</a>         | 2013/7092 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Decommissioning of the Legendre facilities</a>                          | 2010/5681 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Deep Water Drilling Program</a>   | 2010/5532 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Deep Water Northwest Shelf 2D Seismic Survey</a>                        | 2007/3260 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Demeter 3D Seismic Survey, off Dampier, WA</a>                          | 2002/900  | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Draeck 3D Marine Seismic Survey, WA-205-P</a>                           | 2006/3067 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Drilling 35-40 offshore exploration wells in deep water</a>             | 2008/4461 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Eendracht Multi-Client 3D Marine Seismic Survey</a>                     | 2009/4749 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Enfield M3 &amp; Vincent 4D Marine Seismic Surveys</a>                  | 2008/3981 | Not Controlled Action (Particular Manner) | Completed         |
| <a href="#">Enfield M3 4D, Vincent 4D &amp; 4D Line Test Marine Seismic Surveys</a> | 2008/4122 | Not Controlled Action (Particular         | Post-Approval     |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>                         |           |   |                   |
|  |           | Manner)                                   |                   |
| <a href="#">Enfield M4 4D Marine Seismic Survey</a>                      | 2008/4558 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Enfield oilfield 3D Seismic Survey</a>                       | 2006/3132 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Exploration drilling of Zeus-1 well</a>                      | 2008/4351 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Fletcher-Finucane Development, WA26-L and WA191-P</a>        | 2011/6123 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Foxhound 3D Non-Exclusive Marine Seismic Survey</a>          | 2009/4703 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Gazelle 3D Marine Seismic Survey in WA-399-P and WA-42-L</a> | 2010/5570 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Glencoe 3D Marine Seismic Survey WA-390-P</a>                | 2007/3684 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Greater Western Flank Phase 1 gas Development</a>            | 2011/5980 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Grimalkin 3D Seismic Survey</a>                              | 2008/4523 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Harmony 3D Marine Seismic Survey</a>                         | 2012/6699 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Harpy 1 exploration well</a>                                 | 2001/183  | Not Controlled Action (Particular Manner) | Post-Approval     |

| Title of referral   | Reference | Referral Outcome                          | Assessment Status |
|---|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>  |           |   |                   |
| <a href="#">Huzzas MC3D Marine Seismic Survey (HZ-13) Carnarvon Basin, offshore WA</a>              | 2013/7003 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Huzzas phase 2 marine seismic survey, Exmouth Plateau, Northern Carnarvon Basin, WA</a> | 2013/7093 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">John Ross &amp; Rosella Off Bottom Cable Seismic Exploration Program</a>                | 2008/3966 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Judo Marine 3D Seismic Survey within and adjacent to WA-412-P</a>                       | 2008/4630 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Judo Marine 3D Seismic Survey within and adjacent to WA-412-P</a>                       | 2009/4801 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Julimar Brunello Gas Development Project</a>  | 2011/5936 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Klimt 2D Marine Seismic Survey</a>  | 2007/3856 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Laverda 3D Marine Seismic Survey and Vincent M1 4D Marine Seismic Survey</a>            | 2010/5415 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Macedon Gas Field Development</a>   | 2008/4605 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Moosehead 2D seismic survey within permit WA-192-P</a>                                  | 2005/2167 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Munmorah 2D seismic survey within permits WA-308/9-P</a>                                | 2003/970  | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Ocean Bottom Cable Seismic Program, WA-264-P</a>  | 2007/3844 | Not Controlled Action (Particular Manner) | Post-Approval     |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>   |           |   |                   |
|  |           | Manner)                                   |                   |
| <a href="#">Ocean Bottom Cable Seismic Survey</a>  | 2005/2017 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Offshore Drilling Campaign</a>   | 2011/5830 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Orcus 3D Marine Seismic Survey in WA-450-P</a>                                   | 2010/5723 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Osprey and Dionysus Marine Seismic Survey</a>                                    | 2011/6215 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Pomodoro 3D Marine Seismic Survey in WA-426-P and WA-427-P</a>                   | 2010/5472 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Pyrenees 4D Marine Seismic Monitor Survey, HCA12A</a>                            | 2012/6579 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Pyrenees-Macedon 3D marine seismic survey</a>                                    | 2005/2325 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Reindeer gas reservoir development, Devil Creek, Carnarvon Basin - WA</a>        | 2007/3917 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Rose 3D Seismic Program</a>  | 2008/4239 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Rydal-1 Petroleum Exploration Well, WA</a>                                       | 2012/6522 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Santos Winchester three dimensional seismic survey - WA-323-P &amp; WA-330-P</a> | 2011/6107 | Not Controlled Action (Particular Manner) | Post-Approval     |

| Title of referral   | Reference | Referral Outcome                          | Assessment Status |
|---|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>                      |           |   |                   |
| <a href="#">Stag 4D &amp; Reindeer MAZ Marine Seismic Surveys, WA</a> | 2013/7080 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Stag Off-bottom Cable Seismic Survey</a>                  | 2007/3696 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Stybarrow 4D Marine Seismic Survey</a>                    | 2011/5810 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Stybarrow Baseline 4D marine seismic survey</a>           | 2008/4530 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Tidepole Maz 3D Seismic Survey Campaign</a>               | 2007/3706 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Triton 3D Marine Seismic Survey, WA-2-R and WA-3-R</a>    | 2006/2609 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Undertake a 3D marine seismic survey</a>                  | 2010/5695 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Undertake a three dimensional marine seismic survey</a>   | 2010/5715 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Undertake a three dimensional marine seismic survey</a>   | 2010/5679 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Vincent M1 and Enfield M5 4D Marine Seismic Survey</a>    | 2010/5720 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Warramunga Non-Inclusive 3D Seismic Survey</a>            | 2008/4553 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">West Anchor 3D Marine Seismic Survey</a>                  | 2008/4507 | Not Controlled Action (Particular Manner) | Post-Approval     |

| Title of referral  | Reference | Referral Outcome                          | Assessment Status |
|--|-----------|---|-------------------|
| <b>Not controlled action (particular manner)</b>   |           |   |                   |
|  |           | Manner)                                   |                   |
| <a href="#">West Panaeus 3D seismic survey</a>   | 2006/3141 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Westralia SPAN Marine Seismic Survey, WA &amp; NT</a>                                | 2012/6463 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Wheatstone 3D MAZ Marine Seismic Survey</a>  | 2011/6058 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Wheatstone Iago Appraisal Well Drilling</a>  | 2008/4134 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <a href="#">Wheatstone Iago Appraisal Well Drilling</a>  | 2007/3941 | Not Controlled Action (Particular Manner) | Post-Approval     |
| <b>Referral decision</b>   |           |   |                   |
| <a href="#">3D Seismic Survey</a>  | 2008/4219 | Referral Decision                         | Completed         |
| <a href="#">Bianchi 3D Marine Seismic Survey, Carnavon Basin, WA</a>                             | 2013/7078 | Referral Decision                         | Completed         |
| <a href="#">CVG 3D Marine Seismic Survey</a>   | 2012/6270 | Referral Decision                         | Completed         |
| <a href="#">Enfield 4D Marine Seismic Surveys, Production Permit WA-28-L</a>                     | 2005/2370 | Referral Decision                         | Completed         |
| <a href="#">Rose 3D Seismic acquisition survey</a>   | 2008/4220 | Referral Decision                         | Completed         |
| <a href="#">Stybarrow Baseline 4D Marine Seismic Survey (Permit Areas WA-255-P, WA-32-L, WA-</a> | 2008/4165 | Referral Decision                         | Completed         |
| <a href="#">Two Dimensional Transition Zone Seismic Survey - TP/7 (R1)</a>                       | 2010/5507 | Referral Decision                         | Completed         |

## Key Ecological Features

[ [Resource Information](#) ]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

| Name | Region |
|------|--------|
|------|--------|

| Name  | Region     |
|---|------------|
| <a href="#">Ancient coastline at 125 m depth contour</a>                              | North-west |
| <a href="#">Canyons linking the Cuvier Abyssal Plain and the Cape Range Peninsula</a> | North-west |
| <a href="#">Commonwealth waters adjacent to Ningaloo Reef</a>                         | North-west |
| <a href="#">Continental Slope Demersal Fish Communities</a>                           | North-west |
| <a href="#">Exmouth Plateau</a>   | North-west |
| <a href="#">Glomar Shoals</a>   | North-west |

## Biologically Important Areas

| Scientific Name   | Behaviour                             | Presence       |
|---|---------------------------------------|----------------|
| <b>Dugong</b>   |                                       |                |
| <a href="#">Dugong dugon</a><br>Dugong [28]                 | Breeding                              | Known to occur |
| <a href="#">Dugong dugon</a><br>Dugong [28]                 | Calving                               | Known to occur |
| <a href="#">Dugong dugon</a><br>Dugong [28]                 | Foraging (high density seagrass beds) | Known to occur |
| <a href="#">Dugong dugon</a><br>Dugong [28]                 | Nursing                               | Known to occur |
| <b>Marine Turtles</b>                                       |                                       |                |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763] | Internesting buffer                   | Known to occur |
| <a href="#">Caretta caretta</a><br>Loggerhead Turtle [1763] | Nesting                               | Known to occur |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]       | Aggregation                           | Known to occur |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]       | Basking                               | Known to occur |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]       | Foraging                              | Known to occur |

| Scientific Name   | Behaviour              | Presence       |
|---|------------------------|----------------|
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]             | Internesting           | Known to occur |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]             | Internesting<br>buffer | Known to occur |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]             | Mating                 | Known to occur |
| <a href="#">Chelonia mydas</a><br>Green Turtle [1765]             | Nesting                | Known to occur |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766] | Foraging               | Known to occur |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766] | Internesting<br>buffer | Known to occur |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766] | Mating                 | Known to occur |
| <a href="#">Eretmochelys imbricata</a><br>Hawksbill Turtle [1766] | Nesting                | Known to occur |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Aggregation            | Known to occur |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Foraging               | Known to occur |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Internesting           | Known to occur |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Internesting<br>buffer | Known to occur |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Mating                 | Known to occur |
| <a href="#">Natator depressus</a><br>Flatback Turtle [59257]      | Nesting                | Known to occur |

## Seabirds

| Scientific Name   | Behaviour | Presence       |
|---|-----------|----------------|
| <a href="#">Ardena pacifica</a><br>Wedge-tailed Shearwater [84292]    | Breeding  | Known to occur |
| <a href="#">Sterna dougallii</a><br>Roseate Tern [817]                | Breeding  | Known to occur |
| <a href="#">Sternula nereis</a><br>Fairy Tern [82949]                 | Breeding  | Known to occur |
| <a href="#">Thalasseus bengalensis</a><br>Lesser Crested Tern [66546] | Breeding  | Known to occur |

## Sharks

|  |                              |                |
|--|------------------------------|----------------|
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680] | Foraging                     | Known to occur |
| <a href="#">Rhincodon typus</a><br>Whale Shark [66680] | Foraging (high density prey) | Known to occur |

## Whales

|  |                             |                |
|--|-----------------------------|----------------|
| <a href="#">Balaenoptera musculus brevipinna</a><br>Pygmy Blue Whale [81317] | Distribution                | Known to occur |
| <a href="#">Balaenoptera musculus brevipinna</a><br>Pygmy Blue Whale [81317] | Foraging                    | Known to occur |
| <a href="#">Balaenoptera musculus brevipinna</a><br>Pygmy Blue Whale [81317] | Migration                   | Known to occur |
| <a href="#">Megaptera novaeangliae</a><br>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 are 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

## 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

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

## 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
- 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 D OIL SPILL PREPAREDNESS AND RESPONSE STRATEGY SELECTION AND EVALUATION**

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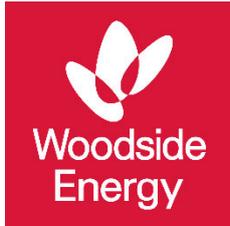
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# Oil Spill Preparedness and Response Mitigation Assessment for the TPA03 Well Intervention Environment Plan

Security & Emergency Management  
Hydrocarbon Spill Preparedness Unit

May 2023

Revision 0a

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## EXECUTIVE SUMMARY

Woodside Energy Limited (Woodside) has developed its oil spill preparedness and response position for the TPA03 Well Intervention activity, hereafter known as the Petroleum Activities Program (PAP).

This document demonstrates the risks and impacts from an unplanned hydrocarbon release, and the associated response operations, are controlled to As Low As Reasonably Practicable (ALARP) and Acceptable levels. It achieves this by evaluating response options to address the potential environmental impacts, resulting from an unplanned loss of hydrocarbon containment associated with the PAP, described in the Environment Plan (EP). This document then outlines Woodside's decisions and techniques for responding to a hydrocarbon release event, and the process for determining its level of hydrocarbon spill preparedness.

A summary of the key facts and references to additional detail within this document are presented below.

**Table 0-1: Summary of the key details for assessment**

| Key details of assessment     | Summary  | Reference to additional detail   |
|-------------------------------|--|--|
| Worst Case Credible Scenarios | <p><b>Credible Scenario-01 (CS-01): Subsea release of GWF-1 Condensate at the TPA03 location due to well loss of containment during well intervention</b></p> <p>515 m<sup>3</sup> release of condensate over 12 hours (19° 45' 43.618" S, 115° 53' 23.986" E). 1.4% residual component of 7.2 m<sup>3</sup></p>   | Section 2.2  |
|                               | <p><b>Credible Scenario-02 (CS-02): Surface release of Marine Diesel Oil (MDO) after a vessel collision at the TPA03 well location</b></p> <p>Instantaneous release of 250 m<sup>3</sup>. 5% residue of 12.5 m<sup>3</sup></p>   |  |
| Hydrocarbon Properties        | <p><b>GWF-1 Condensate</b></p> <p>GWF-1 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 65.7% of the oil mass should evaporate within the first 12 hours (BP &lt; 180 °C); up to a further 22.8% could evaporate within the first 24 hours (180 °C &lt; BP &lt; 265 °C); and a further 10.2% should evaporate over several days (265 °C &lt; BP &lt; 380 °C). Approximately 1.4% of the oil is shown to be persistent.</p> <p><b>MDO</b></p> <p>MDO is a mixture of volatile and persistent hydrocarbons with low proportions of highly volatile and residual components. In general, about 6% of the oil mass should evaporate within the first 12 hours (BP &lt; 180 °C); a further 35% should evaporate within the first 24 hours (180 °C &lt; BP &lt; 265 °C); and a further 54% should evaporate over several days (265 °C &lt; BP &lt; 380 °C). Approximately 5% of the oil is shown to be persistent.</p> | <p>Section 0</p> <p>Section 6.7 of the EP</p> <p>Appendix A of the First Strike Plan</p> |

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|                   |   |   |                                |
|-------------------|---|---|--------------------------------|
| Modelling Results | <p><b>Stochastic modelling</b></p> <p>A quantitative, stochastic assessment has been undertaken for credible spill scenarios to help assess the environmental risk of a hydrocarbon spill.</p> <p>A total of 100 replicate simulations were completed for 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).</p> |   | Section 2.3                    |
|                   | <p><b>Deterministic modelling</b></p> <p>Deterministic modelling was not undertaken for CS-01 or CS-02 – the below results are from stochastic modelling:</p>   |   |                                |
|                   | <p><b>CS-01: Unplanned hydrocarbon release of condensate – LOWC from TPA03 during well intervention (515 m<sup>3</sup> over 12 hours)</b></p>   | <p><b>CS-02: Surface release of MDO after a vessel fuel tank rupture near the well (instantaneous release of 250 m<sup>3</sup> MDO)</b></p> |                                |
|                   | Maximum cumulative area for contact by floating oil (at concentrations in excess of 50 g/m <sup>2</sup> )   | <i>No contact at threshold</i>  | <i>No contact at threshold</i> |
|                   | Minimum time to floating oil contact with the offshore edge(s) of any shoreline receptor polygon (at a threshold of 10 g/m <sup>2</sup> )   | <i>No contact at threshold</i>  | <i>No contact at threshold</i> |
|                   | Minimum time to commencement of oil accumulation at any shoreline receptor (at a threshold of 100 g/m <sup>2</sup> )  | <i>No contact at threshold</i>  | <i>No contact at threshold</i> |
|                   | Maximum cumulative hydrocarbon volume accumulated across all shoreline receptors contacted by accumulated hydrocarbons (at a concentration of 100 g/m <sup>2</sup> )  | <i>No contact at threshold</i>  | <i>No contact at threshold</i> |
|                   | Maximum cumulative oil volume accumulated at any individual shoreline receptor (at  | <i>No contact at threshold</i>  | <i>No contact at threshold</i> |

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|  |  |  |                        |
|--|--|--|------------------------|
|  | concentrations in excess of 100 g/m <sup>2</sup> )   |  |                        |
| Net Environmental Benefit Assessment             | Monitor and evaluate, source control via well control package (WCP) intervention, source control (via vessel SOPEP), oiled wildlife response are all identified as potentially having a net environmental benefit (dependent on the actual spill scenario) and carried forward for further assessment. |  | Section 4              |
| ALARP evaluation of selected response techniques | The evaluation of the selected response techniques shows the proposed controls reduced the risk to an ALARP and Acceptable level for the risks and impacts presented in Section 2 and Section 3, including the implementation of considered additional, alternative or improved control measures.      |  | Section 5<br>Section 6 |

# 1 INTRODUCTION

## 1.1 Overview

Woodside has developed its oil spill preparedness and response position for the TPA03 Well Intervention, hereafter known as the PAP. 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 2009* (Environment Regulations) relating to hydrocarbon spill response arrangements:

- The TPA03 Well Intervention Environment Plan (EP)
- Oil Pollution Emergency Arrangements (OPEA) (Australia)
- The TPA03 Well Intervention Oil Pollution Emergency Plan (OPEP) including:
  - First Strike Plan (FSP)
  - Relevant Operations Plans
  - Relevant Tactical Response Plans (TRPs)
  - Relevant Supporting Plans
  - Data Directory.

## 1.3 Scope

This document evaluates response options to address the potential environmental risks and impacts resulting from an unplanned loss of hydrocarbon containment associated with the PAP described in the EP. It 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 PAP is shown in Figure 3-1 of the EP.

## 1.4 Oil spill response document overview

The documents outlined in Table 1-1 and Figure 1-1 are collectively used to manage the preparedness and response for a hydrocarbon release.

ANNEX A contains a pre-operational Net Environmental Benefit Analysis (NEBA) summary, outlining the selected response techniques for this PAP. 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 FSP is underway. The IAP includes inputs from the monitor and evaluate operations and the operational NEBA (Section 4). Planning, coordination and resource management are initiated by the Incident Management Team (IMT). In some instances, technical specialists may be utilised to provide expert advice. The planning may also involve liaison officers from supporting government agencies.

During each operational period, field reports are continually reviewed to evaluate the effectiveness of response operations. In addition, the operational NEBA is continually reviewed and updated to ensure the response techniques implemented continue to result in a net environmental benefit (see Section 4). The response will continue as described in Section 5 until the response termination criteria have been met as set out in ANNEX B: Operational Monitoring Activation and Termination Criteria.

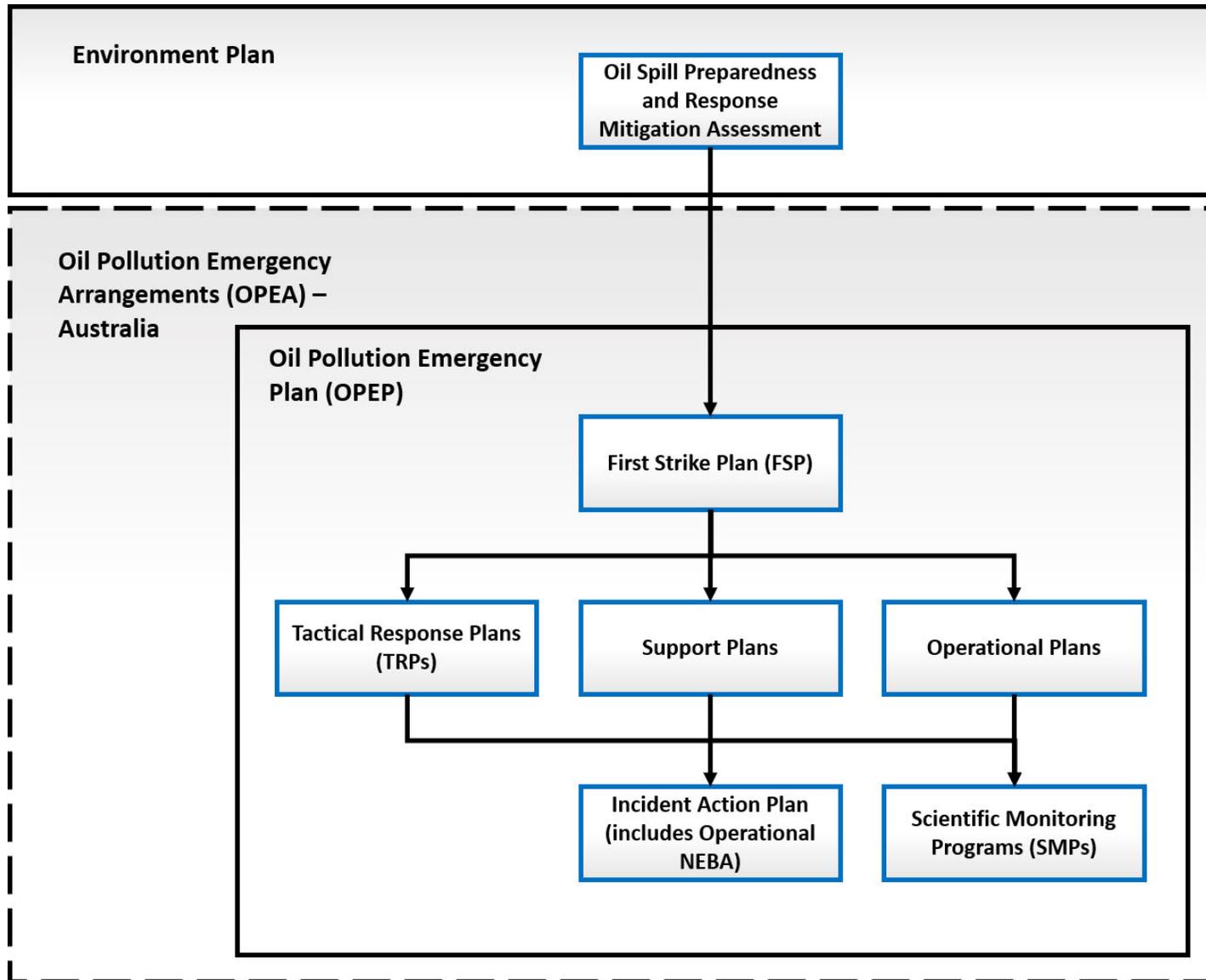


Figure 1-1: Woodside hydrocarbon spill document structure

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**Table 1-1: Hydrocarbon spill preparedness and response – document references**

| Document   | Document overview  | Stakeholders  | Relevant information   | Document subsections (if applicable) |
|--|--|---|--|--------------------------------------|
| <b>TPA03 Well Intervention EP</b>  | Demonstrates that potential adverse impacts on the environment associated with the GWA Facility Operations (during both routine and non-routine operations) are mitigated and managed to ALARP and will be of an acceptable level.   | NOPSEMA<br>Woodside internal  | EP Section 6 (Environmental Risk Assessment, Performance Outcomes, Standards and Measurement Criteria).<br><br>EP Section 7 (Implementation strategy – including emergency preparedness and response).<br><br>EP Section 7 (Reporting and compliance).   |                                      |
| <b>Oil Pollution Emergency Arrangements (OPEA) Australia</b>   | Describes the arrangements and processes adopted by Woodside when responding to a hydrocarbon spill from a petroleum activity.   | Regulatory agencies<br>Woodside internal  | All sections   |                                      |
| <b>Oil Spill Preparedness and Response Mitigation Assessment for the TPA03 Well Intervention (this document)</b> | Evaluates response options to address the potential environmental impacts resulting from an unplanned loss of hydrocarbon containment associated with the PAP described in the EP.   | Regulatory agencies<br>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.   |                                      |
| <b>TPA03 Well Intervention Oil Pollution FSP</b>   | Facility specific document providing details and tasks required to mobilise a first strike response.<br><br>Primarily applied to the first 24 hours of a response until a full IAP specific to the event is developed.<br><br>Oil Pollution FSPs are intended to be the first document used to | Site-based IMT for initial response, activation and notification.<br><br>CIMT for initial response, activation and notification.<br><br>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.<br><br>Relevant spill response options that could be initiated for mobilisation in the event of a spill.<br><br>Recommended pre-planned tactics.<br><br>Details and forms for use in immediate response. Activation process for oil |                                      |

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| Document                       | Document overview   | Stakeholders   | Relevant information  | Document subsections (if applicable)   |
|--------------------------------|---|--|---|--|
|                                | provide immediate guidance to the responding IMT.   |  | spill trajectory modelling, aerial surveillance and oil spill tracking buoy details.  |  |
| <b>Operational Plans</b>       | <p>Lists the actions required to activate, mobilise and deploy personnel and resources to commence response operations.</p> <p>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.</p> <p>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.</p> | <p>CIMT: Operations and Logistics functions for first strike activities.</p> <p>CIMT: Planning Function to help inform the IAP on resources available.</p> | <p>Locations from where resources may be mobilised.</p> <p>How resources will be mobilised.</p> <p>Details of where resources may be mobilised to and what facilities are required once the resources arrive.</p> <p>Details on how to implement resources to undertake a response.</p> | <p>Operational Monitoring Plan</p> <p>Source Control</p> <p>Emergency Response Planning Guideline</p> <p>Vessel SOPEP</p> <p>Oiled Wildlife</p> <p>Scientific Monitoring</p> |
| <b>Tactical Response Plans</b> | Provides options for response techniques in selected Response Protection Areas (RPAs). Provides site, access and deployment information to support a response at the location.  | CIMT: Planning Function to help develop IAPs, and Logistics function to assist with determining resources required.  | <p>Indicative response techniques.</p> <p>Access requirements and/or permissions.</p> <p>Relevant information for undertaking a response at that site.</p> <p>Where applicable, may include equipment deployment locations and site layouts.</p>  | A list of available Tactical Response Plans is available in <b>ANNEX E: Tactical Response Plans</b>  |
| <b>Support Plans</b>           | Support Plans detail Woodside's approach to resourcing and the  | CIMT: Operations, Logistics and Planning functions.  | Strategy for mobilising and managing additional resources outside of  | <p>Logistics Support Plan</p> <p>Aviation Support Plan</p>   |

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| Document | Document overview  | Stakeholders | Relevant information                            | Document subsections (if applicable)  |
|----------|--|--------------|---|---|
|          | provision of services during a hydrocarbon spill response. |              | Woodside's immediate preparedness arrangements. | Marine Support Plan<br>Accommodation & Catering Plan – Australia<br>Transport Management Plan – Australia<br>Waste Management Plan – Australia<br>Health and Safety Support Plan<br>Hydrocarbon Spill Responder Health Monitoring Guidelines<br>People and Global Capability (Surge Labour Requirements) Support Plan<br>(Land Based) Security Support Plan<br>Stakeholder Engagement Support Plan<br>Guidance for Hydrocarbon Spill Claims Management<br>Communications Support Plan – Australia |

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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 PAP.

The TPA03 Well Intervention 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.

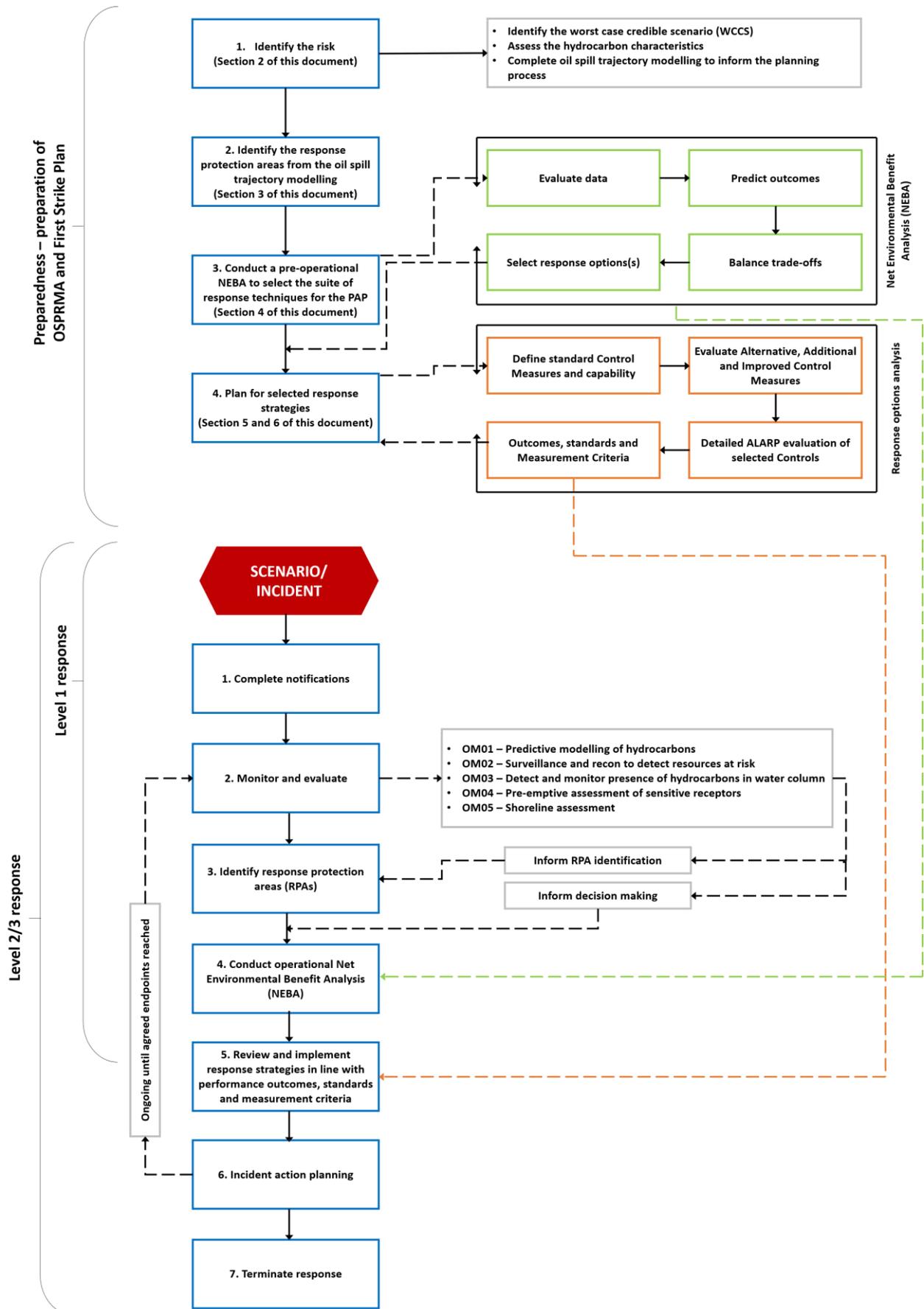


Figure 2-1: Response planning and selection process

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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  $>100\text{g}/\text{m}^2$  (Refer to Table 2-4).
- 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 ensure 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 the 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

### 2.1.1 Response Planning Assumptions – Timing, Resourcing and Effectiveness

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.

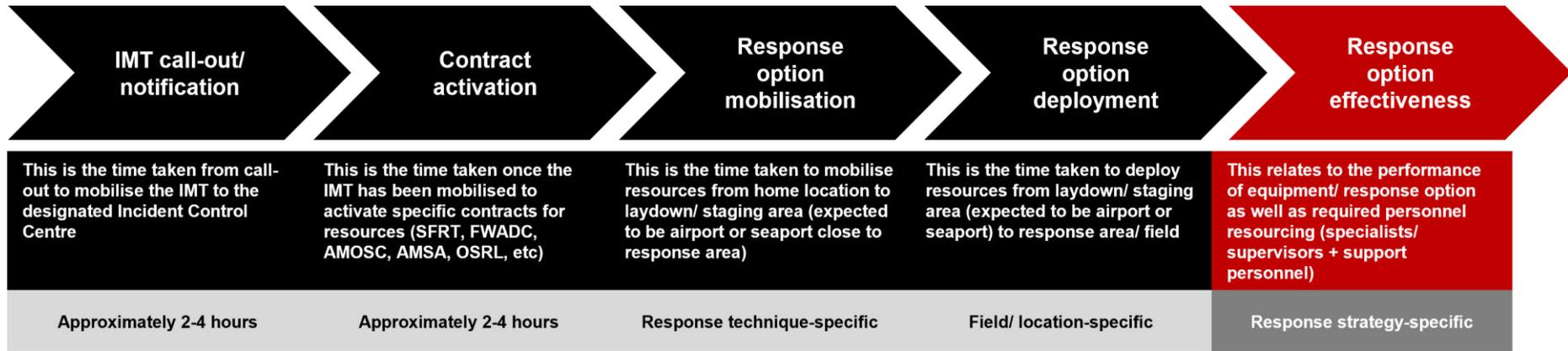


Figure 2-2: Response Planning Assumptions – Timing, Resourcing and Effectiveness

## 2.2 Environment plan risk assessment (credible spill scenarios)

Potential hydrocarbon release scenarios from the PAP have been identified during the risk assessment process (Section 6 of the EP). Further descriptions of risk, impacts and mitigation measures (which are not related to hydrocarbon preparedness and response) are provided in Section 6 of the EP. Two unplanned events or credible spill scenarios for the PAP 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 PAP. One loss of well containment scenario (CS-01) and one surface release of MDO after a vessel collision (CS-02) were stochastically modelled.

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.

**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 <sup>3</sup> ) | Incident Level | Hydrocarbon type | Residual proportion | Residual volume (liquid m <sup>3</sup> ) |
|--------------------------|---|---|---|----------------|------------------|---------------------|--|
| CS-01                    | Yes                                     | Unplanned hydrocarbon release of condensate – LOWC from TPA03 during well intervention<br>Uncontrolled subsea release of 515 m <sup>3</sup> over 12 hours | 515   | 2              | GWF1 Condensate  | 1.4%                | 7.2 m <sup>3</sup>                       |
| CS-02                    | Yes                                     | Surface release of MDO after a vessel fuel tank rupture near the well   | 250   | 2              | MDO              | 5%                  | 12.5 m <sup>3</sup>                      |

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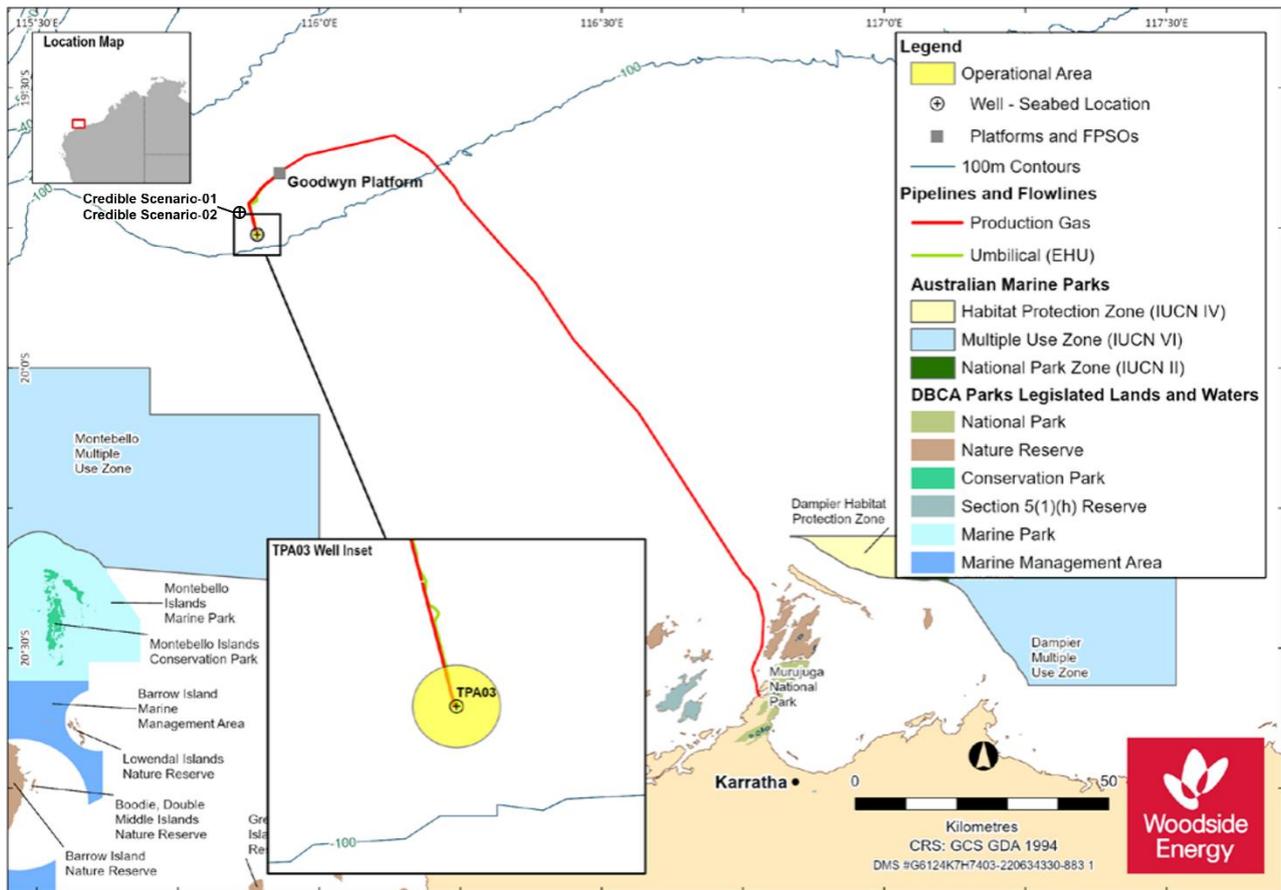


Figure 2-3: Location of credible spill scenarios

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## 2.2.1 Hydrocarbon characteristics

More detailed hydrocarbon characteristics, including modelled weathering data and ecotoxicity, are included in Section 6 of the EP.

### **GWF1 Condensate**

GWF-1 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 65.7% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); up to a further 22.8% could evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 10.2% should evaporate over several days (265 °C < BP < 380 °C). Approximately 1.4% of the oil is shown to be persistent.

The whole oil 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.

Soluble, aromatic hydrocarbons contribute approximately 18% by mass of the whole oil. Around 10% by mass is highly soluble and highly volatile. A further 8% 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 process of evaporation over dissolution under calm sea conditions, but increased entrainment of oil and dissolution of soluble compounds can be expected under breaking wave conditions.

### **MDO**

MDO 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 MDO 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.

The increased level of entrainment in the variable-wind case results in a higher percentage of biological and photochemical degradation, where the decay of the floating slicks and oil droplets in the water column occurs at an approximate rate of 2.4% per day with an accumulated total of ~16% after seven days, in comparison to a rate of ~0.2% per day and an accumulated total of 1.3% after seven days in the constant-wind case. Given the large proportion of entrained oil and the tendency for it to remain mixed in the water column, the remaining hydrocarbons decay and/or evaporate over time scales of several weeks to a few months. This long weathering duration extends the area of potential effect.

## 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 that 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 credible spill scenarios CS-01 and CS-02 (Table 2-1) to help assess the environmental consequences of a hydrocarbon spill.

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 contact 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 environmental impacts**

| Hydrocarbon Type | Surface hydrocarbon (g/m <sup>2</sup> ) | Dissolved hydrocarbon (ppb) | Entrained hydrocarbon (ppb) | Accumulated hydrocarbon (g/m <sup>2</sup> ) |
|------------------|---|-----------------------------|-----------------------------|---|
| Condensate       | 10                                      | 50                          | 100                         | 100   |
| Diesel           | 10                                      | 50                          | 100                         | 100   |

## 2.3.2 Deterministic modelling

Deterministic modelling is undertaken where initial stochastic modelling has indicated that floating oil is present at an impact threshold of 50 g/m<sup>2</sup> and/or where there is shoreline accumulations at an impact threshold of 100 g/m<sup>2</sup>. The deterministic modelling outputs are then used to scale the required capability for the offshore (containment and recovery and dispersant) and/or shoreline responses.

The stochastic modelling used as representative of this PAP did not predict the threshold concentrations required to trigger the undertaking of deterministic modelling. Deterministic modelling was therefore not undertaken and stochastic modelling has been used to scale the response.

### 2.3.2.1 Response planning thresholds for surface and shoreline hydrocarbon exposure

Thresholds to determine the EMBA are used to predict and assess environmental impacts and inform the Scientific Monitoring Program (SMP), 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 modelling would be reviewed for suitability and additional modelling would be conducted using real-time data and field information to inform IMT decisions.

The 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<sup>2</sup>) (Section 2.2). The thresholds used are derived from oil spill response planning literature and industry guidance and are summarised below.

## Surface hydrocarbon concentrations

**Table 2-3: Surface hydrocarbon thresholds for response planning**

| Surface hydrocarbon threshold (g/m <sup>2</sup> )   | Description   | Bonn Agreement Oil Appearance Code                    | Mass per area (m <sup>3</sup> /km <sup>2</sup> ) |
|---|---|---|--|
| >10   | Predicted minimum threshold for commencing operational monitoring <sup>1</sup>  | Code 3 – Dull metallic colours                        | 5 to 50  |
| 50  | Predicted minimum floating oil threshold for containment and recovery and surface dispersant application <sup>2</sup> | 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 <sup>2</sup> ) | Description   | National Plan Guidance on Oil Contaminated Foreshores | Mass per area (m <sup>3</sup> /km <sup>2</sup> ) |
| 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<sup>2</sup>. 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<sup>2</sup>) (International Tanker Owners Pollution Federation [ITOPF] 2011). Additionally, the recommended rate of application for surface dispersant is typically 1-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 (International Petroleum Industry Environment Conservation Association [IPIECA] 2015).

Guidance from the Australian Maritime Safety Authority (AMSA, 2015) 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)

<sup>1</sup> Operational monitoring 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 (WA DoT) or AMSA.

<sup>2</sup> At 50 g/m<sup>2</sup>, 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.

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).

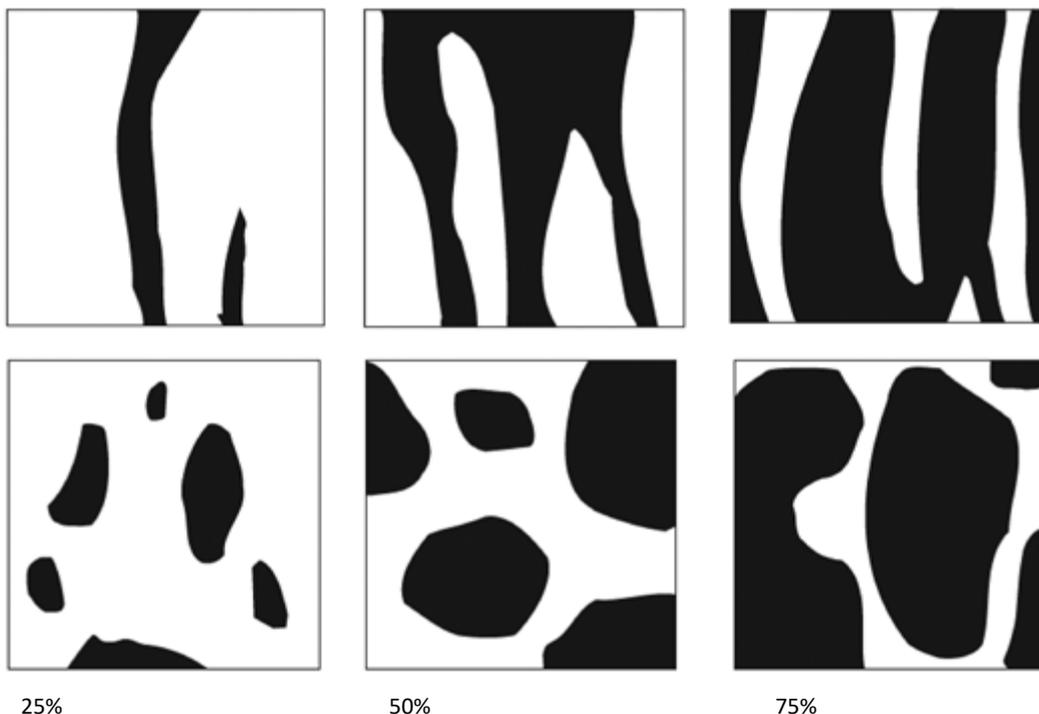
Therefore, dispersant application should be concentrated on the thickest areas of an oil slick and Woodside intends on applying surface dispersants to only BAOAC 4 and 5. Spraying areas of oil designated as BAOAC Code 4 (Discontinuous true oil colour) with dispersant will, on average, deliver approximately 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 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, 2014).

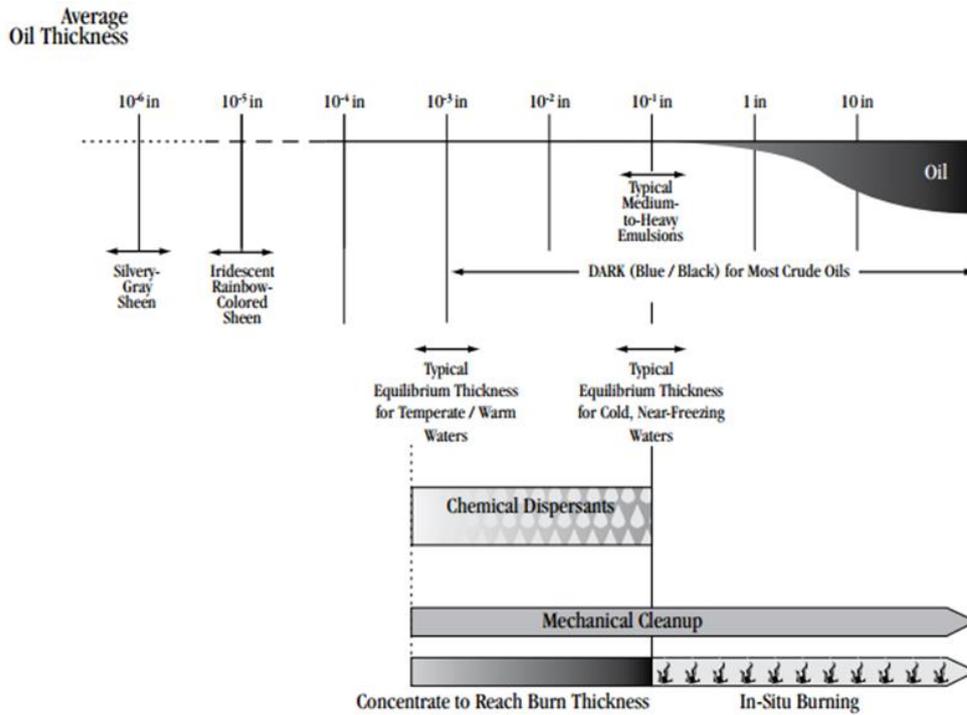
Figure 2-4 below from AMSA's Identification of Oil on Water – Aerial Observation and Identification Guide (AMSA, 2014) shows expected percent coverage of surface hydrocarbons as a proportion of total surface area. Wind-rows, heavy oil patches and tar balls, for example, must be considered, as they influence 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 50g/m<sup>2</sup> was chosen as an average/equilibrium thickness for offshore response operations (50 g/m<sup>2</sup> is an average of 50% coverage of 0.1mm Bonn Agreement Code 4 – discontinuous true oil colour, or 25% coverage of 0.2mm 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.



**Figure 2-5: Oil thickness versus potential response options (from Allen & Dale 1996)**

Wind and waves influence the feasibility of mechanical clean-up operations, dropping the effectiveness significantly because of entrainment and/or splash-over as short period waves develop beyond two to three feet (0.6–0.9 m) in height. Waves and wind can also be limiting factors for the safe operation of vessels and aircraft.

**Surface hydrocarbon viscosity**

**Table 2-4: Surface hydrocarbon viscosity thresholds**

| Surface viscosity threshold (cSt) | Description   | European Maritime Safety Authority (EMSA) | Viscosity at sea temperature (cSt) |
|-----------------------------------|---|---|------------------------------------|
| 5,000*                            | Predicted optimum viscosity for surface dispersant operations           | Generally possible to disperse            | 500-5,000                          |
| 15,000*                           | Predicted maximum viscosity for effective surface dispersant operations | Sometimes possible to disperse            | 5,000-15,000                       |

\*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 15,000 mPa (15,000 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 15,000 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 – 15,000 cSt at sea temperature above pour point are sometimes possible to disperse, with products beyond 15,000 cSt at sea temperature below pour point are generally impossible to disperse.

To support decision making and response planning, a threshold of 15,000 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).

### 2.3.3 Spill modelling results

Deterministic modelling was not undertaken for CS-01 or CS-02 – the below results are from stochastic modelling:

**Table 2-5: Worst case credible scenario modelling results**

| Response parameter  | Modelled result   |  |
|---|---|--|
|   | CS-01: Unplanned hydrocarbon release of condensate – LOWC from TPA03 during well intervention | CS-02: Surface release of MDO after a vessel fuel tank rupture near the well |
| Maximum continuous liquid hydrocarbon release rate and duration   | 515 m <sup>3</sup> of GWF-1 Condensate over 12 hours  | Instantaneous release of 250 m <sup>3</sup> of MDO                           |
| Maximum residual surface hydrocarbon after weathering   | 1.4% residual component of 7.2 m <sup>3</sup>   | 5% residual component of 12.5 m <sup>3</sup>                                 |
| Modelling results   |   |  |
| Maximum cumulative area for contact by floating oil (at concentrations in excess of 50 g/m <sup>2</sup> ) | <i>No contact at threshold</i>  | <i>No contact at threshold</i>   |

|  |                                |                                |
|--|--------------------------------|--------------------------------|
| Minimum time to floating oil contact with the offshore edge(s) of any shoreline receptor polygon (at a threshold of 10 g/m <sup>2</sup> )                            | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Minimum time to commencement of oil accumulation at any shoreline receptor (at a threshold of 100 g/m <sup>2</sup> )   | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Maximum cumulative hydrocarbon volume accumulated across all shoreline receptors contacted by accumulated hydrocarbons (at a concentration of 100 g/m <sup>2</sup> ) | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Maximum cumulative oil volume accumulated at any individual shoreline receptor (at concentrations in excess of 100 g/m <sup>2</sup> )                                | <i>No contact at threshold</i> | <i>No contact at threshold</i> |

As shown in Table 2-6, modelling does not show floating oil at threshold (>10 g/m<sup>2</sup>) at any RPA.

Due to the volatile nature of GWF-1 Condensate and very low residue (1.4%), together with no predicted floating oil >10 g/m<sup>2</sup> at any RPA and no shoreline impact at any of the assessed thresholds, subsea and surface dispersant are not appropriate response techniques as they would not provide a net environmental benefit.

Containment and recovery of volatile condensates poses a significant safety risk due to low flash points and thus corralling such hydrocarbons should be avoided. This response technique is therefore also not feasible.

Additional safety considerations that may prevent an offshore response include high winds (>20 knots), waves and/or sea states (>1.5m waves) and high ambient temperatures.

The above results from the stochastic modelling for CS-01 and CS-02 have been used as the basis for response planning and are included in Section 4.2.

### 3 IDENTIFY RESPONSE PROTECTION AREAS (RPAS)

In a response, operational monitoring programs – 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.

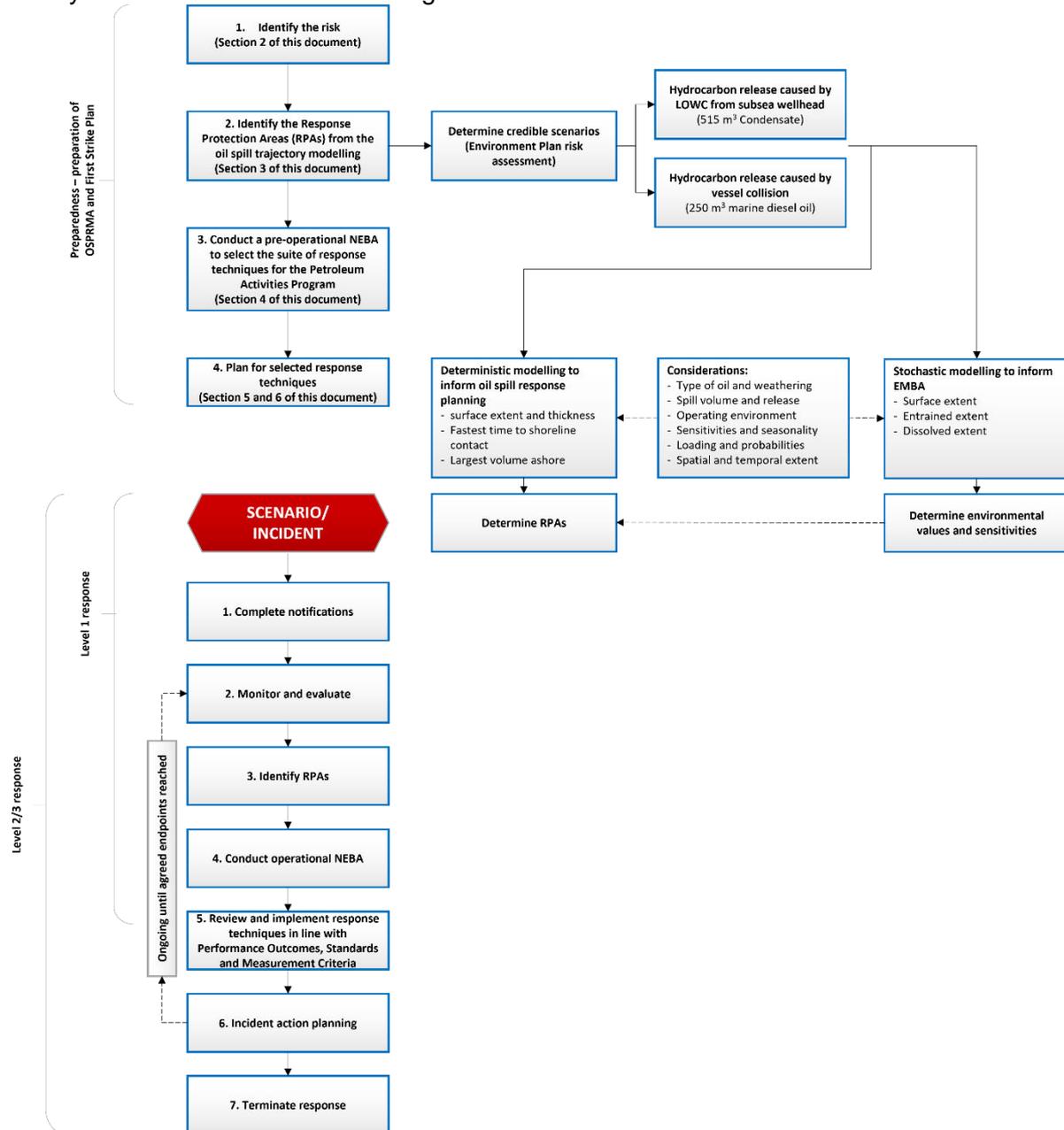


Figure 3-1: Identify Response Protection Areas flowchart

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### 3.1 Identified sensitive receptor locations

Section 4 of the EP includes the list of sensitive receptor locations 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
- Receptors within the EMBA which meet the following:
  - a number of priority protection criteria/categories
  - International Union for 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 are selected on the basis of their environmental ecological, social, economic, cultural and heritage values and sensitivities and the ability to conduct a response based on the minimum response thresholds (Section 2.3.2.1).

From the identified sensitive receptors described in Section 4 of the EP, only those which a shoreline response could feasibly be conducted (accumulation  $>100 \text{ g/m}^2$  for shoreline assessment and/or contact with surface slicks  $>10 \text{ g/m}^2$  for operational monitoring.<sup>3</sup>) would be selected for response planning purposes. While not discounting other sensitivities, these RPAs would then be 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.

On this basis, no RPAs have been identified for either CS-01 or CS-02 scenario.

Additional sensitive receptors are presented in 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 ensure all feasible response techniques are considered in the planning phase, therefore additional receptors are also included in the pre-operational NEBA.

<sup>3</sup> Operational monitoring 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/or control of the incident passes to statutory authorities e.g. WA DoT or AMSA.

## 4 NET ENVIRONMENTAL BENEFIT ANALYSIS

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.

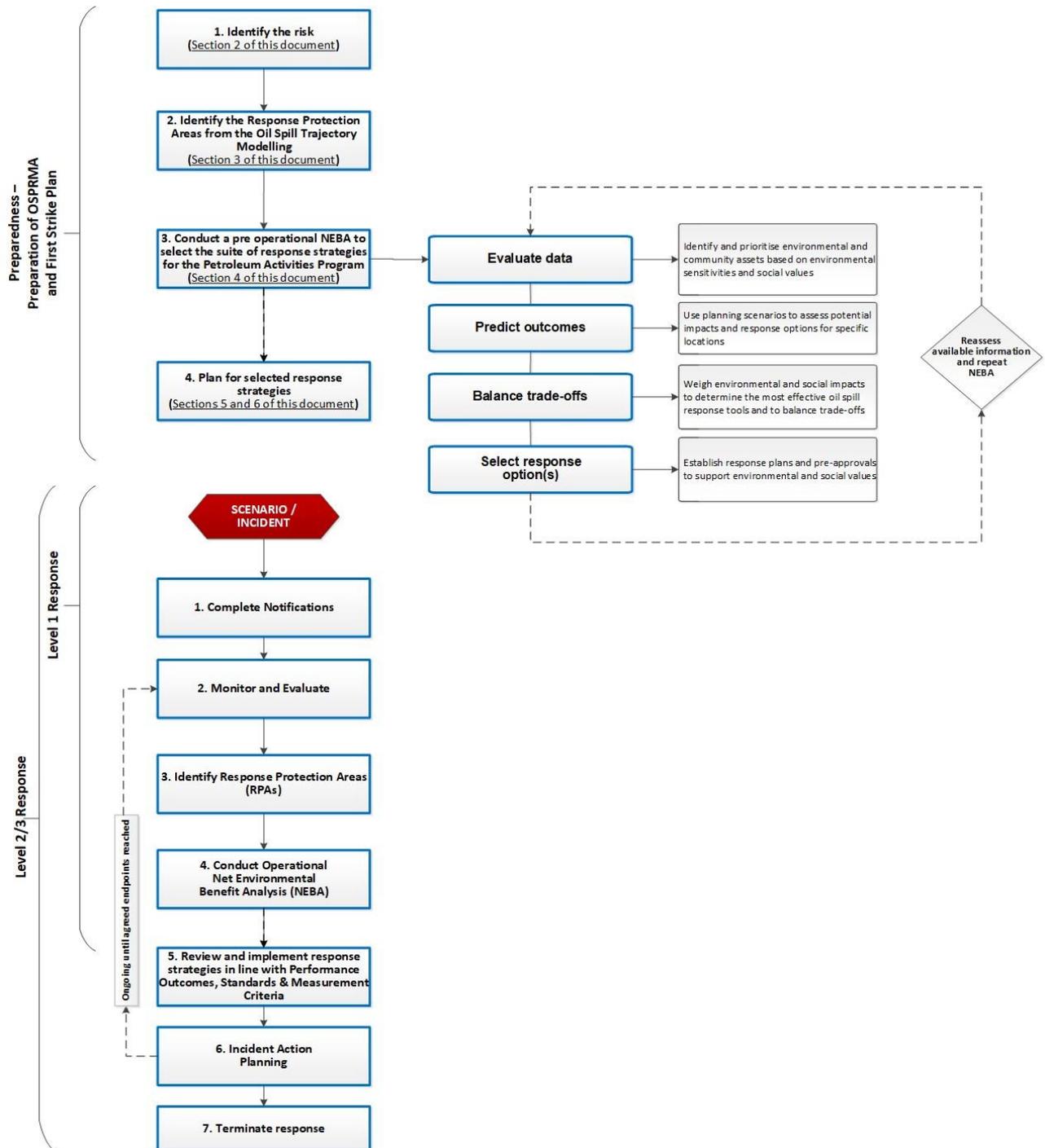


Figure 4-1: Net Environmental Benefit Analysis (NEBA) flowchart

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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 2.3.2.1) and the surface concentrations (Section 0) 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 PAP 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 PAP activities.

### 4.2.1 Define the scenario(s)

Woodside uses scenarios identified from the risk assessment in the EP to assess potential impacts and response options for specific locations. The overall 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. The worst-case diesel scenario is also analysed to meet regulatory requirements. Response thresholds and deterministic modelling are then used to assess the feasibility/effectiveness and scale of the response.

**Table 4-1: Scenario summary information (WCCS)**

| <b>Scenario summary information (CS-01)</b> |  |
|---|--|
| <b>Scenario</b>                             | Unplanned hydrocarbon release of condensate – LOWC from TPA03 during well intervention   |
| <b>Location</b>                             | Lat: 19° 45' 43.618" S<br>Long: 115° 53' 23.986" E   |
| <b>Oil Type</b>                             | GWF-1 Condensate   |
| <b>Fate and Weathering</b>                  | 65.7% of the mass should evaporate within the first 12 hours (BP < 180 °C)<br>22.8% of the mass should evaporate within the first 24 hours (180 °C < BP < 265 °C)<br>10.2% of the mass should evaporate over several days (265 °C < BP < 380 °C)<br>1.4% residue |
| <b>Volume and duration of release</b>       | 515 m <sup>3</sup> over 12 hours   |
| <b>Scenario summary information (CS-02)</b> |  |
| <b>Scenario</b>                             | Surface release of MDO after a vessel fuel tank rupture near the well  |
| <b>Location</b>                             | Lat: 19° 45' 43.618" S<br>Long: 115° 53' 23.986" E   |
| <b>Oil Type</b>                             | MDO  |
| <b>Fate and Weathering</b>                  | 6% of the oil mass should evaporate within the first 12 hours (BP < 180 °C)<br>35% should evaporate within the first 24 hours (180 °C < BP < 265 °C)<br>54% should evaporate over several days (265 °C < BP < 380 °C)<br>5% residue                              |
| <b>Volume and duration of release</b>       | 250 m <sup>3</sup> (instantaneous)   |

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#### 4.2.1.1 Hydrocarbon characteristics

##### **GWF-1 Condensate**

GWF-1 condensate is a mixture of volatile and persistent hydrocarbons with high proportions of volatile and semi-volatile components. In favourable evaporation conditions, about 65.7% of the oil mass should evaporate within the first 12 hours (BP < 180 °C); up to a further 22.8% could evaporate within the first 24 hours (180 °C < BP < 265 °C); and a further 10.2% should evaporate over several days (265 °C < BP < 380 °C). Approximately 1.4% of the oil is shown to be persistent.

The whole oil 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.

Soluble, aromatic hydrocarbons contribute approximately 18% by mass of the whole oil. Around 10% by mass is highly soluble and highly volatile. A further 8% 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 process of evaporation over dissolution under calm sea conditions, but increased entrainment of oil and dissolution of soluble compounds can be expected under breaking wave conditions.

##### **MDO**

MDO 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 MDO shows 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.

The increased level of entrainment in the variable-wind case results in a higher percentage of biological and photochemical degradation, where the decay of the floating slicks and oil droplets in the water column occurs at an approximate rate of 2.4% per day with an accumulated total of ~16% after seven days, in comparison to a rate of ~0.2% per day and an accumulated total of 1.3% after seven days in the constant-wind case. Given the large proportion of entrained oil and the tendency for it to remain mixed in the water column, the remaining hydrocarbons decay and/or evaporate over time scales of several weeks to a few months. This long weathering duration extends the area of potential effect.

**Table 4-2: Oil fate, behaviour and impacts**

| <b>Modelling results</b>   |                                |                                |
|--|--------------------------------|--------------------------------|
|  | <b>CS-01</b>                   | <b>CS-02</b>                   |
| <b>Surface area of hydrocarbons (&gt;50g/m<sup>2</sup> and &lt;15,000cSt)</b>  | <i>Nil</i>                     | <i>Nil</i>                     |
| Maximum cumulative area for contact by floating oil (at concentrations in excess of 50 g/m <sup>2</sup> )  | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Minimum time to floating oil contact with the offshore edge(s) of any shoreline receptor polygon (at a threshold of 10 g/m <sup>2</sup> )                            | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Minimum time to commencement of oil accumulation at any shoreline receptor (at a threshold of 100 g/m <sup>2</sup> )   | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Maximum cumulative hydrocarbon volume accumulated across all shoreline receptors contacted by accumulated hydrocarbons (at a concentration of 100 g/m <sup>2</sup> ) | <i>No contact at threshold</i> | <i>No contact at threshold</i> |
| Maximum cumulative oil volume accumulated at any individual shoreline receptor (at concentrations in excess of 100 g/m <sup>2</sup> )                                | <i>No contact at threshold</i> | <i>No contact at threshold</i> |

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## 4.2.2 Determining potential response options

The available response techniques based on current technology can be summarised under the following headings:

- monitor and evaluate (including operational monitoring)
- source control
  - remotely operated vehicle (ROV) intervention
  - debris clearance and/or removal
  - capping stack
  - relief well drilling
- source control on the vessel
- 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.

Support functions may include:

- waste management
- post spill monitoring/ scientific monitoring.

Assessments of which response options are feasible for the scenarios are included below in Table 4-3, and Table 4-4. These options are evaluated against each scenario's parameters including oil type, volume and characteristics, prevailing weather conditions, logistical support, and resource availability to determine their deployment feasibility.

A shortlist of the feasible response options is then carried forward for the ALARP assessment with a justification for the exclusion of other response techniques included in Section 4.2.3. This assessment will typically result in a range of available options that are deployed at different areas (at-source, offshore, nearshore and onshore) and times through the response. The NEBA process assists in prioritising which options to use where, when and timings throughout the response.

Table 4-3: Response technique evaluation – Condensate release from loss of well containment

| Response technique  | Effectiveness  | Feasibility  | Decision   | Rationale for the decision  |
|---|--|--|------------|---|
| <b>Hydrocarbon: GWF-1 Condensate</b>  |  |  |            |   |
| <b>Monitor and evaluate</b>   | <p>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:</p> <ul style="list-style-type: none"> <li>OM01 Predictive modelling of hydrocarbons – used throughout spill. ‘Ground-truthed’ using the outputs of all other monitoring techniques.</li> <li>OM02 Surveillance and reconnaissance to detect hydrocarbons and resources at risk – from outset of spill.</li> <li>OM03 Monitoring of hydrocarbon presence, properties, behaviour and weathering in water – from outset of spill.</li> <li>OM04 Pre-emptive assessment of sensitive receptors at risk – triggered once OM01, OM02 and OM03 inform likely RPAs at risk.</li> <li>OM05 Shoreline assessment – once OM02, OM03 and OM04 inform which RPAs have been impacted.</li> </ul> | Monitoring of a GWA 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 (WA DoT).                            | <b>Yes</b> | <p>Monitoring the spill will be necessary to:</p> <ul style="list-style-type: none"> <li>validate trajectory and weathering models</li> <li>determine the behaviour of the oil in water</li> <li>determine the location and state of the slick</li> <li>provide forecasts of spill trajectory</li> <li>determine appropriate response techniques</li> <li>determine effectiveness of response techniques</li> <li>confirm impact pathways to receptors</li> <li>provide regulatory agencies with required information.</li> </ul> |
| <b>Source control via well control package intervention using ROV and hotstab</b> | Controlling a loss of well containment at source through well control package (WCP) intervention using ROV and hot stab 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 well intervention operations, ROV operations to locally operate the WCP would be attempted.   | <b>Yes</b> | The use of source control through WCP intervention using ROV and hot stab will reduce or stop quantity of hydrocarbons entering the marine environment.   |
| <b>Source control via debris clearance and capping stack</b>                      | Controlling a loss of well containment at source via capping stack would be an effective way to limit the quantity of hydrocarbon entering the marine environment where no other means exist to shut in the well. In the case of TPA03 this would mean the Xmas Tree was no longer on the wellhead. This scenario is not considered credible.  | Capping stack would only be appropriate if the Xmas Tree was no longer on the wellhead. This scenario is not considered credible.  | <b>No</b>  | Deployment of the capping stack is not feasible with the vertical Xmas Tree and/or light well intervention (LWI) stack in place. In this case the vertical Xmas Tree and/or LWI stack provides a similar functionality to the capping stack, having multiple layers of redundancy. The capping stack could be utilised in specific cases where the vertical Xmas Tree has failed and is no longer connected to the wellhead, however, this scenario not considered credible.  |
| <b>Source control via relief well drilling</b>                                    | Relief well is an effective way to kill a well which is blowing out where no other means exist to shut in the well. In the case of TPA03 this would mean the Xmas Tree was no longer on the wellhead. This scenario is not considered credible.  | Relief well would only be appropriate if the Xmas Tree was no longer on the wellhead. This scenario is not considered credible.  | <b>No</b>  | <p>Relief well does not reduce risk, given the intervention is carried out through a vertical Xmas Tree. This means there are additional barriers available to close in the well.</p> <p>There are no credible scenarios identified that could permanently compromise all available barriers in the Xmas Tree and Well Control Package.</p>   |
| <b>Subsea Dispersant Injection (SSDI)</b>   | <p>Application of subsea dispersant may reduce the scale and extent of hydrocarbons reaching the surface and thus reduce spill volumes contacting RPAs.</p> <p>SSDI can increase dispersed/entrained hydrocarbons which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons.</p>  | GWF-1 Condensate is highly volatile with a low residue of 1.4%. Modelling does not predict floating or shoreline contact at any of the assessed thresholds. The use of SSDI would therefore not provide an environmental benefit and would increase entrained hydrocarbon levels which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons. | <b>No</b>  | <p>A spill from the TPA03 well is not predicted to result in significant surface oil at threshold and no shoreline impacts therefore the use of SSDI would increase dispersed/entrained hydrocarbon levels without providing a net environmental benefit.</p> <p>General safety risks associated with responding in close proximity to well release of volatile hydrocarbons.</p>   |

| Response technique                    | Effectiveness  | Feasibility  | Decision  | Rationale for the decision  |
|---------------------------------------|--|--|-----------|---|
| <b>Hydrocarbon: GWF-1 Condensate</b>  |  |  |           |   |
|                                       | <p>Entrained oil could potentially impact on sensitive shallow-water receptors e.g. corals, which may be otherwise unaffected.</p> <p>Entrained oil plume likely to be increased resulting in greater spatial extent of entrained oil.</p>   |  |           |   |
| <b>Surface dispersant application</b> | <p>Application of surface dispersant would likely reduce the volumes of hydrocarbons contacting sensitive surface receptors.</p> <p>Dispersant can also enhance biodegradation and may reduce VOCs in some circumstances therefore reducing potential health and safety risk to responders.</p> <p>Dispersant can increase dispersed/entrained hydrocarbons which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons.</p> <p>Subsurface oil plume likely to increase in size resulting in greater spatial extent of entrained oil.</p> <p>Entrained oil could potentially impact on sensitive shallow-water receptors e.g. corals, which otherwise may have been unaffected.</p> | <p>Dispersants are not generally considered a feasible response technique when applied on thin surface films such as condensate as the dispersant droplets tend to pass through the surface films without binding to the hydrocarbon.</p> <p>GWF-1 Condensate is highly volatile with a low residue of 1.4%. Modelling does not predict floating or shoreline contact at any of the assessed thresholds. The use of surface dispersant would therefore not provide an environmental benefit and would increase entrained hydrocarbon levels which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons.</p> <p>Additionally, this technique may be prevented from being undertaken due to personnel safety issues arising from predicted high local concentrations of atmospheric volatiles.</p>                                     | <b>No</b> | <p>Use of surface dispersant is not deemed to be an appropriate technique for use on highly volatile, low residue condensate and would unnecessarily introduce additional chemical substances to the marine environment. The additional entrainment would also increase exposure of subsea species and habitats to hydrocarbons without any net environmental benefit.</p> <p>Furthermore, atmospheric volatile levels would make it unsafe for response personnel.</p>   |
| <b>Mechanical dispersion</b>          | <p>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.</p>   | <p>Although the technique is feasible, highly volatile hydrocarbons are likely to weather, spread and evaporate quickly.</p> <p>The volatile nature of the oil likely to lead to unsafe conditions in the vicinity of fresh hydrocarbon.</p> <p>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.</p> <p>The decontamination of a vessel used for mechanical dispersion activities would result in additional quantities of oily waste requiring appropriate handling and treatment.</p>  | <b>No</b> | <p>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.</p> <p>This method will not be adopted due to significant safety risks.</p>   |
| <b>In-situ burning</b>                | <p>In-situ burning is only effective where minimum slick thickness can be achieved and where calm metocean conditions can be ensured. Use of this technique would also cause an increase in the release of atmospheric pollutants.</p>   | <p>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.</p> <p>Furthermore, this technique may be prevented from being undertaken due to personnel safety issues arising from predicted high local concentrations of atmospheric volatiles.</p>  | <b>No</b> | <p>The safety concerns and the predicted low effectiveness associated with implementing an in-situ burning response outweigh the potential environmental benefit. Also, there is a lack of equipment and trained personnel available in Australia.</p>  |
| <b>Containment and recovery</b>       | <p>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.</p>  | <p>Predicted low effectiveness – typical expectation is less than 10% of hydrocarbon released can be contained and recovered. Deepwater Horizon/Macondo effectiveness was approx. 3–5% with the largest containment and recovery operation ever conducted.</p> <p>Modelling of a GWF-1 Condensate spill predicts that floating oil will be prone to rapid spreading and evaporation and will not reach the required threshold (&gt;50 g/m<sup>2</sup>) for containment and recovery to be feasible for the duration of the spill.</p> <p>Surface hydrocarbon would need to be corralled to a sufficient thickness to permit efficient recovery by skimmers, however, corraling a volatile, low flash point substance poses a significant safety risk and should be avoided.</p> <p>Meteorological conditions and sea-state must also allow the deployment of booms and skimmers.</p> | <b>No</b> | <p>Potential to slightly reduce the magnitude, probability of, extent of, contact with and accumulation on shorelines receptors if and when appropriate encounter rates can be achieved and in conditions that are safe for response personnel.</p> <p>Surface concentrations will not meet the 50 g/m<sup>2</sup> minimum concentration required for response options to be deployed. Additionally, corraling a volatile hydrocarbon such as GWF-1 Condensate poses a significant safety risk due to low flash points and thus should be avoided.</p> <p>This response technique is therefore not recommended.</p> |

| Response technique                         | Effectiveness  | Feasibility  | Decision   | Rationale for the decision   |
|--|--|--|------------|--|
| <b>Hydrocarbon: GWF-1 Condensate</b>       |  |  |            |  |
| <b>Shoreline protection and deflection</b> | 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.  | Modelling does not predict any shoreline contact at feasible response thresholds for the duration of the spill.<br>Furthermore, the volatile nature of GWF-1 Condensate is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon.<br>If real-time Operational Monitoring activities (OM01, OM02 and OM03) indicate surface hydrocarbons are moving toward shorelines, pre-emptive assessments of sensitive receptors at risk (OM04) and existing TRPs will be utilised to guide shoreline protection and deflection operations, in agreement with WA DoT (for Level 2/3 spills). | <b>No</b>  | No RPAs are predicted to be contacted at feasible response thresholds.<br>If RPAs are deemed to be at risk, based on real-time monitoring during a spill event, shoreline protection and deflection techniques may be employed if safe to do so to minimise hydrocarbon contact providing net environmental benefit. |
| <b>Shoreline clean-up</b>                  | Shoreline clean-up is an effective means of hydrocarbon removal from contaminated shorelines where coverage is at an optimum level of 250 g/m <sup>2</sup> .   | Modelling does not predict any shoreline contact at feasible response thresholds for the duration of the spill.<br>Furthermore, the volatile nature of GWF-1 Condensate is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon.<br>If real-time Operational Monitoring activities (OM01, OM02 and OM03) indicate surface hydrocarbons are moving toward shorelines, pre-emptive assessments of sensitive receptors at risk (OM04) and existing TRPs will be utilised to guide shoreline protection and deflection operations, in agreement with WA DoT (for Level 2/3 spills). | <b>No</b>  | No RPAs are predicted to be contacted at feasible response thresholds.<br>If RPAs are deemed to be at risk, based on real-time monitoring during a spill event, shoreline protection and deflection techniques may be employed if safe to do so to minimise hydrocarbon contact providing net environmental benefit. |
| <b>Oiled wildlife response</b>             | 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.<br><br>Due to the likely volatile atmospheric conditions surrounding a GWA Condensate spill, response options may be limited to hazing to ensure the safety of response personnel.  | <b>Yes</b> | This technique may prevent impact to and/or treat oiled wildlife providing net environmental benefit.  |

**Table 4-4: Response technique evaluation – MDO release from vessel collision (CS-02)**

| Response Technique                     | Effectiveness   | Feasibility   | Decision   | Rationale for the decision  |
|--|---|---|------------|---|
| <b>Hydrocarbon: MDO</b>                |   |   |            |   |
| <b>Monitor and evaluate</b>            | <p>Will be effective in tracking the location of the spill, predicting potential impacts and triggering further monitoring and response techniques as required. Monitoring techniques include:</p> <ul style="list-style-type: none"> <li>OM01 Predictive modelling of hydrocarbons – used throughout spill. ‘Ground-truthed’ using the outputs of all other monitoring techniques.</li> <li>OM02 Surveillance and reconnaissance to detect hydrocarbons and resources at risk – from outset of spill.</li> <li>OM03 Monitoring of hydrocarbon presence, properties, behaviour and weathering in water – from outset of spill.</li> <li>OM04 Pre-emptive assessment of sensitive receptors at risk – triggered once OM01, OM02 and OM03 inform likely RPAs at risk.</li> <li>OM05 Shoreline assessment – once OM02, OM03 and OM04 inform if any RPAs have been impacted.</li> </ul> | <p>Monitoring of a MDO 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 DoT. Practicable techniques that could be used for this scenario include predictive modelling (OM01), surveillance and reconnaissance (OM02) and monitoring of hydrocarbon presence in water (OM03).</p> <p>Modelling does not predict impact of any shoreline receptors at threshold, however, pre-emptive assessment of sensitive receptors at risk (OM04) and monitoring of contaminated resources (OM05) would be utilised if any sensitive shoreline receptors are deemed to be at risk of impact.</p> | <b>Yes</b> | <p>Monitoring the spill will be necessary to:</p> <ul style="list-style-type: none"> <li>validate trajectory and weathering models</li> <li>determine the behaviour of the oil in water</li> <li>determine the location and state of the slick</li> <li>provide forecasts of spill trajectory</li> <li>determine appropriate response techniques</li> <li>determine effectiveness of response techniques</li> <li>confirm impact pathways to receptors</li> <li>provide regulatory agencies with required information.</li> </ul> |
| <b>Source control via vessel SOPEP</b> | 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.   | <b>Yes</b> | 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.   |
| <b>Surface dispersant application</b>  | Dispersants are not considered effective when applied on thin surface films such as MDO as the dispersant droplets tend to pass through the surface films without binding to the hydrocarbon resulting in the unnecessary addition of chemicals to the marine environment   | <p>MDO is prone to rapid spreading and evaporation and is not suitable for surface dispersant application. Furthermore, modelling predicts that floating oil will not reach the required threshold (&gt;50 g/m<sup>2</sup>) for containment and recovery to be feasible within any RPA or in open waters.</p> <p>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.</p>  | <b>No</b>  | The application of dispersant to MDO 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.   |
| <b>Mechanical dispersion</b>           | 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.   | <p>Although the technique is feasible, highly volatile hydrocarbons are likely to weather, spread and evaporate quickly.</p> <p>The volatile nature of the oil likely to lead to unsafe conditions in the vicinity of fresh hydrocarbon.</p> <p>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.</p> <p>The decontamination of a vessel used for mechanical dispersion activities would result in additional quantities of oily waste requiring appropriate handling and treatment.</p>   | <b>No</b>  | 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.  |
| <b>In-situ burning</b>                 | In-situ burning is only effective where minimum slick thickness can be achieved.  | <p>Use of in-situ burning as a response technique for MDO is unfeasible as the minimum slick thickness cannot be attained due to rapid spreading.</p> <p>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.</p>   | <b>No</b>  | Diesel characteristics are not appropriate for the use of in-situ burning and would unnecessarily cause an increase the release of atmospheric pollutants.  |

| Response Technique                         | Effectiveness  | Feasibility   | Decision   | Rationale for the decision   |
|--|--|---|------------|--|
| <b>Hydrocarbon: MDO</b>                    |  |   |            |  |
|  |  | 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.   |            |  |
| <b>Containment and recovery</b>            | Containment and recovery have 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 <sup>2</sup> to 200 g/m <sup>2</sup> .   | MDO is prone to rapid spreading and evaporation and is deemed unsuitable for effective containment and recovery operations. Furthermore, modelling predicts that floating oil will not reach the required threshold (>50 g/m <sup>2</sup> ) for containment and recovery to be feasible within any RPA or in open waters.<br><br>The volatile nature of MDO is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon thus this response technique is deemed inappropriate.  | <b>No</b>  | Containment and recovery would be an inappropriate response technique for a spill of MDO. In addition to the safety issues, most of the spilled diesel would have been subject to rapid evaporation prior to the commencement of containment and recovery operations.  |
| <b>Shoreline protection and deflection</b> | Shoreline protection and deflection can be effective at preventing contamination of at-risk areas.   | Modelling does not predict any shoreline contact at feasible response thresholds for the duration of the spill.<br><br>Furthermore, the volatile nature of MDO is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon.<br><br>If real-time Operational Monitoring activities (OM01, OM02 and OM03) indicate surface hydrocarbons are moving toward shorelines, pre-emptive assessments of sensitive receptors at risk (OM04) and existing TRPs will be utilised to guide shoreline protection and deflection operations, in agreement with WA DoT (for Level 2/3 spills).   | <b>No</b>  | No RPAs are predicted to be contacted at feasible response thresholds.<br><br>If RPAs are deemed to be at risk, based on real-time monitoring during a spill event, shoreline protection and deflection techniques may be employed if safe to do so to minimise hydrocarbon contact providing net environmental benefit. |
| <b>Shoreline clean-up</b>                  | Shoreline clean-up is an effective means of hydrocarbon removal from contaminated shorelines where coverage is at an optimum level of 250 g/m <sup>2</sup> .   | Modelling does not predict any shoreline contact at feasible response thresholds for the duration of the spill.<br><br>Furthermore, the volatile nature of MDO is also likely to lead to unsafe conditions in the vicinity of the hydrocarbon.<br><br>If real-time Operational Monitoring activities (OM01, OM02 and OM03) indicate surface hydrocarbons are moving toward shorelines, pre-emptive assessments of sensitive receptors at risk (OM04) and existing TRPs will be utilised to guide shoreline protection and deflection operations, in agreement with WA DoT (for Level 2/3 spills).   | <b>No</b>  | No RPAs are predicted to be contacted at feasible response thresholds.<br><br>If RPAs are deemed to be at risk, based on real-time monitoring during a spill event, shoreline protection and deflection techniques may be employed if safe to do so to minimise hydrocarbon contact providing net environmental benefit. |
| <b>Oiled wildlife response</b>             | 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.<br><br>The modelling undertaken predicts that no sensitive areas will be impacted thus it is unlikely that this technique would be required.<br><br>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 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. | <b>Yes</b> | 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 is at risk of contamination, oiled wildlife response will be undertaken as and where required.   |

### 4.2.3 Exclusion of response techniques

Response techniques not feasible for all scenarios for this PAP are detailed in the subsections below and are excluded from further assessment within this document.

#### 4.2.3.1 Capping stack

Deployment of a capping stack would not be feasible with the vertical Xmas Tree and/or light well intervention (LWI) stack in place. In this case the vertical Xmas Tree and/or LWI stack provides a similar functionality to the capping stack, having multiple layers of redundancy. The capping stack could be utilised in specific cases where the vertical Xmas Tree has failed and is no longer connected to the wellhead, however, this scenario not considered credible.

#### 4.2.3.2 Relief well drilling

Relief well would not reduce risk, given the intervention will be carried out through a vertical Xmas Tree. This means there are additional barriers available to close in the well.

There are no credible scenarios identified that could permanently compromise all available barriers in the Xmas Tree and Well Control Package.

#### 4.2.3.3 Subsea dispersant injection

GWF-1 Condensate is highly volatile with a low residue of 1.4%. Modelling does not predict floating or shoreline contact at any of the assessed thresholds. The use of SSDI would therefore not provide an environmental benefit and would increase dispersed/entrained hydrocarbon levels which can potentially have higher toxicity to biota in shallow water than naturally dispersed hydrocarbons.

Subsea dispersant is not applicable for spills of MDO.

#### 4.2.3.4 Surface dispersant application

GWF-1 Condensate is highly volatile with a low residue of 1.4%. Modelling does not predict floating or shoreline contact at any of the assessed thresholds for the duration of the spill. Surface dispersant application would therefore be unlikely to prevent further impacts and would unnecessarily introduce additional chemical substances to the marine environment and increase exposure of subsea species and habitats to hydrocarbons. It would thus not provide a net environmental benefit.

Additionally, the ongoing nature of the release combined with the potential for the plume to breach the surface may cause conditions leading to high local concentrations of atmospheric volatiles producing a health and safety risk, thus limiting the ability of a surface dispersant response to safely target fresh GWF-1 Condensate.

Surface dispersant is not appropriate for spills of MDO.

#### 4.2.3.5 Mechanical dispersion

Mechanical dispersion involves the use of a vessel's propeller wash and/or fire hose to target surface hydrocarbons to achieve dispersion into the water column. This technique is of limited benefit in an open ocean environment where wind and wave action are likely to deliver similar advantages. Additionally, the volatile nature of the oil likely to lead to unsafe conditions in the vicinity of fresh hydrocarbon.

Any vessel used for mechanical dispersion activities would become 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.

#### 4.2.3.6 In-situ burning

This technique requires calm sea state conditions as is required for containment and recovery operations, which limits its feasibility in the region. Optimum weather conditions are <20 knot wind speed and waves <1 to 1.5 m with oil collected to a minimum 3 mm thick layer. Due to the conditions in the region it is expected that the ability to contain oil may be limited as the sea state may exceed the optimum conditions. It is preferable that oil is fresh and does not emulsify to maximise burn efficiency and reduce residue thickness.

There are health and safety risks for response personnel associated with the containment and subsequent burning of hydrocarbons. It is also suggested that the residue from attempts to burn would sink, thereby posing a risk to the environment. The longer-term effects of burn residues on the marine environment are not fully understood and therefore, no assessment of the potential environmental impact can be determined.

Until further operational and environmental information becomes available, Woodside will not consider this option.

#### 4.2.3.7 Containment and recovery

GWF-1 Condensate is highly volatile, has very low residues and is prone to rapid spreading and evaporation. Modelling results for CS-01 indicates that surface oil will not reach response threshold (>50 g/m<sup>2</sup>) suitable for containment and recovery in the open ocean for the duration of the spill. No floating oil at threshold reaches any sensitive offshore receptors and no shoreline receptors are contacted at response thresholds.

Corralling a volatile, low flash point substance such as GWA Condensate, however, poses a significant safety risk and should be avoided. Therefore, due to the limited availability of recoverable hydrocarbons, the safety implications outweigh any predicted environmental benefit.

Containment and recovery is not appropriate for spills of MDO.

#### 4.2.3.8 Shoreline protection and deflection

Modelling does not predict shoreline contact at response thresholds (>100 g/m<sup>2</sup>), for either scenario for this petroleum activity program. Shoreline protection and deflection is therefore not required.

#### 4.2.3.9 Shoreline clean-up

Modelling does not predict shoreline contact at response thresholds (>100 g/m<sup>2</sup>), for either scenario for this petroleum activity program. Shoreline clean-up is therefore not required.

### 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 (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.

**Table 4-5: Selection and prioritisation of response techniques**

| Response planning scenario   | Key characteristics for response planning<br>(times are minimum times to contact for first receptor and/or shoreline contacted above response threshold) | Feasibility of response techniques |     |   |                              |                                       |                             |                                |                       |                 |                          |                                     |                   |                         | Outline response technique |   |
|--|--|------------------------------------|-----|---|------------------------------|---------------------------------------|-----------------------------|--------------------------------|-----------------------|-----------------|--------------------------|-------------------------------------|-------------------|-------------------------|----------------------------|---|
|  |  | Monitor and evaluate               |     | Source control – debris clearance and capping stack | Source control on the vessel | Source control – relief well drilling | Subsea dispersant injection | Surface dispersant application | Mechanical dispersion | In-situ burning | Containment and recovery | Shoreline protection and deflection | Shoreline cleanup | Oiled wildlife response |                            |   |
| CS-01:<br>Unplanned hydrocarbon release of condensate – LOWC from TPA03 during well intervention.<br>515 m <sup>3</sup> over 12 hours (residual component of 7.26 m <sup>3</sup> ) | Fastest time to shoreline accumulation >100 g/m <sup>2</sup> – no contact  | Yes                                | Yes | No  | N/A                          | No                                    | No                          | No                             | No                    | No              | No                       | No                                  | No                | No                      | Yes                        | Monitor and evaluate. Initiate WCP intervention. Plan for oiled wildlife response and implement if oiled wildlife is observed.                  |
| CS-02:<br>Surface release of MDO after a vessel fuel tank rupture near the well.<br>Instantaneous release of 250 m <sup>3</sup> MDO (residual component of 12.5 m <sup>3</sup> )   | Fastest time to shoreline accumulation >100 g/m <sup>2</sup> – no contact  | Yes                                | N/A | N/A   | Yes                          | N/A                                   | N/A                         | No                             | No                    | No              | No                       | No                                  | No                | No                      | Yes                        | Monitor and evaluate. Initiate vessel source control if feasible. Plan for oiled wildlife response and implement if oiled wildlife is observed. |

From the NEBA undertaken on the WCCSs identified (loss of well containment – CS-01), and MDO from a support vessel collision (CS-02), the recommended response techniques are;

- monitor and evaluate (all scenarios)
- source control via WCP (CS-01)
- source control on the vessel (CS-02)
- oiled wildlife response (all scenarios).

Support functions include:

- waste management (all scenarios)
- scientific monitoring programs (all scenarios).

## 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* (2021) and is set out in the 'Woodside Hydrocarbon Spill Oil Spill Preparedness and Response Mitigation Assessment (OSPRMA) Development Guidelines'.

From the identified response planning need and pre-operational NEBA, Woodside conducts a structured, semi-quantitative hydrocarbon spill process which has the following steps:

1. considers the response planning need identified in terms of surface area (km<sup>2</sup>) and available surface hydrocarbon volumes (m<sup>3</sup>) against existing Woodside capability
2. 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.
3. 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:

1. a structured process for identifying and considering alternative, additional, and improved options has been completed for each selected response technique
2. the analysis of alternate, additional, and improved control measures meets one of the following criteria:
  - all identified, reasonably practicable control measures have been adopted
  - 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.
3. where an alternative, additional and/or improved control measure is adopted, a measurable level of environmental performance has been assigned
4. 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
5. 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: Net Environmental Benefit Analysis detailed outcomes.

## 5.1 Monitor and Evaluate (including operational monitoring)

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.

The table below provides the operational monitoring plans that support the successful execution of this response technique.

**Table 5-1: Description of supporting operational monitoring plans**

| ID   | Title   |
|------|---|
| OM01 | Predictive modelling of hydrocarbons to assess resources at risk                  |
| OM02 | Surveillance and reconnaissance to detect hydrocarbons and resources at risk      |
| OM03 | Monitoring of hydrocarbon presence, properties, behaviour and weathering in water |
| OM04 | Pre-emptive assessment of sensitive receptors at risk                             |
| OM05 | Shoreline assessment  |

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 will be completed to guide effective shoreline clean-up operations. This plan includes the process for the IMT to mobilise resources depending on the nature and scale of the spill.

The proximity of Karratha/Dampier to the spill event location means that multiple logistical options are available to monitor the spill in relatively short timeframes.

### 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:

- Operational monitoring will be undertaken from the outset of a spill. This is needed to assess the nature of the spill and track its location. The data collected from the operational monitoring will inform the need for any additional operational monitoring, deployment of response techniques and may assist post-spill scientific monitoring. It also informs when the spill has entered State Waters and control of the incident passes to WA DoT.
- Surface hydrocarbons are not predicted at any of the assessed thresholds for CS-01 and only at a threshold of 1 g/m<sup>2</sup> at Rankin Bank for CS-02.
- No shoreline contact is predicted at threshold concentrations for either CS-01 or CS-02.
- The shortest time to contact for entrained hydrocarbons greater than 100 ppb is 21 hours at Rankin Bank for CS-01 and 19 hours for 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 functions. These should be reviewed and updated regularly.
- The duration of the spill may be up to 12 hours (CS-01).

- The location, trajectory and fate of the spill will be verified by real-time spill tracking via modelling, direct observation and remote sensing (OM01, OM02, OM03, OM04 and OM05).

## 5.1.2 Environmental performance based on need

**Table 5-2: Environmental Performance – Monitor and Evaluate**

| Environmental Performance Outcome |                                 | To gather information from multiple sources to establish an accurate common operating picture as soon as possible and predict the fate and behaviour of the spill to validate planning assumptions and adjust response plans as appropriate to the scenario. |   |                 |
|-----------------------------------|---------------------------------|--|---|-----------------|
| Control measure                   |                                 | Performance Standard   | Measurement Criteria (Section 5.8)  |                 |
| 1                                 | Oil spill trajectory modelling  | 1.1  | Initial modelling available within 6 hours using the Rapid Assessment Tool.   | 1, 3B, 3C, 4    |
|                                   |                                 | 1.2  | Detailed modelling available within 4 hours of RPS receiving information from Woodside.   |                 |
|                                   |                                 | 1.3  | Detailed modelling service available for the duration of the incident upon contract activation.   |                 |
| 2                                 | Tracking buoy                   | 2.1  | Tracking buoy located on facility/vessel and ready for deployment 24/7.   | 1, 3A, 3C, 4    |
|                                   |                                 | 2.2  | Deploy tracking buoy from facility 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 COP daily to improve the accuracy of other monitor and evaluate strategies.  | 1, 3B, 4        |
| 3                                 | Satellite imagery               | 3.1  | Contract in place with 3 <sup>rd</sup> party provider to enable access and analysis of satellite imagery. Imagery source/type requested on activation of service.   | 1, 3C, 4        |
|                                   |                                 | 3.2  | 3 <sup>rd</sup> 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 3 <sup>rd</sup> party provider its acceptance of the proposed acquisition plan.  | 1               |
|                                   |                                 | 3.4  | 3 <sup>rd</sup> 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 monitor and evaluate strategies.  | 1, 3B, 4        |
|                                   |                                 | 3.6  | Satellite Imagery services available and employed during response.  | 1, 3C, 4        |
| 4                                 | Aerial surveillance             | 4.1  | 2 trained aerial observers available to be deployed by day 1 from resource pool.  | 1, 2, 3B, 3C, 4 |
|                                   |                                 | 4.2  | 1 aircraft available for 2 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 First Strike plan. 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 Clean-up Assessment Technique (SCAT), containment and recovery and surface dispersal and pre-emptive assessments as contingency if required.   | 1, 2            |
| 5                                 | Hydrocarbon detections in water | 5.1  | Activate 3 <sup>rd</sup> party service provider as per First Strike plan. Deploy resources within 3 days: <ul style="list-style-type: none"> <li>• 3 specialists in water quality monitoring</li> <li>• 2 monitoring systems and ancillaries</li> </ul> | 1, 2, 3C, 3D, 4 |

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| <b>Environmental Performance Outcome</b> |  | 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. |  |   |
|--|--|--|--|---|
| <b>Control measure</b>                   |  | <b>Performance Standard</b>  |  | <b>Measurement Criteria (Section 5.8)</b> |
|  |  |  | <ul style="list-style-type: none"> <li>1 vessel for deploying the monitoring systems with a dedicated winch, A-frame or Hiab and ancillaries to deploy the equipment.</li> </ul>   |   |
|  |  | 5.2  | Water monitoring services available and employed during response.  | 1, 3C, 4                                  |
|  |  | 5.3  | Preliminary results of water sample as per contractor's implementation plan within 7 days of receipt of samples at the accredited lab.   |   |
|  |  | 5.4  | Daily fluorometry reports as per service provider's implementation plan will be provided to IMT to validate modelling and monitor presence/absence of entrained hydrocarbons.  |   |
|  |  | 5.5  | Use of Autonomous Underwater Vehicles (AUVs) for hydrocarbon presence and detection may be used as a contingency if the operational SIMA confirms conventional methods are unsafe or not possible.   |   |
| 6  | Pre-emptive assessment of sensitive receptors            | 6.1  | 10 days prior to any predicted impact, 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                           |
|  |  | 6.2  | 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                                  |
| 7  | Shoreline assessment                                     | 7.1  | 10 days prior to any predicted impact, in agreement with WA DoT (for Level 2/3 incidents), deployment of 1 specialist(s) in SCAT from resource pool for each of the Response Protection Areas (RPAs) with predicted impacts  | 1, 2, 3B, 3C, 4                           |
|  |  | 7.2  | SCAT reports provided to IMT daily detailing the assessed areas to maximise effective utilisation of resources.  | 1, 3B, 4                                  |
| 8  | Management of environmental impact of the response risks | 8.1  | Shoreline access routes with the least environmental impact identified will be selected by a specialist in SCAT operations.  | 1   |
|  |  | 8.2  | 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 |   |
|  |  | 8.3  | Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines  |   |
|  |  | 8.4  | Vehicular access will be restricted on dunes, turtle nesting beaches and in mangroves  |   |

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 Monitor and Evaluate 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 ensure there is 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.
- 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 clearly disproportionate to the environmental benefit gained and/or not reasonably practicable for this PAP.

The Monitor and Evaluate capability outlined in this section is part of the response developed to manage potential risks and impacts associated with the scenarios to ALARP, and there are no further additional, alternative and improved control measures other than those implemented that would provide further benefit.

## 5.2 Source control and well intervention

The worst-case credible scenario for a loss of well containment is considered to be loss of well control during intervention operations. In order to have an uncontrolled release from the well, several simultaneous events have to occur, including the failure of the autonomous emergency disconnect system.

There is no credible scenario in which the vessel could put sufficient load onto the Xmas Tree or Wellhead to cause complete structural failure of the lower well control package, Xmas Tree or wellhead.

It is possible, if an umbilical or guidewire snagged during a drive off, that the upper well control package could be damaged. As such, the credible spill scenario is a 12-hour subsea release of 515 m<sup>3</sup> from the TPA03 well.

In the event of a loss of well containment, the primary response would be use of the intervention vessel ROV intervention to isolate the well via the Xmas Tree or WCP. The *Woodside Source Control Response Planning Procedure* includes the process for the IMT to mobilise resources for WCP, intervention, and Subsea First Response Toolkit (SFRT) support. This plan has pre-identified vessel specifications and contracts required for SFRT debris clearance work and Woodside monitors the availability and location of these vessels.

Source control operations cannot be implemented if the safety of response personnel cannot be guaranteed. Circumstances that limit the safe execution of this control measure include lower explosive limit (LEL) concentrations, volatile concentrations of hydrocarbons in the atmosphere, weather window, waves and/or sea states (>1.5m waves) and high ambient temperatures.

### 5.2.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which a response need can be based:

- Prior to any source control activities, Woodside will implement protocols to ensure 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:
  - closure of the tubing retrievable safety valve (TRSV)
  - WCP closed via ROV
  - Xmas Tree closed via ROV
- Arrangements for support organisations who provide specialist services or resources should be tested regularly.
- Plans, procedures and support documents need to be in place for Operational and Support functions. These should be reviewed and updated regularly.
- The duration of the spill may be up to 12 hours .

In addition, a number of assumptions are required to estimate the response need for source control. These assumptions have been described in the table below.

**Table 5-3: Response Planning Assumptions – Source Control**

#### Response planning assumptions

|                              |  |
|------------------------------|--|
| <b>Safety considerations</b> | 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: <ul style="list-style-type: none"><li>• hydrocarbon gas and/or liquid exposure</li><li>• high winds, waves and/or sea states</li><li>• high ambient temperatures.</li></ul> |
|------------------------------|--|

## 5.2.2 Environmental performance based on need

**Table 5-4: Environmental Performance – Source Control**

| Environmental Performance Outcome |                                      | To stop the flow of hydrocarbons into the marine environment. |   |                                    |
|-----------------------------------|--------------------------------------|---|---|------------------------------------|
| Control measure                   |                                      | Performance Standard  |   | Measurement Criteria (Section 5.8) |
| 9                                 | Subsea First Response Toolkit (SFRT) | 9.1   | Oceanering support staff available all year round, via contract, to assist with the mobilisation, deployment, and operation of the SFRT equipment.                                    | 1, 3B, 3C                          |
|                                   |                                      | 9.2   | Intervention vessel with minimum requirement of a working class ROV and operator.   | 1, 3C                              |
|                                   |                                      | 9.3   | Mobilised to site for deployment within 11 days.  | 1, 3B, 3C                          |
|                                   |                                      | 9.4   | Open communication line to be maintained between IMT and infield operations to ensure awareness of progress against plan(s).  | 1, 3A, 3B                          |
| 10                                | Well intervention                    | 10.1  | Vessel on location with ROV equipment deployed within 12 hours.   | 1, 3B, 3C                          |
|                                   |                                      | 10.2  | Hot Stab and/or well intervention attempt made using ROV within 12 hours.   | 1, 3B, 3C                          |
|                                   |                                      | 10.3  | Open communication line(s) to be maintained between IMT and infield operations to ensure awareness of progress against plan(s).   | 1, 3A, 3B                          |
| 11                                | Support vessels                      | 11.1  | Monthly monitoring of availability of larger vessels through existing Frame Agreements and market intelligence to meet specifications for source control.                             | 3C                                 |
|                                   |                                      | 11.2  | Frame agreements for Infield Support Vessels (ISVs) require vessels maintain in-force safety case approvals covering ROV operations and provide support in the event of an emergency. | 1, 3B, 3C                          |
|                                   |                                      | 11.3  | MODU and vessel contracts include clause outlining requirement for support in the event if an emergency   | 1, 3C                              |
| 12                                | Safety case                          | 12.1  | Woodside will prioritise vessel(s) for intervention work(s) that have an existing safety case.  | 1, 3C                              |
|                                   |                                      | 12.2  | 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                              |
|                                   |                                      | 12.3  | Woodside will maintain minimum safe operating standards that can be provided to vessel operators for safety case guidance.  | 1, 3C                              |

The resulting source control capability has been assessed against the WCCS. The range of techniques provide a feasible and viable approach to well intervention and 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 clearly disproportionate to the insignificant environmental benefit gained and/or not reasonably practicable for this PAP.
- 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.

### 5.3 Source Control via Vessel 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 PAP 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 a potential vessel collision, the vessel master may engage precautionary marine manoeuvres to avoid collision or commence pumping operations to transfer MDO 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 PAP which are detailed in **Section 6.7** of the EP. The vessel master's roles and responsibilities are described in EP **Section 7.3**.

Performance standards for each contracted PAP vessel are detailed in the vessel's specific SOPEP.

These standards ensure sufficient resources are available and are adequately tested to ensure implementation of the SOPEP in the event of a hydrocarbon spill.

## 5.4 Oiled wildlife response

Woodside would implement a response in accordance with the *Oiled Wildlife Operational Plan*. This 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).

Oiled wildlife response is undertaken in accordance with the Western Australian Oiled Wildlife Response Plan to ensure it is conducted in accordance with legislative requirements under the *Animal Welfare Act 2002*.

If there is a net environmental benefit, oiled wildlife operations will be conducted 24 hours per day to reduce the time for rehabilitation and release of oiled wildlife. Hazing and pre-emptive capture techniques to keep non-oiled animals away from contaminated habitat in instances where it is deemed appropriate will be conducted in accordance with the Western Australian Oiled Wildlife Response Plan, specifically vessels used in hazing/pre-emptive capture will approach wildlife at slow speeds to ensure animals are not directed towards the oil and deterrence/hazing and pre-emptive capture will only be conducted if Woodside has licensed authority from DBCA and approval from the Incident Controller.

Shoreline access will be considered as part of the operational NEBA. Vehicular access would be restricted on dunes, turtle nesting beaches and in mangroves. Woodside retains specialist personnel to support and manage oiled wildlife operations, including trained and competent responders in Exmouth and Dampier. Additional personnel would be sourced through Woodside's arrangements to support an oiled wildlife response as required.

### 5.4.1 Response need based on predicted consequence parameters

The following statements identify the key parameters upon which a response need can be based:

- There is no floating oil at ~10 g/m<sup>2</sup> or shoreline impact predicted at response threshold (>100 g/m<sup>2</sup>) at any RPAs for CS-01 or CS-02 for the duration of the spill.
- The offshore location of the release site is expected to initially result in low numbers of at-risk or impacted wildlife.
- As the surface oil approaches shorelines, potential for oiled wildlife impacts are likely to increase.
- It is estimated that an oiled wildlife response would be a Level 1, as defined in the WA OWRP (Table 5-7).

**Table 5-5: Key at-risk species potentially in open ocean**

| Species                              | Open ocean |
|--------------------------------------|------------|
| Marine turtles                       | ✓          |
| Whale sharks                         | ✓          |
| Seabirds and/or migratory shorebirds | ✓          |
| Cetaceans – migratory whales         | ✓          |
| Cetaceans – dolphins and porpoises   | ✓          |
| Dugongs                              | ✓          |
| Sharks and rays                      | ✓          |

The 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. Responding to oiled wildlife consists of eight key stages, as described in **Table 5-6** below.

**Table 5-6: Oiled wildlife response stages**

| Stage  | Description   |
|--|---|
| Stage 1: Wildlife first strike response              | Gather situational awareness including potential wildlife assets at risk.   |
| Stage 2: Mobilisation of wildlife resources          | Resources include personnel, equipment and facilities.  |
| Stage 3: Wildlife reconnaissance                     | Reconnaissance to identify potentially affected animals.  |
| Stage 4: IAP wildlife sub-plan development           | The IAP includes the appropriate response options for oiled wildlife, including wildlife priorities for protection from oiling; deterrence measures (see below); and recovery and treatment of oiled wildlife; resourcing of equipment and personnel.<br><br>It includes consideration of deterrence practices such as 'hazing' to prevent wildlife from entering areas potentially contaminated by spilled hydrocarbons, as well as dispersing, displacing or relocating wildlife to minimise/prevent contact and provide time for clean-up. |
| Stage 5: Wildlife rescue and staging                 | This includes the different roles of finding oiled wildlife, capturing wildlife, and holding and/or transportation of wildlife to oiled wildlife facilities.  |
| Stage 6: Establishment of an oiled wildlife facility | Treatment facilities would be required for the first-aid, cleaning and rehabilitation of affected animals.<br><br>A vessel-based 'on-water' facility would likely need to be established to enable stabilisation of oiled wildlife before transport to a suitable treatment facility.<br><br>Suitable staging sites in the Dampier and Exmouth have been identified in the draft Regional OWROP, should a land-based site be required.  |
| Stage 7: Wildlife rehabilitation                     | Considerations include a suitable rehabilitation centre and personnel, wildlife housing, record keeping and success tracking.   |
| Stage 8: Oiled wildlife response termination         | Once a decision has been made to terminate operations, the Incident Controller will stand down individual participating and supporting agencies.  |

Reconnaissance and primary response would be done during operational monitoring and surveillance activities. Where marine wildlife are observed on water or transiting near or within the spill area, observations would be recorded through surveillance records. The shoreline assessments would be done in accordance with OM05, which would be used as a further tool to identify wildlife and habitats contacted by hydrocarbons.

Staging sites would be established as forward bases for shoreline- or vessel-based field teams. Once recovered to a staging site, wildlife would be transported to the designated oiled wildlife facility or a temporary holding centre (before being transported to the oiled wildlife facility). Temporary holding centres are required when there is significant distance between a staging site and the oiled wildlife facility, to enable stabilisation of oiled animals. The oiled wildlife facility is the primary location where animals would be housed and treated. Sites

proposed for staging a regional oiled wildlife response in Dampier and Exmouth have been identified.

To deploy a response appropriate to the nature and scale of the event, as well as scalable over time, Woodside would implement an oiled wildlife response in consultation with DBAC and use the capability outlined in the WA OWRP, with additional capability if required (e.g. volunteers) accessible through Woodside’s *People & Global Capability Surge Labour Requirement Plan*.

The WA OWRP provides indicative oiled wildlife response levels (Table 5-7) and the resources likely to be needed at each increasing level of response.

**Table 5-7: Indicative oiled wildlife response level (adapted from the WA OWRP, 2014)**

| Oiled wildlife response Level | Indicative personnel numbers | Indicative duration | Indicative number of birds (non-threatened species) | Indicative number of birds (threatened species) | Turtles (hatchlings, juveniles, adults) | Cetaceans                      | Pinnipeds | Dugongs               |
|-------------------------------|------------------------------|---------------------|---|---|---|--------------------------------|-----------|-----------------------|
| Level 1                       | 6                            | <3 days             | 1–2/day <5 total                                    | No complex birds                                | None                                    | None                           | None      | None                  |
| Level 2                       | 26                           | 4–14 days           | 1–5/day <20 total                                   | No complex birds                                | <20 hatchlings<br>No juv/adults         | None                           | None      | None                  |
| Level 3                       | 59                           | 4–14 days           | 5–10/day <50 total                                  | 1–5/day <10 total                               | <5 juv/adults<br><50 hatchlings         | None                           | <5        | None                  |
| Level 4                       | 77                           | >14 days            | 5–10/day <200 total                                 | 5–10/day  | <20 juv/adults<br><500 hatchlings       | <5, or known habitats affected | 5–50      | Habitat affected only |
| Level 5                       | 116                          | >14 days            | 10–100/day >200 total                               | 10–50/day                                       | >20 juv/adults<br>>500 hatchlings       | >5 dolphins                    | >50       | Dugongs oiled         |
| Level 6                       | 122                          | >14 days            | >100/day  | 10–50/day                                       | >20 juv/adults<br>>500 hatchlings       | >5 dolphins                    | >50       | Dugongs oiled         |

## 5.4.2 Environmental performance based on need

**Table 5-8: Environmental Performance – Oiled Wildlife Response**

| Environmental Performance Outcome                           |                      | Oiled Wildlife Response is conducted in accordance with the Western Australian Oiled Wildlife Response Plan (WAOWRP) to ensure it is conducted in accordance with legislative requirements to house, release or euthanise wildlife under the Animal Welfare Act 2002. |                     |
|---|----------------------|---|---------------------|
| Control measure   | Performance Standard | Measurement Criteria (Section 5.8)  |                     |
| 13 Wildlife response equipment                              | 13.1                 | Contracted capability to treat 100 individual wildlife for immediate mobilisation to Response Protection Areas (RPAs).  | 1, 3A, 3B, 3C, 4    |
|   | 13.2                 | Contracted capability to treat up to an additional 250 individual wildlife within a 5-day period.   |                     |
|   | 13.3                 | National plan access to additional resources under the guidance of the WA DoT (up to a Level 5 oiled wildlife response as specified in the OWRP), with the ability to treat about 600 individual wildlife by the time hydrocarbons contact the shoreline.             | 1, 3C, 4            |
|   | 13.4                 | Vessels used in hazing/pre-emptive capture will approach wildlife at slow speeds to ensure animals are not directed towards the hydrocarbons.   | 1, 3A, 3B, 4        |
|   | 13.5                 | Facilities for the rehabilitation of oiled wildlife are operational 24/7 as per WAOWRP.   | 1, 3A, 4            |
| 14 Wildlife responders                                      | 14.1                 | 2 OWR team members to lead the oiled wildlife operations who have completed an Oiled Wildlife Response Management course.   | 1, 2, 3B            |
|   | 14.2                 | Wildlife responders to be accessed through resource pool and additional agreements with specialist providers.   | 1, 2, 3A, 3B, 3C, 4 |
|   | 15.3                 | Open communication line to be maintained between IMT and infield operations to ensure awareness of progress against plan(s).  | 1, 3A, 3B           |
| 15 Management of environmental impact of the response risks | 15.1                 | 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:

- Mobilisation and deployment of one wildlife collection team to each impacted RPA as directed by operational monitoring.
- Mobilisation and deployment of up to two central wildlife treatment and rehabilitation locations at Exmouth and Dampier in accordance with WA OWRP, if required.
- The waste storage capacity is sufficient to meet the need (circa 1 m<sup>3</sup> waste generated per wildlife unit cleaned).

Woodside would establish a wildlife collection point at the RPA for identified oiled wildlife collection and sorting. From these locations, recovered wildlife would be transported to a central treatment location at Dampier or Exmouth.

## 5.5 Waste Management

Waste management is considered a support technique to shoreline clean-up and wildlife response. Waste generated and collected during the response that requires handling, management and disposal may consist of:

- Liquids (hydrocarbons and contaminated liquids) collected during wildlife response, and/or
- Solids/semi-solids (oily solids, garbage, contaminated materials) and debris (e.g. seaweed, sand, woods, and plastics) collected during 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 ensure continuous response operations can be maintained.

All waste management activities will follow the *Environment Protection (Controlled Waste) Regulations 2004* and the waste will be managed to minimise final disposal volumes. Waste treatment techniques will consider contaminated solids treatment to allow disposal to landfill and solids with high concentrations of hydrocarbon will be treated and recycled where possible or used in clean fill if suitable.

The waste products would be transported from response locations to the nearest suitable staging area/waste transfer station for treatment, disposal or recycling. Waste will be transferred with appropriately licensed vehicles. Containers will be available for temporary waste storage and will be:

- Labelled with the waste type
- Provided with appropriate lids to prevent waste being blown overboard
- Bunded if storing liquid wastes.
- Processes will be in place for transfers of bulk liquid wastes and include:
  - Inspection of transfer hose undertaken prior to transfer
  - Watchman equipped with radio visually monitors loading hose during transfer
  - Tank gauges monitored throughout operation to prevent overflow.

The *Oil Spill Preparedness Waste Management Support Plan* details the procedures, capability and capacity in place between Woodside and its primary waste services contractor to manage waste volumes generated from response activities.

### 5.5.1 Response need based on predicted consequence parameters

Table 5-9: Response Planning Assumptions – Waste Management

| Response planning assumptions: Waste management                   |  |
|---|--|
| <b>Waste loading per m<sup>3</sup> oil recovered (multiplier)</b> | Oiled wildlife response – approx. 1m <sup>3</sup> of oily liquid waste generated for each wildlife unit cleaned. |

## 5.5.2 Environmental performance based on need

**Table 5-10: Environmental performance – waste management**

| <b>Environmental Performance Outcome</b>                       |                             | To minimise further impacts, waste will be managed, tracked and disposed of in accordance with laws and regulations.  |   |
|--|-----------------------------|---|---|
| <b>Control measure</b>   | <b>Performance Standard</b> |   | <b>Measurement Criteria (Section 5.8)</b> |
| 16<br>Waste Management   | 16.1                        | Contract with waste management services for transport, removal, treatment and disposal of waste.  | 1, 3A, 3B, 3C, 4                          |
|  | 16.2                        | Recovered hydrocarbons and wastes will be transferred to licensed treatment facility for reprocessing or disposal.  |   |
|  | 16.3                        | Teams will segregate liquid and solid wastes at the earliest opportunity.   |   |
|  | 16.4                        | Waste management provider support staff available year-round to assist in the event of an incident with waste management as detailed in contract.                 |   |
|  | 16.5                        | Open communication line to be maintained between IMT and waste management services to ensure the reliable flow of accurate information between parties.           | 1, 3A, 3B                                 |
|  | 16.6                        | Waste management to be conducted in accordance with Australian laws and regulations.  | 1, 3A, 3B, 3C, 4                          |
|  | 16.7                        | Waste management services available and employed during response.   |   |
| 17<br>Management of environmental impact of the response risks | 17.1                        | All oiled wildlife response sites zoned and marked before operations commence to prevent secondary contamination and minimise the mixing of clean and oiled waste | 1, 3A, 3B                                 |

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.

It indicates the waste management capability has the following expected performance:

- Waste contractor has the capacity to treat up to 120,000 m<sup>3</sup> overall waste volumes. The waste management requirements are within Woodside's and its service providers existing capacity.
- Woodside has assessed the existing capability available and considered potential alternative, additional and improved control measures. Where control measures have been selected and implemented, they are included in Section 6.5.

## 5.6 Scientific monitoring

A scientific monitoring program (SMP) would be activated following a Level 2 or 3 unplanned hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors. This would consider receptors at risk (ecological and socio-economic) for the entire predicted Environment that Maybe Affected (EMBA) and in particular, any identified Pre-emptive Baseline Areas (PBAs) for the credible spill scenario(s) or other identified unplanned hydrocarbon releases associated with the operational activities (refer to **Table 2-1**: PAP credible spill scenarios).

The outputs of the stochastic hydrocarbon spill modelling are used to assess the environmental risk, in terms of delineating which areas of the marine environment are predicted to be exposed to hydrocarbons exceeding environmental threshold concentrations (refer to **Table 2-2, Section 2.3.1.1**). The summary of all the locations where hydrocarbon thresholds could be exceeded by any of the simulations modelled is defined as the EMBA. The Petroleum Activities Program worst-case credible spill scenarios (CS-01 and CS-02) defines the EMBA and is the basis of the SMP approach presented in this section.

It should be noted the resulting SMP receptor locations may differ from the Response Protection Areas (RPAs) discussed in **Section 3** of this document due to the applicability of different hydrocarbon threshold levels. The SMP would be informed by the data collected via the operational monitoring program (OMP) studies, however, it differs from the OMP in being a long-term program independent of, and not directing, the operational oil spill response or monitoring of impacts from response activities (refer to Section 5.1 Monitor and Evaluate) for the operational monitoring overview.

Key objectives of the Woodside oil spill scientific monitoring program are:

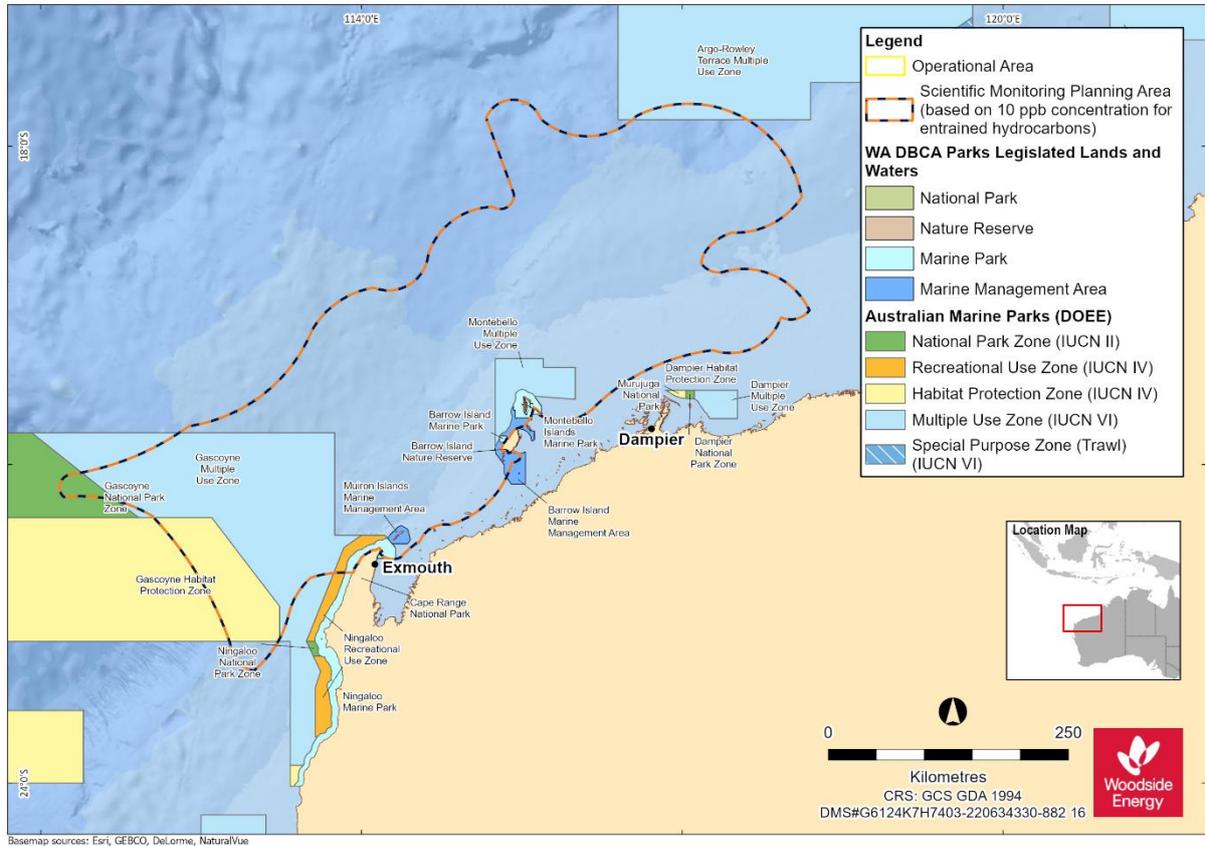
- Assess the extent, severity and persistence of the environmental impacts from the spill event;  
and
- Monitor subsequent recovery of impacted key species, habitats and ecosystems.

The SMP comprises ten targeted environmental monitoring programs to assess the condition of a range of physico-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 are as follows:

- SM01 - Assessment of the presence, quantity and character of hydrocarbons in marine waters (linked to OM01 to OM03)
- SM02 - Assessment of the presence, quantity and character of hydrocarbons in marine sediments (linked to OM01 and OM05)
- SM03 – Assessment of impacts and recovery of subtidal and intertidal benthos
- SM04 - Assessment of impacts and recovery of mangroves/saltmarsh habitat
- SM05 - Assessment of impacts and recovery of seabird and shorebird populations
- SM06 - Assessment of impacts and recovery of nesting marine turtle populations
- SM07 - Assessment of impacts to pinniped colonies including haul-out site populations
- SM08 - Desktop assessment of impacts to other non-avian marine megafauna
- SM09 - Assessment of impacts and recovery of marine fish (linked to SM03)
- SM10 - Assessment of physiological impacts to important fish and shellfish species (fish health and seafood quality/safety) and recovery.

These SMPs have been designed to cover all key tropical and temperate habitats and species within Australian waters and broader, if required. A planning area for scientific monitoring is

also identified to acknowledge potential hydrocarbon contact below the environmental threshold concentrations and beyond the EMBA. This planning area has been set with reference to the entrained low exposure value of 10 ppb detailed in the NOPSEMA Bulletin #1 Oil Spill Modelling (2019), and for this activity is shown in **Figure 5-1**.



**Figure 5-1: The planning area for scientific monitoring based on the area potentially contacted by the low (below ecological impact) entrained hydrocarbon threshold of 10 ppb in the event of the worst-case credible spill scenarios (CS-01 and CS-02).**

Please note that **Figure 5-1** represents the overall combined extent of the oil spill model outputs based on a total of 100 replicate simulations over an annual period for CS-01 and CS-02 and therefore represents the largest spatial boundaries of 100 CS-01 and CS-02 hydrocarbon spill combinations, not the spatial extent of a single CS-01 or CS-02 hydrocarbon spill trajectory.

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### 5.6.1 Scientific Monitoring Deployment Considerations

Table 5-11: Scientific monitoring deployment considerations

| Scientific Monitoring Deployment Considerations  |   |
|--|---|
| Existing baseline studies for sensitive receptor locations predicted to be affected by a spill | <p>Pre-emptive Baseline Areas (PBAs) of the following two categories:</p> <ul style="list-style-type: none"> <li>• PBAs within the predicted &lt;10-day hydrocarbon contact time prediction: As part of this assessment, a desktop review was conducted of available and appropriate baseline data for key receptors for locations (if any) that are potentially impacted within 10 days of a spill (based on the EMBA). Furthermore, the need to conduct baseline data collection to address data gaps and demonstrate spill response preparedness is assessed (refer to Annex D). In the scenario, that baseline data needs are identified, planning for baseline data acquisition is typically commenced pre-PAP and the execution of studies undertaken considers: receptor type, seasonality and temporal assessment requirements and location conditions.</li> <li>• PBAs predicted &gt;10 days to hydrocarbon contact: As part of this assessment, a desktop review is conducted of available and appropriate baseline data for key receptors for locations (if any) that are potentially impacted &gt;10 days' time of a hydrocarbon spill event and documented (refer to <b>Section 5.6.2</b>). In the event of a spill, the SMP activation (as per the TPA03 Well Intervention Oil Pollution First Strike Plan) directs the SMP team to follow the steps outlined in the SMP Operational Plan. The steps include: the review of availability and type of existing baseline data, with particular reference to any Pre-emptive Baseline Areas (PBAs) identified as &gt;10 days to hydrocarbon contact as predicted by forecast modelling trajectories. Such information is used to identify response phase PBAs and plan for the activation of SMPs for pre-emptive (i.e. pre-hydrocarbon contact) baseline assessment.</li> </ul> |
| Pre-emptive Baseline in the event of a spill   | Activation of SMPs in order to collect baseline data at sensitive receptor locations with predicted hydrocarbon contact time >10 days (refer to <b>Section 5.6.2</b> ) and the process as documented in ANNEX C).   |
| Survey platform suitability and availability   | In the event of the SMP activation, suitable survey platforms are available and can support the range of equipment and data collection methodologies to be implemented in nearshore and offshore marine environments.   |
| Trained personnel to implement SMPs suitable and available.                                    | Access to trained personnel and the sampling equipment contracted for scientific monitoring via a dedicated scientific monitoring program standby contract.   |
| Met-ocean conditions   | <p>The following met-ocean conditions are the identified limits for implementing SMPs:</p> <ul style="list-style-type: none"> <li>• Waves &lt;1 m for nearshore systems</li> <li>• Waves &lt;1.5 m for offshore systems</li> <li>• Winds &lt;20 knots</li> <li>• Daylight operations only</li> </ul> <p>SMP implementation will be planned and managed according to HSE risk reviews and the met-ocean conditions on a day to day basis by SMP operations.</p>  |

## 5.6.2 Response Planning Assumptions

Table 5-12: Scientific monitoring response planning assumptions

| Response Planning Assumptions            |  |
|--|--|
| <b>Pre-emptive Baseline Areas (PBAs)</b> | <p>Pre-emptive Baseline Areas (PBAs) identified through the application of defined hydrocarbon impact thresholds during the Quantitative Spill Risk Assessment process and a consideration of the minimum time to contact at receptor locations fall into two categories:</p> <ul style="list-style-type: none"> <li>• PBAs for which baseline data exist or are planned for and data collection may commence pre-PAP (<math>\leq 10</math> days minimum time to contact).</li> <li>• PBAs (<math>&gt; 10</math> days minimum time to contact) for which baseline data may be collected in the event of an unplanned hydrocarbon release. In the event of a spill, response phase PBAs are prioritized based on vulnerability (i.e. time to contact and environmental sensitivity) to potential impacts from hydrocarbon contact and an identified need to acquire baseline data.</li> </ul> <p>Time to hydrocarbon contact of <math>&gt;10</math> days has been identified as a minimum timeframe within which it is feasible to plan and mobilise applicable SMPs and commence collection of baseline (pre-hydrocarbon contact) data, in the event of an unplanned hydrocarbon release from the activity.</p> <p>The PBAs for TPA03 Well Intervention are identified and listed in ANNEX D, Table D-1. The listed PBAs, together with the situational awareness (provided by the operational monitoring) are the basis for the response phase SMP planning and implementation.</p> |
| <b>Pre-Spill</b>                         | <p>Activity: TPA03 Well Intervention</p> <p>A review of existing baseline data for receptor locations (refer to Annex D, Table D-1) with potential to be contacted by surface, dissolved or entrained hydrocarbons at environmental thresholds <math>\leq 10</math> days, relating to the worse case credible scenarios (CS-01 and CS-02) hydrocarbon release for the activity has identified the following:</p> <ul style="list-style-type: none"> <li>• Commonwealth marine environment</li> <li>• Rankin Bank</li> <li>• Barrow, Montebello and Lowendal Island groups (including State Marine Parks and Management Areas)</li> </ul> <p>Refer to ANNEX D, Table D-2 – baseline data available.</p> <p>Australian Marine Parks (AMPs) potentially affected includes:</p> <ul style="list-style-type: none"> <li>• Montebello AMP</li> </ul> <p>All the Australian Marine Parks (AMPs) are located in offshore waters where hydrocarbon exposure is possible from floating hydrocarbons (on surface waters) and in the upper water column (0-20 m depth range, approximately).</p>   |
| <b>In the Event of a Spill</b>           | <p>Receptor locations with <math>&gt;10</math> days to hydrocarbon contact, as well as the wider area, will be investigated and identified by the SMP team (in the Environment Unit of the CIMT) as the spill event unfolds and as the situational awareness provided by the OMPs permits delineation of the spill affected area (for example, updates to the spill trajectory tracking). The full list of receptor locations is presented in Annex D, based on the PAP worse-case credible spill scenarios (CS-01 and CS-02) (Table 2-1).</p> <p>To address the initial focus in a response phase SMP planning situation, receptor locations predicted to be contacted <math>&gt;10</math> days have been identified as follows:</p>  |

|                             |  |
|-----------------------------|--|
|                             | <ul style="list-style-type: none"> <li>• Ningaloo Coast .<sup>4</sup></li> <li>• Muiron Islands .<sup>5</sup></li> <li>• Glomar Shoals</li> <li>• Southern Pilbara Island group</li> </ul> <p>Australian Marine Parks (AMPs) potentially affected includes:</p> <ul style="list-style-type: none"> <li>• Gascoyne AMP</li> <li>• Ningaloo AMP</li> </ul> <p>The unfolding spill affected area predictions and confirmation of appropriate baseline data will determine the selection of receptor locations and SMPs to be activated in order to gather pre-emptive (pre-hydrocarbon contact) data. Refer to ANNEX C for further details on the process for scientific monitoring plan implementation and delivery. The timing of SMP activation and mobilisation of the individual SMPs to undertake data collection will be decided and documented by the Woodside SMP team following the process outlined in the SMP Operational Plan.</p> <p>In the event key receptors within geographic locations potentially impacted after 10 days (following a spill event or commencement of the spill), a response phase SMP effort to collect baseline data would be addressed. SMP planning would assess where adequate and appropriate baseline data are not available and a response phase effort to collect baseline data for the following purposes:</p> <ul style="list-style-type: none"> <li>• Priority will be given to the collection of baseline data for receptors predicted to be within the spill affected area prior to hydrocarbon contact. The process is initiated with the investigation of available baseline and time to hydrocarbon contact (&gt;10 days which is sufficient time to mobilise SMP teams and acquire data before hydrocarbon contact). With reference to the TP03 Well Intervention PAP, priority would be focused on the Ningaloo Coast, south of the predicted minimum time to contact locations.</li> <li>• Highly sensitive and/or valued habitats and communities in coastal waters will be prioritised for pre-emptive baseline surveys over open water areas of AMPs.</li> <li>• Collection of baseline data for receptors predicted to be outside the spill affected area so reference datasets for comparative analysis with impacted receptor types can be assessed post-spill.</li> </ul> |
| <p><b>Baseline Data</b></p> | <ul style="list-style-type: none"> <li>• A summary of the spill affected area and receptor locations as defined by the EMBA for the PAP. The worst case credible spill scenario CS-01 is presented in TP03 Well Intervention EP (Section 6).</li> <li>• The key receptors at risk by location and corresponding SMPs based on the EMBA for the PAP are presented in ANNEX D, Table D-1, as per the worst case credible spill events, CS-01 and CS-02. This matrix maps the receptors at risk with their location and the applicable SMPs that may be triggered in the event of a Level two or three hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors. Receptor locations and applicable SMPs are colour coded to highlight possible time to contact based on receptor types and locations.</li> <li>• The status of baseline studies relevant to the PAP are tracked by Woodside through the maintenance of a SMP Environmental Baseline Database (managed by the Woodside Environmental Science team), as well as accessing external databases such as the Department of Water and</li> </ul>  |

<sup>4</sup> Ningaloo Coast includes the WHA, State Marine Park

<sup>5</sup> Muiron Islands includes the WHA and State Marine Management Area

|  |   |
|--|---|
|  | Environmental Regulation (WA) Index of Marine Surveys for Assessment (IMSA). <sup>[1]</sup> (refer to ANNEX C). |
|--|---|

### 5.6.3 Summary – scientific monitoring

The resulting scientific monitoring capability has been assessed against the PAP worst case credible spill scenario, CS-01 and CS-02. The SMP assessment provides for a range of strategies and an ongoing approach to monitoring the response and operations to assess and evaluate the scale and extent of impacts. All 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 SMP’s main objectives can be met, with no additional, alternative or improved control measures providing further benefit.

### 5.6.4 Response planning: need, capability and gap – scientific monitoring

The receptor locations identified in ANNEX D provide the basis of the SMPs likely to be selected and activated. Once the Woodside SMP Delivery team and Standby SMP contractor have been stood up and the exact nature and scale of the spill becomes known, the SMPs to be activated will be confirmed as per the process set out in the SMP Operational Plan.

#### Scope of SMP Operations in the event of a hydrocarbon spill

Receptor locations of interest for the SMP during the response phase are:

- Ningaloo Coast
- Muiron Islands
- Barrow, Montebello and Lowendal Island groups (including State Marine Parks and Management Areas)
- Southern Pilbara Island group
- Montebello AMP
- Ningaloo AMP
- Gascoyne AMP

Documented baseline studies are available for certain sensitive receptor locations including the Rankin Bank and Glomar Shoal, Ningaloo Coast and Muiron Islands ([ANNEX D](#), Table D-2). The SMP approach in the response phase would still deploy SMP teams to maximise the opportunity to collect pre-emptive baseline data at sensitive receptor locations, i.e., the sections of the Ningaloo Coast not immediately contacted to hydrocarbons. As the exact locations where hydrocarbon contact occurs may be unpredictable, SM01 would be mobilised as a priority to be able to detect hydrocarbons and track the leading edge of the spill to verify where hydrocarbon contact occurs which will assist with where SMP resources are a priority need to obtain pre-emptive baseline data.

The option analysis in **Section 6.6** considers ways to reduce the gap by considering alternate, additional, and/or improved control measures on each selected response strategy.

<sup>[1]</sup> <https://biocollect.ala.org.au/imsa#max%3D20%26sort%3DdateCreatedSort>

### 5.6.5 Environmental performance based on need

**Table 5-13: Environment Performance – Scientific Monitoring**

| Environmental Performance Outcome |  | Woodside can demonstrate preparedness to stand up the SMP to quantitatively assess and report on the extent, severity, persistence and recovery of sensitive receptors impacted from the spill event. |  |   |
|-----------------------------------|--|---|--|---|
| Control measure                   |  | Performance Standard  |  | Measurement Criteria  |
| 18                                | Woodside has an established and dedicated SMP team comprising the Environmental Science Team and additional Environment Advisers within the HSE Function.  | 18.1  | SMP team comprises a pool of competent Environment Advisers (stand up personnel) who receive training regarding the SMP, SMP activation and implementation of the SMP on an annual basis.  | <ul style="list-style-type: none"> <li>• Training materials</li> <li>• Training attendance registers</li> <li>• Process that maps minimum qualification and experience with key SMP role competency and a tracker to manage availability of competent people for the SMP team including redundancy and rostering.</li> </ul>  |
| 19                                | <ul style="list-style-type: none"> <li>• Woodside has a contracted SMP service provider to supply scientific personnel and equipment to implement the SMPs. The service will resource a base capability of one team per SMP (SM01-SM10), see Table C-2, ANNEX C and as detailed in Woodside’s SMP standby contractor Implementation Plan. The availability of relevant personnel is reported to Woodside on a monthly basis via a simple report on the base-loading availability of suitable people for each of the SMPs comprising field work for data collection (SMP resourcing report register).</li> <li>• In the event of a spill and the SMP is activated, the base-loading availability of scientific personnel will be provided by the SMP standby contractor for the individual SMPs and where gaps in resources are identified, the SMP standby contractor and Woodside will seek additional personnel (if needed) from other sources including Woodside’s Environmental Services Panel.</li> </ul> | 19.1  | <p>Woodside maintains the capability to mobilise personnel required to conduct scientific monitoring programs SM01 – SM10 (except desktop based SM08):</p> <ul style="list-style-type: none"> <li>• Personnel are sourced through the existing standby contract with SMP standby contractor, as detailed within the SMP Implementation Plan.</li> <li>• Scientific Monitoring Program Implementation Plan describes the process for standing up and implementing the scientific monitoring programs.</li> <li>• SMP team stand up personnel receive</li> </ul> | <ul style="list-style-type: none"> <li>• Hydrocarbon Spill Preparedness (HSP) Internal Control Environment tracks the quarterly review of the Oil Spill Contracts.</li> <li>• SMP resource report of personnel availability provided by SMP contractor on monthly basis (SMP resourcing report register).</li> <li>• Training materials</li> <li>• Training attendance registers</li> </ul> |

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|    |  |      |   |  |
|----|--|------|---|--|
|    |  |      | training regarding the stand up, activation and implementation of the SMP on an annual basis  | <ul style="list-style-type: none"> <li>• Competency criteria for SMP roles</li> <li>• SMP annual arrangement testing and reporting.</li> </ul>   |
| 20 | <ul style="list-style-type: none"> <li>• Roles and responsibilities for SMP implementation are captured in Table C-1 (Annex C) and the SMP team (as per the organisational structure of the CIMT) is outlined in SMP Operational Plan. Woodside has a defined Crisis and Incident Management structure including Source Control, Operations, Planning and Logistics functions to manage a response.</li> <li>• SMP Team structure, interface with SMP standby contractor (standby SMP contractor) and linkage to the CIMT is presented in Figure C-1, ANNEX C</li> <li>• Woodside has a defined Command, Control and Coordination structure for Incident and Emergency Management that is based on the AIIMS framework utilised in Australia.</li> <li>• Woodside utilises an online Incident Management Information System (IMIS) to coordinate and track key incident management functions. This includes specialist modelling programs, geographic information systems (GIS), as well as communication flows within the Command, Control and Coordination structure.</li> <li>• SMP activated via the First Strike Plan (FSP)</li> <li>• Step by step process to activation of individual SMPs provided in the SMP Operational Plan</li> <li>• All decisions made regarding SMP logged in the online IMIS (SMP team members trained in using Woodside's online Incident Management System)</li> <li>• SMP component input to the CIMT Incident Action Plan (IAP) as per the identified CIMT timed sessions and the SMP IAP logged on the online IMIS</li> <li>• Woodside Environmental Science Team provide awareness training on the activation and stand-up of the Scientific Monitoring Programme (SMP) for the Environment Advisers in</li> </ul> | 20.1 | <ul style="list-style-type: none"> <li>• Woodside has established an SMP organisational structure and processes to stand up and deliver the SMP.</li> </ul> | <ul style="list-style-type: none"> <li>• SMP Oil Spill Scientific Monitoring Operational Plan</li> <li>• SMP Implementation Plan</li> <li>• SMP annual arrangement testing and reporting.</li> </ul> |

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|    |  |      |   |  |
|----|--|------|---|--|
|    | <p>Woodside who are listed on the SMP team on an annual basis.</p> <ul style="list-style-type: none"> <li>• Woodside Environmental Science Team provide awareness training on the activation and stand-up of the Scientific Monitoring Programme (SMP) for the SMP standby contractor.</li> <li>• Woodside Environmental Science Team co-ordinates an annual SMP arrangement testing exercise which the SMP standby contractor.</li> </ul>   |      |   |  |
| 21 | <ul style="list-style-type: none"> <li>• Chartered and mutual aid vessels.</li> <li>• Suitable vessels would be secured from the Woodside support vessels, regional fleet of vessels operated by Woodside and other operators and the regional charter market.</li> <li>• Vessel suitability will be guided by the need to be equipped to operate grab samplers, drop camera systems and water sampling equipment (the individual vessel requirements are outlined in the relevant SMP methodologies (refer to Table C-2, ANNEX C).</li> <li>• Nearshore mainland waters could use the same approach as for open water. Smaller vessels may be used where available and appropriate. Suitable vehicles and machinery for onshore access to nearshore SMP locations would be provided by Woodside's transport services contract and sourced from the wider market.</li> <li>• Dedicated survey equipment requirements for scientific monitoring range from remote towed video and drop camera systems to capture seabed images of benthic communities to intertidal/onshore surveying tools such as quadrats, theodolites and spades/trowels, cameras and binoculars (specific survey equipment requirements are outlined in the relevant SMP methodologies (refer to Table C-2, ANNEX C)). Equipment would be sourced through the existing SMP standby contract and if additional surge capacity is required this would be available through the other Woodside Environmental Services Panel Contractors and specialist contractors. SMP standby contractor can also address equipment redundancy through either individual</li> </ul> | 21.1 | <p>Woodside maintains standby SMP capability to mobilise equipment required to conduct scientific monitoring programs SM01 – SM10 (except desktop based SM08):</p> <ul style="list-style-type: none"> <li>• Equipment is sourced through the existing standby contract with SMP standby contractor as detailed within the SMP Implementation Plan.</li> </ul> | <ul style="list-style-type: none"> <li>• HSP Internal Control Environment tracks the quarterly review of the Oil Spill Contracts</li> <li>• SMP standby monthly resource reports of equipment availability provided by SMP contractor (SMP resourcing report register).</li> <li>• SMP annual arrangement testing and reporting</li> </ul> |

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|    |   |      |   |  |
|----|---|------|---|--|
|    | <p>or multiple suppliers. MoUs are in place with one marine sampling equipment company and one analytical laboratory (SMP resourcing report register).</p> <ul style="list-style-type: none"> <li>• Availability of SMP equipment for offshore/onshore scientific monitoring team mobilisation is within one week to ten days of the commencement of a hydrocarbon release. This meets the SMP mobilisation lead time that will support meeting the response objective of 'to acquire, where practicable, the environmental baseline data prior to hydrocarbon contact required to support the post-response SMP'.</li> </ul>   |      |   |  |
| 22 | <p>Woodside's SMP approach addresses the pre-PAP acquisition of baseline data for Pre-emptive Baseline Areas (PBAs) with ≤10 days if required following a baseline gap analysis process. Woodside maintains knowledge of Environmental Baseline data through:</p> <ul style="list-style-type: none"> <li>• Documentation annual reviews of the Woodside SMP Baseline Environmental Studies Database, and specific activity baseline gap analyses.</li> <li>• Accessing external databases such as the Department of Water and Environmental Regulation (WA) Index of Marine Surveys for Assessment (IMSA) (refer to ANNEX C: Oil Spill Scientific Monitoring Program).</li> </ul> | 22.1 | <ul style="list-style-type: none"> <li>• Annual reviews of environmental baseline data</li> <li>• PAP specific Pre-emptive Baseline Area baseline gap analysis</li> </ul> | <ul style="list-style-type: none"> <li>• Annual review/update of Woodside Baseline Environmental Studies Database</li> <li>• Desktop review to assess the environmental baseline study gaps completed prior to EP submission</li> <li>• Accessing baseline knowledge via the SMP annual arrangement testing</li> </ul> |

|  |  |  |   |   |
|--|--|--|---|---|
| <b>Environmental Performance Outcome</b> |  | SMP plan to acquire response phase monitoring targeting pre-emptive data achieved. |   |   |
| <b>Control measure</b>                   |  | <b>Performance Standard</b>  |   | <b>Measurement Criteria</b>   |
| 23                                       | <p>Woodside's SMP approach addresses:</p> <ul style="list-style-type: none"> <li>• Scientific data acquisition for PBAs &gt;10 days to hydrocarbon contact and activated in the response phase and</li> <li>• Transition into post-response SMP monitoring.</li> </ul> | 23.1   | <p><b>Pre-emptive Baseline Area (PBA) baseline data acquisition in the response phase</b><br/>If baseline data gaps are identified for PBAs predicted to have hydrocarbon contact in &gt;10 days, there will be a response phase effort</p> | <ul style="list-style-type: none"> <li>• Response SMP plan</li> <li>• Woodside's online Incident Management System records</li> <li>• SMP component of the Incident Action Plan.</li> </ul> |

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|  |  |  |  |   |
|--|--|--|--|---|
|  |  |  | to collect baseline data. Priority in implementing SMPs will be given to receptors where pre-emptive baseline data can be acquired or improved. SMP team (within the Environment Unit of the CIMT) contribute SMP component of the CIMT Planning Function in development of the IAP. |   |
|  |  | 23.2   | <b>Post Spill contact</b><br>For the receptors contacted by the spill in where baseline data are available, SMPs programs to assess and monitor receptor condition will be implemented post spill (i.e. after the response phase).   | <ul style="list-style-type: none"> <li>• SMP planning document</li> <li>• SMP Decision Log</li> <li>• Incident Action Plans (IAPs)</li> </ul>   |
| <b>Environmental Performance Outcome</b> |  | Implementation of the SMP (response and post-response phases). |  |   |
| <b>Control measure</b>                   |  | <b>Performance Standard</b>                                    |  | <b>Measurement Criteria</b>   |
| 24                                       | <ul style="list-style-type: none"> <li>• Scientific monitoring will address quantitative assessment of environmental impacts of a level 2 or 3 spill or any release event with the potential to contact sensitive environmental receptors. The SMP comprises ten targeted environmental monitoring programs.</li> <li>• SMP supporting documentation: (1) Oil Spill Scientific Monitoring Operational Plan; (2) SMP Implementation Plan and (3) SMP Process and Methodologies Guideline.</li> <li>• The Oil Spill Scientific Monitoring Operational Plan details the process of SMP selection, input to the IAP to trigger operational logistic support services. Methodology documents for each of the ten SMPs are accessible detailing equipment, data collection techniques and the specifications required for the survey platform support.</li> <li>• The SMP standby contractor holds a Woodside SMP implementation plan detailing activation processes, linkage</li> </ul> | 24.1   | <b>Implementation of SM01</b><br>SM01 will be implemented to assess the presence, quantity and character of hydrocarbons in marine waters during the spill event in nearshore areas  | Evidence SM01 has been triggered: <ul style="list-style-type: none"> <li>• Documentation as per requirements of the SMP Operational Plan</li> <li>• Woodside's online Incident Management System Records.</li> <li>• SMP component of the IAP</li> <li>• SMP data records from field</li> </ul> |
|  |  | 24.2   | <b>Implementation of SM02-SM10</b><br>SM02-SM10 will be implemented in accordance with the objectives and  | Evidence SMPs have been triggered: <ul style="list-style-type: none"> <li>• Documentation as per requirements</li> </ul>  |

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|  |  |             |  |   |
|--|--|-------------|--|---|
|  | <p>with the Woodside SMP team and the general principles for the planning and mobilisation of SMPs to deliver the individual SMPs activated. Monthly resourcing reports are issued by the SMP standby contractor (SMP resourcing report register). All SMP documents and their status are tracked via SMP document register.</p> |             | <p>activation triggers as per Table C-2 of Annex C.</p>  | <p>of the SMP Operational Plan</p> <ul style="list-style-type: none"> <li>• Woodside’s online Incident Management System Records.</li> <li>• SMP component of the IAP</li> <li>• SMP Data records from field</li> </ul> |
|  |  | <p>24.3</p> | <p><b>Termination of SMP plans</b><br/>                 The Scientific Monitoring Program will be terminated in accordance with termination triggers for the SMPs detailed in Table C-2 of Annex C, and the Termination Criteria Decision-tree for Oil Spill Environmental Monitoring (Figure C-3 of Annex C):</p> | <p>Evidence of Termination Criteria triggered:</p> <ul style="list-style-type: none"> <li>• Documentation and approval by relevant stakeholders to end SMPs for specific receptor types.</li> </ul>                     |

## 5.7 Incident Management System

The Incident Management System (IMS) is both a control measure and a measurement criterion. 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 criterion, the IMS records the evidence of the timeliness of all response actions included in the environmental performance standards and the plans used of the PAP.

As the IMS does not directly remove hydrocarbons spilt into the marine environment there is no direct relationship to the response planning need.

### 5.7.1 Incident action planning

The CIMT will be required to collect and interpret information from the scene of the incident to determine support requirements to the site based IMT, develop an IAP and assist the IMT with the execution of that plan. The site-based IC may request the CIMT to complete notifications internally within Woodside, to persons/ organisations and government agencies as required. Depending on the type and scale of the incident either the CIMT Duty Manager (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 ensure techniques to control the incident are appropriate to the situation at the time.

### 5.7.2 Operational NEBA process

In the event of a response Woodside will confirm the response techniques adopted at the time of EP/OPEP acceptance remain appropriate to reduce the consequences of the spill. This process verifies 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 OPEA. In effect the operational NEBA will determine whether there is net environmental benefit to continue response operations.

### 5.7.3 Consultation engagement process

Woodside will ensure 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 persons/ organisations in the region (identified in the FSP). This includes notification to mariners to communicate navigational hazards introduced through response equipment and personnel.
- Identify and engage with relevant persons/ organisations and continually assess and review.

## 5.7.4 Environmental performance based on need

**Table 5-14: Environmental Performance – Incident Management System**

| Environmental Performance Outcome |  | To support the effectiveness of all other control measures and monitor/record the performance levels achieved. |   | Measurement Criteria (Section 5.8) |                 |
|-----------------------------------|--|--|---|------------------------------------|-----------------|
| Control measure                   |  | Performance Standard   |   |                                    |                 |
| 25                                | Operational SIMA                           | 25.1   | Confirm that the response strategies adopted at the time of acceptance remain appropriate to reduce the consequences of the spill within 24 hours.  | 1, 3A                              |                 |
|                                   |  | 25.2   | Record the evidence and justification for any deviation from the planned response activities.   |                                    |                 |
|                                   |  | 25.3   | Record the information and data from operational and scientific monitoring activities used to inform the SIMA.  |                                    |                 |
| 26                                | Stakeholder engagement                     | 26.1   | Prompt and record all notifications (including government notifications) for persons/ organisations in the region are made.   |                                    |                 |
|                                   |  | 26.2   | In the event of a response, identification of relevant stakeholders will be re-assessed throughout the response period.   |                                    |                 |
|                                   |  | 26.3   | Undertake communications in accordance with: <ul style="list-style-type: none"> <li>• Woodside Crisis Management Functional Support Team Guideline – Reputation</li> <li>• External Communication and Continuous Disclosure Procedure</li> <li>• External Stakeholder Engagement Procedure</li> </ul>   |                                    |                 |
| 27                                | Personnel required to support any response | 27.1   | Action planning is an ongoing process that involves continual review to ensure strategies to control the incident are appropriate to the situation at the time.   |                                    | 1, 3B           |
|                                   |  | 27.2   | A duty roster of trained and competent people will be maintained to ensure that minimum manning requirements are met all year round.  |                                    | 3C              |
|                                   |  | 27.3   | Immediately activate the IMT with personnel filling one or more of the following roles: <ul style="list-style-type: none"> <li>• Operations Duty Manager</li> <li>• Operations Coordinator</li> <li>• Deputy Operations Coordinator</li> <li>• Planning Coordinator</li> <li>• Logistics (materials, aviation, marine and support positions)</li> <li>• Management Support</li> <li>• Health and Safety Advisor</li> <li>• Environment Duty Manage</li> <li>• People Coordinator</li> <li>• Public Information Coordinator</li> <li>• Intelligence Coordinator</li> <li>• Finance Coordinator.</li> </ul> |                                    | 1, 2, 3B, 3C, 4 |
|                                   |  | 27.4   | 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.  |                                    |                 |

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| <b>Environmental Performance Outcome</b> |  | To support the effectiveness of all other control measures and monitor/record the performance levels achieved. |  |   |
|--|--|--|--|---|
| <b>Control measure</b>                   |  | <b>Performance Standard</b>  |  | <b>Measurement Criteria (Section 5.8)</b> |
|  |  | 27.5   | S&EM advisors will be integrated into CIMT to monitor performance of all functional roles.   |   |
|  |  | 27.6   | Continually communicate the status of the spill and support Woodside to determine the most appropriate response by delivering on the responsibilities of their role. |   |
|  |  | 27.7   | Follow the OPEA, Operational Plans, FSPs, support plans and the IAPs developed.  | 1, 2, 3A, 4                               |
|  |  | 27.8   | Contribute to Woodside's response in accordance with the aims and objectives set by the Duty Manager.  | 1, 2, 3B, 3C, 4                           |

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## 5.8 Measurement criteria for all response techniques

Woodside ensures compliance with environmental performance outcomes and standards through four primary mechanisms. The performance tables aforementioned 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 Emergency & Crisis Management Procedure. 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 Emergency & Crisis Management Procedure 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 communicated the:

- incident objectives;
- status of assets;
- operational period objectives;
- response techniques (defined during response planning); and
- 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 Security & Emergency Management Competency Dashboard

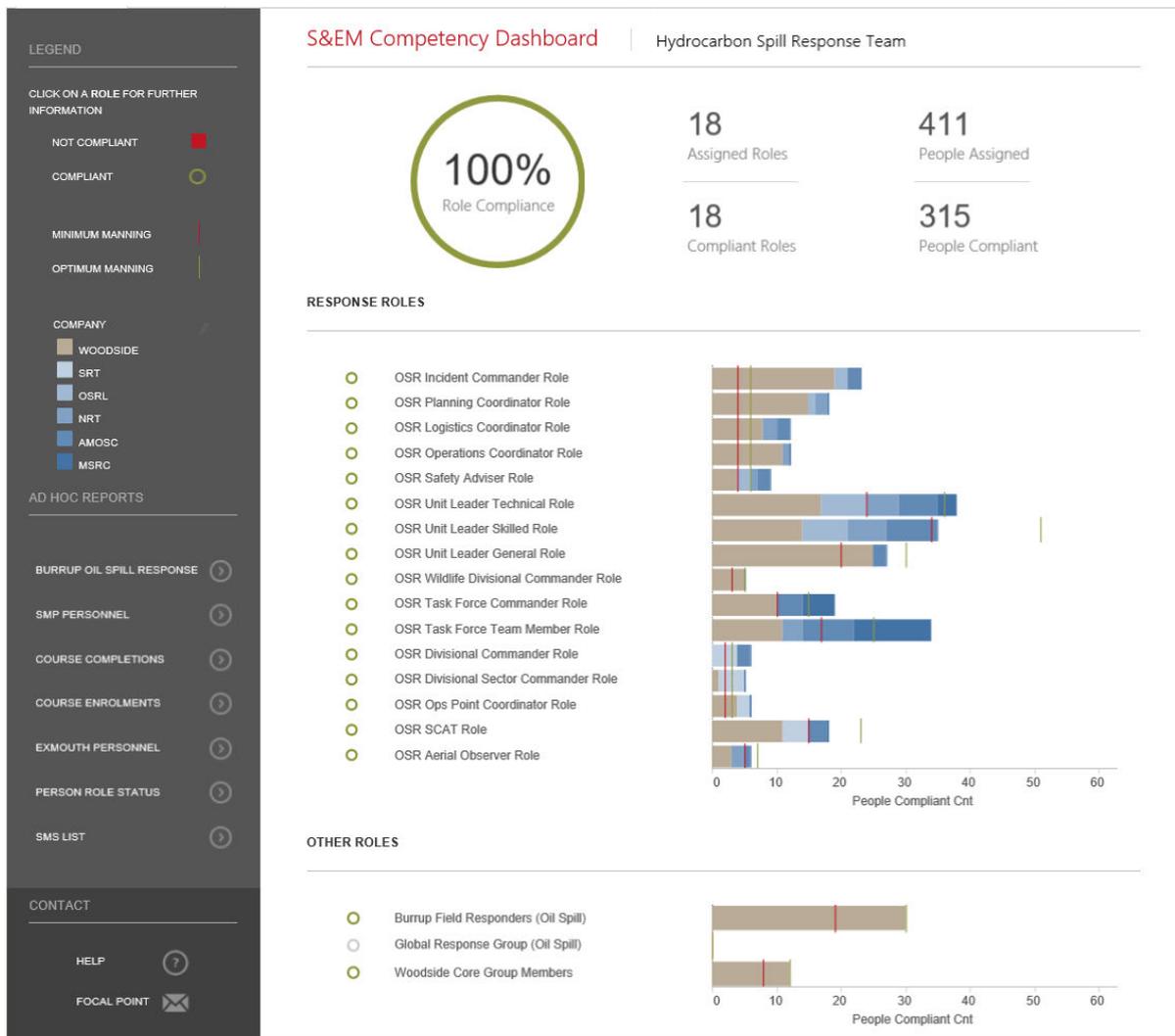
The Security & Emergency Management (S&EM) competency dashboard records the number of trained and competent responders available across Woodside, and some external providers, to participate in a response.

This number varies depending 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 5-2 shows the minimum manning numbers for the different hydrocarbon spill response roles and the number of qualified persons against those roles.

Woodside's pool of trained responders is composed of but not limited to personnel from the following organisations:

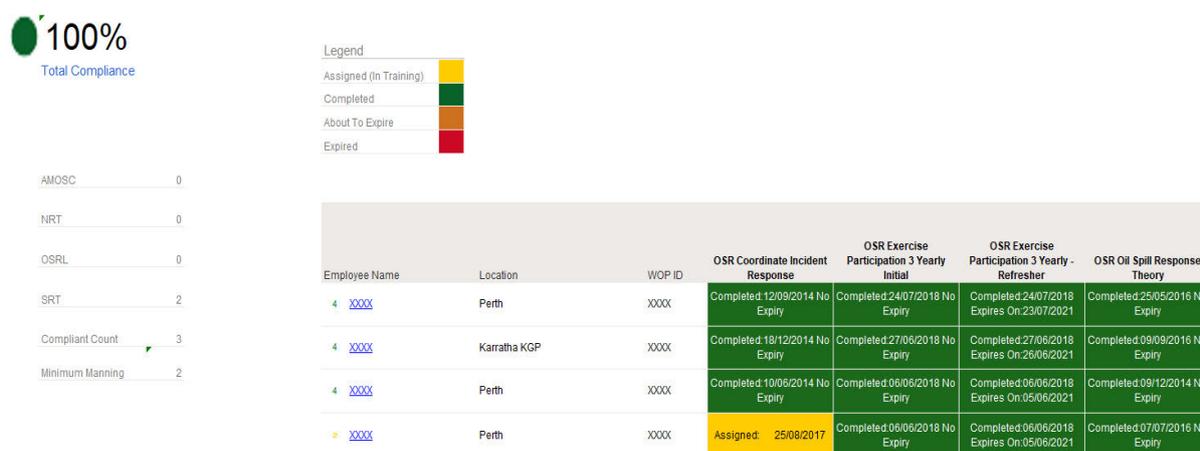
- Woodside internal
- AMOSC core group
- AMOSC
- OSRL
- Marine Spill Response Corporation (MSRC)
- AMSA
- Woodside contracted workforce



**Figure 5-2: Example screen shot of the Hydrocarbon Spill Preparedness competency dashboard**

The Dashboard is one of Woodside’s key means of monitoring its readiness to respond. It also shows Woodside can meet the requirements of the environmental performance standards related to filling certain response roles.

**Figure 5-3** shows deeper dive into the Operations Point Coordinator role and the training modules required to show competence.



**Figure 5-3: Example screen shot for the Operations Point Coordinator role**

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### 3. The Hydrocarbon Spill Preparedness ICE Assurance Process

The Hydrocarbon Spill Response Team has developed a Hydrocarbon Spill Preparedness and Response Internal Control Environment (ICE) process to align and feed into the Woodside Management System Assurance process for hydrocarbon spill. The process tracks compliance over four key control areas:

- a) **Plans** – Ensures all plans (including: OPEA, FSPs, operational plans, support plans and TRPs) are current and in line with regulatory and internal requirements.
- b) **Competency** – Ensures the competency dashboard is up to date and there are the minimum competency 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** – Tracks and monitors capability that could be required in a hydrocarbon incident, including but not limited to: integrated fleet.<sup>6</sup> vessel schedule, dispersant availability, rig/vessels monitoring, equipment stockpiles, tracking buoy locations and the CIMT duty roster.
- d) **Compliance & Assurance** – Ensures all regulator inspection outcomes are actioned and closed out, the global legislation register is up to date and the key assurance components are tracked and managed. Assurance activities (including Audits) conducted on memberships with key Oil Spill Response Organisations (OSROs) including AMOSC and OSRL are also tracked and recorded in the ICE.

The ICE assurance process records how each commitment listed in the performance tables above is managed to ensure ongoing compliance monitoring. The level of compliance can be reviewed in real time and is reported on a monthly basis through the S&EM Function.

The completion of the assurance checks (over and above the ICE process) is also applied via the Woodside Integrated Risk & Compliance System (WiRCS) and subject to the requirements of Woodside's Provide Assurance Procedure.

### 4. The Hydrocarbon Spill Preparedness and Response Procedure

This procedure sets out how to plan and prepare for a liquid hydrocarbon spill to the marine environment. (Note, this procedure does not apply to scenarios relating to gas releases in the marine environment).

This procedure details the:

<sup>6</sup> 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

- Requirement for an OPEP to be developed, maintained, reviewed, and approved by appropriate regulators (where applicable) including:
  - Defining how spill scenarios are developed on an activity specific basis;
  - Developing and maintaining all hydrocarbon spill related plans;
  - Ensuring the ongoing maintenance of training and competency for personnel;
  - Developing the testing of spill response arrangements; and
  - Maintaining access to identified equipment and personnel.
- Planning for hydrocarbon spill response preparedness
- Accountabilities for hydrocarbon spill response preparedness
- Spill training requirements
- Requirements for spill exercising / testing of spill response arrangements
- Spill equipment and services requirements.

The procedure also details the roles and responsibilities of the dedicated Woodside Hydrocarbon Spill Preparedness team. This team is responsible for:

- Assuring that Woodside hydrocarbon spill responders meet competency requirements.
- Establishing the competency requirements, annual training schedule and a training register of trained personnel.
- Establishing and maintaining the total numbers of trained personnel required to provide an effective response to any hydrocarbon spill incident.
- Ensuring equipment and services contracts are maintained
- Establishing OPEPs
- Establishing OPEAs
- Priority response receptor determination
- ALARP determination
- Ensuring compliance and assurance is undertaken in accordance with external and internal requirements.

## 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 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

| <b>Alternative Control Measures considered</b><br><i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |   |   |  |  |                    |
|---|---|---|--|--|--------------------|
| <b>Option considered</b>  | <b>Environmental consideration</b>  | <b>Feasibility</b>  | <b>Approximate cost</b>                      | <b>Assessment conclusions</b>  | <b>Implemented</b> |
| 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 approx. 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

| <b>Additional Control Measures considered</b><br><i>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</i> |   |  |  |   |                    |
|---|---|--|--|---|--------------------|
| <b>Option considered</b>  | <b>Environmental consideration</b>  | <b>Feasibility</b>   | <b>Approximate cost</b>  | <b>Assessment conclusions</b>   | <b>Implemented</b> |
| Additional personnel trained to use systems.  | Current arrangement provides an environmental benefit in the availability of trained personnel facilitating access to monitoring data used to inform all other response techniques. No improvement required.      | 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 approx. 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, additional needs are met from Woodside owned stocks in King Bay Support Base (KBSB) 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.  | Woodside has access to a pool of trained, competent observers at strategic locations to ensure timely and sustainable response. Additional observers are available through current contracts with AMOSC and OSRL. | Aviation standards and guidelines ensure 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 ensure training and competency is maintained. | 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                 |

##### 6.1.1.3 Improved Control Measures

| <b>Additional Control Measures considered</b><br><i>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</i> |   |   |  |  |                    |
|---|---|---|--|--|--------------------|
| <b>Option considered</b>  | <b>Environmental consideration</b>  | <b>Feasibility</b>  | <b>Approximate cost</b>  | <b>Assessment conclusions</b>  | <b>Implemented</b> |
| 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                 |

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| <b>Additional Control Measures considered</b>  |   |   |  |  |    |
|--|---|---|--|--|----|
| <i>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</i> |   |   |  |  |    |
| Night time 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.<br><br>Flight time limitations will be adhered to. | No improvement can be made without risk to personnel health and safety and breaching Woodside's Golden Rules.  | This option is not adopted as the safety considerations outweigh any environmental benefit gained.   | No |
| Faster mobilisation time (for water quality monitoring).   | Due to the restriction on accessing the spill location on Day one there is no environmental benefit in having vessels available from day one. The cost of having dedicated equipment and personnel is disproportionate to the environmental benefit. The availability of vessels and personnel meets the response need.<br><br>Shortening the timeframes for vessel availability would require dedicated response vessels on standby in KBSB.<br><br>The cost and organisational complexity of employing two dedicated response vessels (approximately \$15M/year per vessel) is considered disproportionate to the potential environmental benefit to be realised by adopting this delivery options. | Operations are not feasible on day 1 as the hydrocarbon will take time to surface, and volatility has potential to cause health concerns within the first 24 hours of the response.   | Cost for purchase of equipment approx. A\$200,000. Ongoing costs per annum for cost of hire and pre-positioning for life of asset/activity would be larger than the purchase cost.<br><br>Dedicated equipment and personnel, living locally and on short notice to mobilise. The cost would be approx. A\$1 m per annum, which is disproportionate to the incremental benefit this would provide, assets are already available on day 1. 2 integrated fleet vessels are available from day 1, however these could be tasked with other operations. | This option is not adopted as the area could not be accessed earlier due to safety considerations. Additionally, the cost and complexity of implementation outweighs the benefits. | 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 PAP.

- Alternative
  - None selected
- Additional
  - None selected
- Improved
  - None selected

## 6.2 Source Control – ALARP Assessment

Woodside has based its response planning on the worst-case credible scenarios (as described in Section 2.2). This would be undertaken via ROV intervention on the well control package or Xmas Tree. This allows barriers to be closed isolating the well.

### 6.2.1 ROV Intervention

In the case of a subsea hydrocarbon release the intervention vessel ROV will be able to close either the WCP or Xmas Tree within 12 hours.

There are various failure scenarios that can result in a subsea release. All of these scenarios require failure of separate systems to occur simultaneously. Failure of the vessel and/or ROV in isolation does not result in a release. It is not considered credible to have a failure of the WCP requiring intervention in addition to failure of the vessel or both ROVs.

Where possible, the light well intervention vessel (LWIV) on location would perform inspection activities.

Following confirmation of an emergency event involving a subsurface release, Woodside would mobilise inspection class ROVs via existing frame agreements to undertake inspection activities. ROV would be available for deployment within seven days. It is not expected any additional regulatory approvals would be required as inspection, maintenance and repair is within the scope of activities for GWA and contracted Frame Agreement vessels.

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.

#### 6.2.1.1 Safety Case considerations

Woodside has assessed against the NOPSEMA safety case guidance (NOPSEMA N-09000-GN1661), confirming 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 Table 6-4 for implementing this response would be “no safety case revision required”. Well intervention activities would be implemented concurrently to the actions required by the “no Safety Case” revision scenario, 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.

#### 6.2.2.1 Safety Case considerations

Woodside has assessed against the NOPSEMA safety case guidance (NOPSEMA N-09000-GN1661) and can confirm 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 Table 6-4 for implementing this response would be “no safety case revision required”. Debris clearance and removal equipment deployment activities would be implemented concurrently to the actions required by the “no Safety Case” revision scenario, therefore, the Safety Case scenario will have no impact on the delivery of the strategy.

**Table 6-1: Safety case revision conditions and assumptions**

| Case                          | No safety case revision required   | Safety case revision and submission  | Safety case revision and scope of validation  |
|-------------------------------|--|--|---|
| <b>Description</b>            | 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.  |
| <b>Conditions/assumptions</b> | <ul style="list-style-type: none"> <li>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.</li> </ul> | <ul style="list-style-type: none"> <li>Safety case timing assumes vessel/MODU selected and crew and available for workshops and safety case studies.</li> <li>Assumes nil scope of validation. This assumes that the vessel for SSDI 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.</li> <li>Assumes safety case preparation is undertaken 24/7.</li> </ul> | <ul style="list-style-type: none"> <li>Safety case timing assumes vessel/MODU selected and crew and available for workshops and safety case studies.</li> <li>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.</li> <li>Assumes safety case preparation is undertaken 24/7.</li> </ul> |

### 6.2.3 Activation/Mobilisation – Control Measure Options Analysis

This section details the assessment of alternative, additional or improved control measures that were considered to ensure the selected level of performance in Section 5.2 reduces the risk to ALARP. The Alternative, Additional and Improved control measures that have been assessed and selected are highlighted in green and the relevant performance of the selected control is cross referenced. Items highlighted in red have been considered and rejected on the basis that they are not feasible, or the costs are clearly grossly disproportionate compared to the environmental benefit.

#### 6.2.3.1 Alternative control measures

| <b>Alternative Control Measures considered</b><br><i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |                             |             |                  |                        |             |
|---|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered   | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical alternative control measures identified.  |                             |             |                  |                        | N/A         |

#### 6.2.3.2 Additional Control Measures

| <b>Additional Control Measures considered</b><br><i>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</i> |                             |             |                  |                        |             |
|---|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered   | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical additional control measures identified.   |                             |             |                  |                        | N/A         |

#### 6.2.3.3 Improved Control Measures

| <b>Improved Control Measures considered</b><br><i>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</i> |                             |             |                  |                        |             |
|--|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered  | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical improved control measures identified.  |                             |             |                  |                        | N/A         |

### 6.2.4 Deployment – Control Measure Options Analysis

#### 6.2.4.1 Alternative control measures

| <b>Alternative Control Measures considered</b><br><i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |                             |             |                  |                        |             |
|---|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered   | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical alternative control measures identified.  |                             |             |                  |                        | N/A         |

#### 6.2.4.2 Additional Control Measures

| <b>Additional Control Measures considered</b><br><i>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</i> |                             |             |                  |                        |             |
|---|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered   | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |

|   |     |
|---|-----|
| No reasonably practical additional control measures identified. | N/A |
|---|-----|

### 6.2.4.3 Improved Control Measures

| <b>Improved Control Measures considered</b><br><i>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</i> |                             |             |                  |                        |             |
|--|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered  | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical improved control measures identified.  |                             |             |                  |                        | N/A         |

### 6.2.4.4 Selected control measures

Following review of alternative, additional and improved control measures, the following controls were selected for implementation for the activity.

- Alternative
  - None selected
- Additional
  - None selected
- Improved
  - None selected

### 6.3 Source Control via Vessel SOPEP – ALARP Assessment

Alternative, Additional and Improved options have been assessed against the base capability described in Section 5 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 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

| <b>Alternative Control Measures considered</b><br><i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |                             |             |                  |                        |             |
|---|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered   | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical alternative control measures identified.  |                             |             |                  |                        | N/A         |

##### 6.3.1.2 Additional Control Measures

| <b>Additional Control Measures considered</b><br><i>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</i> |                             |             |                  |                        |             |
|---|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered   | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical additional control measures identified.   |                             |             |                  |                        | N/A         |

##### 6.3.1.3 Improved Control Measures

| <b>Improved Control Measures considered</b><br><i>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</i> |                             |             |                  |                        |             |
|--|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered  | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical improved control measures identified.  |                             |             |                  |                        | N/A         |

##### 6.3.1.4 Selected control measures

Following review of alternative, additional and improved control measures, the following controls were selected for implementation for the activity.

- Alternative
  - None selected
- Additional
  - None selected
- Improved
  - None selected

## 6.4 Oiled Wildlife Response – ALARP Assessment

Alternative, Additional and Improved options have been identified and assessed against the base capability described in Section 5 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.

### 6.4.1 Existing Capability – Wildlife Response

Woodside's existing level of capability is based on internal and third-party resources that are available 24 hours per day, 7 days per week. The capability presented below is displayed as ranges to incorporate operational factors such as weather, crew/vessel/aircraft/vehicle location and duties, survey or classification society inspection requirements, overflight/port/quarantine permits and inspections, crew/pilot duty and fatigue hours, refuelling/re-stocking provisions, and other similar logistic and operational limitation that are beyond Woodside's direct control.

### 6.4.2 Oiled Wildlife Response – Control Measure Options Analysis

#### 6.4.2.1 Alternative Control Measures

| <b>Alternative Control Measures Considered</b><br><i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |   |  |   |   |                    |
|---|---|--|---|---|--------------------|
| <b>Option considered</b>  | <b>Environmental consideration</b>  | <b>Feasibility</b>   | <b>Approximate cost</b>   | <b>Assessment conclusions</b>   | <b>Implemented</b> |
| Direct contracts with service providers   | This option duplicates the capability accessed through AMOSC and OSRL and would compete for the same resources. Does not provide a significant increase in environmental benefit. | These delivery options provide increased effectiveness through more direct communication and control of specialists. However, no significant net benefit is anticipated. | Duplication of capability – already subscribed to through contracts with AMOSC and OSRL | This option is not adopted as the existing capability meets the need. | No                 |

#### 6.4.2.2 Additional Control Measures

| <b>Additional Control Measures Considered</b><br><i>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</i> |   |   |  |   |                    |
|---|---|---|--|---|--------------------|
| <b>Option considered</b>  | <b>Environmental consideration</b>  | <b>Feasibility</b>  | <b>Approximate cost</b>  | <b>Assessment conclusions</b>   | <b>Implemented</b> |
| Additional wildlife treatment systems   | <p>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.</p> <p>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.</p> <p>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.</p> <p>Current capability meets the needs required and there is no additional environmental benefit in adopting the improvements.</p> | <p>Given the low likelihood of such an event occurring and the low environmental benefit of an offshore response, the cost of implementing measures to reduce the mobilisation time is considered disproportionate to the benefit.</p> <p>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.</p> <p>Oiled wildlife response capacity would be addressed for open Commonwealth waters through the AMOSC arrangements, as informed by operational monitoring.</p> <p>The cost and organisational complexity of this approach is moderate, and the overall delivery effectiveness is high.</p> | Additional wildlife response resources could total A\$1700 per operational site per day. | This option is not adopted as the existing capability meets the need. | No                 |
| Additional trained wildlife responders  | <p>Current numbers meet the needs required and additional personnel are available through existing contracts with oil spill response organisations and environmental panel contractors.</p> <p>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.</p> <p>The potential environmental benefit of training additional personnel is expected to be low.</p>  | The capability provides the capacity to treat approximately 600 wildlife units (primarily avian wildlife) by Day 6, with additional capacity available from OSRL. Additional equipment and facilities would be required to support ongoing response, depending on the scale of the event and the impact to wildlife. Materials for holding facilities, portable pools, enclosures and rehabilitation areas would be sourced as required.  | Additional wildlife response personnel cost A\$2000 per person per day                   | This option is not adopted as the existing capability meets the need. | No                 |

### 6.4.2.3 Improved Control Measures

| <b>Improved Control Measures considered</b>   |  |  |   |   |                    |
|---|--|--|---|---|--------------------|
| <i>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</i> |  |  |   |   |                    |
| <b>Option considered</b>  | <b>Environmental consideration</b>   | <b>Feasibility</b>   | <b>Approximate cost</b>   | <b>Assessment conclusions</b>   | <b>Implemented</b> |
| Faster mobilisation time for wildlife response  | <p>Response time is limited by specialist personnel mobilisation time. Current timing is sufficient for expected first shoreline contact.</p> <p>This control measure provides increased effectiveness through faster mobilisation of specialists. However, no significant net environmental benefit is expected due to shoreline stranding times.</p> | <p>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.</p> <p>The selected delivery options provide the capacity to mobilise an oiled wildlife response capable of treating up to 600 wildlife from at least Day 6 and exceeds the estimated Level 1-2 oiled wildlife response thought to be applicable. This delivery option provides the maximum expertise pooled across the participating operators, backed up by the international resources provided by OSRL.</p> <p>The availability of vessels and personnel meets the response need.</p> | <p>Wildlife response packages to preposition at vulnerable sites identified through the deterministic modelling cost A\$700 per package per day.</p> <p>The cost of having dedicated equipment and personnel available to respond faster is considered disproportionate to the environmental benefit.</p> | This option is not adopted as the existing capability meets the need. | No                 |

### 6.4.3 Selected control measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the PAP.

- Alternative
  - None selected
- Additional
  - None selected
- Improved
  - None selected

## 6.5 Waste Management – ALARP Assessment

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. Control measures where there is not a clear justification for their inclusion or exclusion may be subject to a detailed ALARP assessment.

### 6.5.1 Existing Capability – Waste Management

Woodside's 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 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/restocking provisions, and other similar logistic and operational limitation that are beyond Woodside's direct control.

### 6.5.2 Waste Management – Control Measure Options Analysis

#### 6.5.2.1 Alternative Control Measures

| Alternative Control Measures Considered<br><i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |                             |             |                  |                        |             |
|--|-----------------------------|-------------|------------------|------------------------|-------------|
| Option considered  | Environmental consideration | Feasibility | Approximate cost | Assessment conclusions | Implemented |
| No reasonably practical alternative control measures identified.   |                             |             |                  |                        |             |

#### 6.5.2.2 Additional Control Measures

| Additional Control Measures Considered<br><i>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</i> |   |  |  |   |             |
|--|---|--|--|---|-------------|
| 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 waste contractor'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 PAP. | Cost for increased waste disposal capability would be approx. A\$1300 per m <sup>3</sup> .<br>Cost for increased onshore temporary waste storage capability would be approx. A\$40 per unit per day. | This option is not adopted as the existing capability meets the need. | No          |

#### 6.5.2.3 Improved Control Measures

| Improved Control Measures considered<br><i>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</i> |  |  |  |   |             |
|---|--|--|--|---|-------------|
| Option considered   | Environmental consideration  | Feasibility  | Approximate cost   | Assessment conclusions  | Implemented |
| Faster response time  | The access to waste contractor 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.<br><br>Bulk transport to waste contractor's licensed waste management facilities would be undertaken via controlled-waste-licensed vehicles and in accordance with Environmental Protection (Controlled Waste) Regulations 2004.<br><br>The environmental benefit from successful waste storage will reduce pressure on the treatment and disposal facilities reducing ecological consequences by safely | Woodside already maintains an equipment stockpile in Exmouth to enable shorter response times to incidents. This stockpile includes temporary waste storage equipment.<br><br>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          |

|  |   |  |  |  |  |
|--|---|--|--|--|--|
|  | <p>securing waste. In addition, waste storage and transport will allow continuous response operations to occur.</p> <p>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.</p> |  |  |  |  |
|--|---|--|--|--|--|

### 6.5.3 Selected control measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the PAP.

- Alternative
  - None selected
- Additional
  - None selected
- Improved
  - None selected

## 6.6 Scientific Monitoring – ALARP Assessment

Alternative, Additional and Improved options have been identified and assessed against the base capability described in **Section 5.6** 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.

### 6.6.1 Existing Capability – Scientific Monitoring

Woodside's existing level of capability is based on internal and third-party resources that are available 24 hours, 7 days per week. The capability presented below is displayed as ranges to incorporate operational factors such as weather, crew/vessel/aircraft/vehicle location and duties, survey or classification society inspection requirements, overflight/port/quarantine permits and inspections, crew/pilot duty and fatigue hours, refuelling/ re-stocking provisions, and other similar logistic and operational limitation that are beyond Woodside's direct control.

### 6.6.2 Scientific Monitoring – Control Measure Options Analysis

#### 6.6.2.1 Alternative Control Measures

| Alternative Control Measures considered   |                          |   |             |   |   |
|---|--------------------------|---|-------------|---|---|
| <i>Alternative, including potentially more effective and/or novel control measures are evaluated as replacements for an adopted control</i> |                          |   |             |   |   |
| Ref   | Control Measure Category | Option considered   | Implemented | Environmental Consideration   | Feasibility / Cost  |
| SM01  | System                   | Analytical laboratory facilities closer to the likely spill affected area | No          | SM01 water quality monitoring requires water samples to be transported to National Association of Testing Authorities (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). The environmental consideration of having access to suitable laboratory facilities in Karratha or Exmouth 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). | 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.   |
| SM01  | System                   | Dedicated contracted SMP vessel (exclusive to Woodside)                   | No          | Would provide faster mobilisation time of scientific monitoring resources, 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 effectiveness of this alternative control (weather dependency, availability and survivability) is rated as very low |

#### 6.6.2.2 Additional Control Measures

| Additional Control Measures considered   |                          |  |             |  |   |
|--|--------------------------|--|-------------|--|---|
| <i>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</i> |                          |  |             |  |   |
| Ref  | Control Measure Category | Option considered  | Implemented | Environmental Consideration  | Feasibility / Cost  |
| SMO 1  | System                   | Determine baseline data needs and provide implementation plan in the event of an unplanned hydrocarbon release | Yes         | Address resourcing needs to collect post spill (pre-contact) baseline data as spill expands in the event of a LOWC or loss of marine diesel due to vessel collision from the PAP activities. | As part of Woodside's Scientific Monitoring Program the following are considered and incorporated in the SMP Standby Service contract. <ul style="list-style-type: none"> <li>i. Woodside rely on existing environmental baseline for receptors which have predicted hydrocarbon contact (above environment threshold) &lt;10 days and acquiring pre-emptive data in the event of a loss of marine diesel due to vessel collision from the PAP activities based on receptors predicted to have hydrocarbon contact &gt;10 days.</li> <li>ii. Ensure there is appropriate baseline for key receptors for all geographic locations that are potentially impacted &lt;10 days of spill event.</li> </ul> |

|  |  |  |  |  |   |
|--|--|--|--|--|---|
|  |  |  |  |  | iii. Address resourcing needs to collect pre-emptive baseline as the spill expands in the event of a LOWC or loss of marine diesel due to vessel collision from the PAP activities. |
|--|--|--|--|--|---|

### 6.6.2.3 Improved Control Measures

**Improved Control Measures considered** – No reasonably practicable improved Control Measures identified.

### 6.6.3 Selected Control Measures

Following review of alternative, additional and improved control measures as outlined above, the following controls were selected for implementation for the PAP.

- Alternative
  - None selected
- Additional
  - Determine baseline data needs and activate SMPs for any identified PBAs in the event of an unplanned hydrocarbon release
- Improved
  - None selected

### 6.6.4 Operational Plan

Key actions from the Scientific Monitoring Program Operational Plan for implementing the response are outlined in Table 6-5.

**Table 6-2: Scientific monitoring program operational plan actions**

| Responsibility  | Action   |
|---|--|
| <b>Activation</b>   |  |
| CIMT Planning<br>(CIMT Planning – Environment Unit)   | Mobilises SMP Lead/Manager and SMP Coordinator to the CIMT Planning function.  |
| CIMT Planning<br>(CIMT Planning – Environment Unit)<br>(SMP Lead/Manager and SMP Coordinator)                   | Constantly assesses all outputs from OM01, OM02 and OM03 ( <b>Annex B</b> ) to determine receptor locations and receptors at risk. Confirm sensitive receptors likely to be exposed to hydrocarbons, timeframes to specific receptor locations and which SMPs are triggered.<br>Review baseline data for receptors at risk.  |
| CIMT Planning<br>(CIMT Planning – Environment Unit)<br>(SMP Lead/Manager and SMP Coordinator)                   | SMP co-ordinator stands up SMP Standby contractor.<br>Stands up subject matter experts, if required.   |
| CIMT Planning (CIMT Planning – Environment Unit)<br>(SMP Lead/Manager, SMP Coordinator, SMP Standby contractor) | Establish if, and where, pre-contact baseline data acquisition is required.<br>Determines practicable baseline acquisition program based on predicted timescales to contact and anticipated SMP mobilisation times.<br>Determines scope for preliminary post-contact surveys during the Response Phase.<br>Determines which SMP activities are required at each location based on the identified receptor sensitivities. |
| CIMT Planning (CIMT Planning – Environment Unit)<br>(SMP Lead/Manager, SMP Coordinator, SMP Standby contractor) | If response phase data acquisition is required, stand up the contractor SMP teams for data acquisition and instruct them to standby awaiting further details for mobilisation from the IMT.  |

| Responsibility  | Action   |
|---|--|
| CIMT Planning (CIMT Planning – Environment Unit)<br>(SMP Lead/Manager, SMP Coordinator, SMP Standby contractor) | SMP standby contractor, to prepare the Field Implementation Plan.<br>Prepare and obtain sign-off of the Response Phase SMP work plan and Field Implementation Plan.<br>Update the IAP.   |
| CIMT Planning (CIMT Planning – Environment Unit)<br>(SMP Lead/Manager, SMP Coordinator, SMP Standby contractor) | Liaise with CIMT Logistics, and determine the status and availability of aircraft, vessels and road transportation available to transport survey personnel and equipment to point of departure.<br>Engage with SMP standby contractor, SMP Manager and CIMT Logistics to establish mobilisation plan, secure logistics resources and establish ongoing logistical support operations, including: <ul style="list-style-type: none"> <li>• Vessels, vehicles and other logistics resources</li> <li>• Vessel fit-out specifications (as</li> <li>• Detailed in the Scientific Monitoring Program Operational Plan</li> <li>• Equipment storage and pick-up locations</li> <li>• Personnel pick-up/airport departure locations</li> <li>• Ports of departure</li> <li>• Land based operational centres and forward operations bases, Accommodation and food requirements.</li> </ul> |
| CIMT Planning (CIMT Planning – Environment Unit)<br>(SMP Lead/Manager, SMP Coordinator, SMP Standby contractor) | Confirm communications procedures between Woodside SMP team, SMP standby contractor, SMP Team Leads and Operations Point Coordinator.  |
| <b>Mobilisation</b>   |  |
| CIMT Logistics  | Engage vessels and vehicles and arrange fitting out as specified by the mobilisation Plan Confirm vessel departure windows and communicate with the Service Provider SMP Manager.<br>Agree SMP mobilisation timeline and induction procedures with the Division and Sector Command Point(s).   |
| CIMT Logistics  | Coordinate with SMP standby contractor to mobilise teams and equipment according to the logistics plan and Sector induction procedures.  |
| SMP Survey Team Leads   | SMP Survey Team Leader(s) coordinate on-ground/on-vessel mobilisations and support services with the Sector Command point(s).  |

### 6.6.5 ALARP and Acceptability Summary

| <b>ALARP and Acceptability Summary</b>   |   |
|--|---|
| <b>Scientific Monitoring</b>   |   |
| <b>ALARP Summary</b>   | All known reasonably practicable control measures have been adopted   |
|  | X Additional Measures: Determine baseline data needs and activate SMPs for any identified PBAs in the event of an unplanned hydrocarbon release   |
|  | No reasonably practical additional, alternative, and/or improved control measure exists   |
| <p>The resulting scientific monitoring capability has been assessed against the worst-case credible spill scenario (CS-01). The range of strategies provide an ongoing approach to monitoring operations to assess and evaluate the scale and extent of impacts.</p> <p>All 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 SMP's main objectives can be met, with the addition of one alternative control measures to provide further benefit.</p> |   |
| <b>Acceptability Summary</b>   | <ul style="list-style-type: none"> <li>• The control measures selected for implementation manage the potential impacts and risks to ALARP.</li> <li>• In the event of a hydrocarbon spill for the PAP, the control measures selected, meet or exceed the requirements of Woodside Management System and industry best-practice.</li> <li>• Throughout the PAP, relevant Australian standards and codes of practice will be followed to evaluate the impacts from a loss of marine diesel due to vessel collision.</li> <li>• 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 the worse case credible case scenario, and uncertainty has not been used as a reason for postponing control measures.</li> </ul> |
| <p>On the basis of the impact assessment above and in Section 7 of the EP, Woodside considers the adopted controls discussed manage the impacts and risks associated with implementing scientific monitoring activities to a level that is ALARP and acceptable.</p>   |   |

## 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

Additional impacts and risks associated with the control measures not included within the scope of the EP include:

- vessel operations and anchoring
- presence of personnel on the shoreline
- vegetation cutting
- additional stress or injury caused to wildlife
- waste generation.

### 7.2 Analysis of impacts and risks from implementing response techniques

The table below compares the adopted control measures for this activity against the environmental values that can be affected when they are implemented.

**Table 7-1: Analysis of risks and impacts**

|                         | Environmental Value |                         |               |             |                    |         |                |
|-------------------------|---------------------|-------------------------|---------------|-------------|--------------------|---------|----------------|
|                         | Soil & groundwater  | Marine sediment quality | Water quality | Air quality | Ecosystems/habitat | Species | Socio-economic |
| Monitor and evaluate    |                     | ✓                       | ✓             |             | ✓                  | ✓       |                |
| Oiled wildlife response |                     |                         |               |             | ✓                  | ✓       |                |
| Scientific monitoring   | ✓                   | ✓                       | ✓             | ✓           | ✓                  | ✓       | ✓              |
| Waste management        | ✓                   |                         |               | ✓           | ✓                  | ✓       | ✓              |

### 7.3 Evaluation of impacts and risks from implementing response techniques

#### Vessel operations and anchoring

During the implementation of response techniques, where water depths allow, it is possible 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.

#### Presence of personnel on the shoreline

Presence of personnel on the shoreline during shoreline survey operations could potentially result in disturbance to wildlife and habitats. During the implementation of response techniques, it is possible personnel may have minimal, localised impacts on habitats, wildlife and coastlines. The impacts associated with human presence on shorelines during shoreline surveys and response operations may include:

- damage to vegetation/habitat, especially in sensitive locations such as mangroves and turtle nesting beaches, to gain access during shoreline surveys
- damage or disturbance to wildlife during shoreline surveys
- compaction of sediments.

Any impacts are expected to be localised with full recovery expected.

#### 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.

### **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), generated from oiled wildlife response operations
- semi-solids/solids (oily solids), generated from oiled wildlife response operations
- debris (e.g. seaweed, sand, woods, plastics), generated from oiled wildlife response operations.

If not managed and disposed of correctly, wastes generated during the response have the potential for secondary contamination similar to that described above, impacts to wildlife through contact with or ingestion of waste materials and contamination risks if not disposed of correctly onshore.

## **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 this environmental assessment is seeking to identify how to maintain the level of impact and risks at levels that are ALARP and of an acceptable level rather than exploring further impact and risk reduction. It is for this reason that the treatment measures identified in this assessment will be captured in Operational Plans, TRPs, and/or the FSP.

### **Vessel operations and access in the nearshore environment**

- If vessels are required for access, anchoring locations will be selected to minimise disturbance to benthic primary producer habitats. Where existing fixed anchoring points are not available, locations will be selected to minimise impact to nearshore benthic environments with a preference for areas of sandy seabed where they can be identified (PS 8.2).
- Shallow draft vessels will be used to access remote shorelines to minimise the impacts associated with seabed disturbance on approach to the shorelines (PS 8.3).

### **Presence of personnel on the shoreline**

- Shoreline access route (foot, car, vessel and helicopter) with the least environmental impact identified will be selected by a specialist in SCAT operations (PS 8.1).
- Vehicular access will be restricted on dunes, turtle nesting beaches and in mangroves (PS 8.4).

### **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 15.1).

**Waste generation**

- All oiled wildlife response sites zoned and marked before operations commence to prevent secondary contamination and minimise the mixing of clean and oiled waste (PS 17.1).

## 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 has 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:
  - all 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 scenarios from this activity
- the likelihood of the WCCS spill has been ignored in evaluating what was reasonably practicable.

## 9 ACCEPTABILITY CONCLUSION

Following the ALARP evaluation process, Woodside considers the hydrocarbon spill risks and impacts to 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 (external persons/ organisations) and 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. International Convention for the Prevention of Pollution from Ships (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 & 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 PAP.   |
| 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 PAP.  |
| 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.   |
| 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.<br>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.<br>(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.   |

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| Term                   | Description / Definition   |
|------------------------|--|
| 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. Refer to the Woodside OPEA for more details. |
| Regulator              | NOPSEMA are the Environment Regulator under the Environment Regulations.   |
| Reliability            | The probability that at any point in time a control measure will operate correctly for a further specified length of time.   |
| Response technique     | The key priorities and objectives to be achieved by the response plan<br>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.  |
| 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.                                |

## 11.2 Abbreviations

| Abbreviation            | Meaning   |
|-------------------------|---|
| AIIIMS                  | Australasian Inter-Service Incident Management System   |
| AHV                     | Anchor Handling Vessel  |
| ALARP                   | As low as reasonably practicable  |
| AMOSOC                  | Australian Marine Oil Spill Centre  |
| AMP                     | Australian Marine Park  |
| AMSA                    | Australian Maritime Safety Authority  |
| APPEA                   | Australian Petroleum Production and Exploration Association   |
| AUV                     | Autonomous Underwater Vehicle   |
| BAOAC                   | Bonn Agreement Oil Appearance Code  |
| BOP                     | Blowout Preventer   |
| CEDRE                   | Centre for Documentation, Research and Experimentation on Accidental Water Pollution  |
| CERCLA                  | Comprehensive Environmental Response, Compensation, and Liability Act (US)  |
| CFD                     | Computational Fluid Dynamic   |
| CIMT                    | Corporate Incident Management Team  |
| CMT                     | Crisis Management Team  |
| cSt                     | Centistokes   |
| DBCA                    | Western Australia Department of Biodiversity, Conservation and Attractions (former Western Australian Department of Parks and Wildlife) |
| DM                      | Duty Manager  |
| DOR                     | Dispersant to Oil Ratio   |
| EMBA                    | Environment that May Be Affected  |
| EMSA                    | European Maritime Safety Agency   |
| Environment Regulations | Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009  |
| EP                      | Environment Plan  |
| EPBC Act                | Environment Protection and Biodiversity Conservation Act 1999   |
| ESI                     | Environmental Sensitivity Index   |
| ESD                     | Environmentally Sustainable Development   |
| ESP                     | Environmental Services Panel  |
| FSP                     | First Strike Plan   |
| FWADC                   | Fixed Wing Aerial Dispersant Contract   |
| GDS                     | Global Dispersant Stockpile (service from OSRL)   |
| GIS                     | Geographic Information System   |
| GRN                     | Global Response Network   |
| HAZID                   | Hazard Identification   |

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| Abbreviation | Meaning   |
|--------------|---|
| HSEQ         | Health Safety Environment and Quality                                     |
| IAP          | Incident Action Plan  |
| ICE          | Incident Control Environment  |
| IGEM         | Industry-Government Environmental Meta-database                           |
| IMS          | Incident Management System  |
| IMSA         | Index of Marine Surveys for Assessment                                    |
| IMT          | Incident Management Team  |
| IOGP         | International Association of Oil and Gas Producers                        |
| IPIECA       | International Petroleum Industry Environment Conservation Association     |
| ISV          | Infield support vessel  |
| IT           | Information Technology  |
| ITOPF        | International Tanker Owners Pollution Federation                          |
| IUCN         | International Union for Conservation of Nature                            |
| KBSF         | King Bay Support Facility   |
| LEL          | Lower Explosive Limit   |
| LOWC         | Loss of Well Containment  |
| LWI          | Light Well Intervention   |
| LWIV         | Light Well Intervention Vessel  |
| MARPOL       | International Convention for the Prevention of Pollution from Ships       |
| MDO          | Marine Diesel Oil   |
| MMA          | Marine Management Area  |
| MODU         | Mobile Offshore Drilling Unit   |
| MOU          | Memorandum of Understanding   |
| MSRC         | Marine Spill Response Corporation   |
| NATA         | National Association of Testing Authorities (Australia)                   |
| NEBA         | Net Environmental Benefit Analysis  |
| NOAA         | National Oceanic and Atmospheric Administration                           |
| NOPSEMA      | National Offshore Petroleum Safety and Environmental Management Authority |
| NRDA         | Natural Resource Damage Assessment  |
| NWBM         | Non-Water Based Muds  |
| OIE          | Offset Installation Equipment   |
| OILMAP       | Oil Spill Model and Response System                                       |
| OM           | Operational Monitoring  |
| OPEA         | Oil Pollution Emergency Arrangements                                      |
| OPEP         | Oil Pollution Emergency Plan  |
| OSCA         | Oil Spill Cleaning Agent (registered for use within the National Plan)    |

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| Abbreviation | Meaning   |
|--------------|---|
| OSPRMA       | Oil Spill Preparedness and Response Mitigation Assessment |
| OSRL         | Oil Spill Response Limited                                |
| OSRO         | Oil Spill Response Organisations                          |
| OSTM         | Oil Spill Trajectory Modelling                            |
| OWRP         | Oiled Wildlife Response Plan                              |
| OWROP        | Regional Oiled Wildlife Response Operational Plan         |
| PAP          | Petroleum Activities Program                              |
| PBA          | Pre-emptive Baseline Areas                                |
| PPB          | Parts per billion   |
| PPM          | Parts per million   |
| PS           | Performance Standard                                      |
| QA/QC        | Quality Assurance/ Quality Control                        |
| ROV          | Remotely Operated Vehicle(s)                              |
| RPA          | Response Protection Area                                  |
| S&EM         | Security & Emergency Management                           |
| SCAT         | Shoreline Clean-up Assessment Technique                   |
| SDA          | Surface Dispersant Application                            |
| SFRT         | Subsea First Response Toolkit                             |
| SIMA         | Spill Impact Mitigation Assessment                        |
| SIMAP        | Integrated Oil Spill Impact Model System                  |
| SIMOPs       | Simultaneous Operations                                   |
| SMP          | Scientific Monitoring Program                             |
| SSDI         | Subsea Dispersant Injection                               |
| SFRT         | Subsea First Response Toolkit                             |
| SIMA         | Spill Impact Mitigation Assessment                        |
| SM           | Scientific Monitoring                                     |
| SME          | Subject Matter Expert                                     |
| SMP          | Scientific Monitoring Program                             |
| SPD          | Shoreline Protection and Deflection                       |
| TRP          | Tactical Response Plan                                    |
| TRSV         | Tubing Retrievable Safety Valve                           |
| TSS          | Total Suspended Solids                                    |
| UAS          | Unmanned Aerial Systems                                   |
| UAV          | Unmanned Aerial Vehicles                                  |
| VOC          | Volatile Organic Compound                                 |
| WA DoT       | Western Australia Department of Transport                 |
| WBM          | Water Based Muds  |

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| Abbreviation | Meaning                                      |
|--------------|--|
| WCCS         | Worst Case Credible Scenario                 |
| WCP          | Well Control Package                         |
| WHA          | World Heritage Area                          |
| WiRCS        | Woodside Integrated Risk & Compliance System |
| Woodside     | Woodside Energy Group Limited                |
| WWCI         | Wild Well Control Inc                        |
| ZoA          | Zone of Application                          |

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## **ANNEX A: NET ENVIRONMENTAL BENEFIT ANALYSIS DETAILED OUTCOMES**

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Pre-operational NEBAs have been conducted to assess the net environmental benefit of different response techniques to selected receptors in the event of an oil spill from the PAP for a loss of well containment of GWF-1 Condensate (CS-01) and a spill of MDO from a vessel collision (CS-02). The complete list of potential receptor locations within the EMBA within the PAP is included in Section 6 of the EP.

The locations utilised for the NEBA were limited to the identified RPAs of the PAP identified from modelling (see Section 3 for outline of selection). These include receptors which have potential for the following:

- Surface contact (>50 g/m<sup>2</sup>) at any time (none predicted for either CS-01 or CS-02)
- Shoreline accumulation (>100g/m<sup>2</sup>) at any time (none predicted for either CS-01 or CS-02)
- Entrained contact (>100 ppb) < 14 days

The detailed NEBA assessment outcomes are shown below. The TPA03 preoperational NEBAs contains the full assessments.

**Table A-1: NEBA assessment technique recommendations for a loss of well containment (CS-01)**

| Receptor    | Monitor and evaluate | Source control and well intervention | Dispersant application: sub-sea | Dispersant application: > 20 m water depth and > 10 km from shore/reefs | Mechanical dispersion | In situ burning | Containment and recovery | Shoreline protection | Shoreline clean-up (manual) | Shoreline clean-up (mechanical) | Shoreline clean-up (chemical) | Oiled wildlife response |
|-------------|----------------------|--------------------------------------|---------------------------------|---|-----------------------|-----------------|--------------------------|----------------------|-----------------------------|---------------------------------|-------------------------------|-------------------------|
| Open water  | Yes                  | Yes                                  | No                              | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| Rankin Bank | Yes                  | Yes                                  | No                              | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |

**Overall assessment**

|  | Monitor and evaluate | Source control and well intervention | Dispersant application: sub-sea | Dispersant application: > 20 m water depth and > 10 km from shore/reefs | Mechanical dispersion | In situ burning | 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                                  | No                              | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| NEBA identifies response potentially of net environmental benefit? | Yes                  | Yes                                  | No                              | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |

**Table A-2: NEBA assessment technique recommendations for MDO (CS-02)**

| Receptor  | Monitor and evaluate | Source control (vessel) | Dispersant application: > 20 m water depth and > 10 km from shore/reefs | Mechanical dispersion | In situ burning | Containment and recovery | Shoreline protection | Shoreline clean-up (manual) | Shoreline clean-up (mechanical) | Shoreline clean-up (chemical) | Oiled wildlife response |
|---|----------------------|-------------------------|---|-----------------------|-----------------|--------------------------|----------------------|-----------------------------|---------------------------------|-------------------------------|-------------------------|
| Open water  | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| Barrow Island including State Marine Park and MMA | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| Montebello Islands                                | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| Montebello MP                                     | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| Montebello Islands Marine Park                    | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| Tryal Rocks                                       | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |

**Overall assessment**

|  | Monitor and evaluate | Source control (vessel) | Dispersant application: > 20 m water depth and > 10 km from shore/reefs | Mechanical dispersion | In situ burning | 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                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |
| NEBA identifies response potentially of net environmental benefit? | Yes                  | Yes                     | No  | No                    | No              | No                       | No                   | No                          | No                              | No                            | Yes                     |

**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           |   | Potential duration of impact                                 | Equivalent Woodside Corporate Risk Matrix Consequence Level                                   |
|----------|----|----------------------------|---|--|---|
| Positive | 3P | Major                      | Likely to prevent: <ul style="list-style-type: none"> <li>behavioural impact to biological receptors</li> <li>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.</li> </ul>   | Decrease in duration of impact by >5 years                   | N/A   |
|          | 2P | Moderate                   | Likely to prevent: <ul style="list-style-type: none"> <li>significant impact to a single phase of reproductive cycle of biological receptors</li> <li>detectable financial impact, either directly (e.g. loss of income) or indirectly (e.g. via public perception), for socio-economic receptors.</li> </ul>   | Decrease in duration of impact by 1–5 years                  | N/A   |
|          | 1P | Minor                      | Likely to prevent impacts on: <ul style="list-style-type: none"> <li>significant proportion of population or breeding stages of biological receptors</li> <li>socio-economic receptors such as:                             <ul style="list-style-type: none"> <li>significant impact to the sensitivity of protective designation; or</li> <li>significant and long-term impact to business/industry.</li> </ul> </li> </ul>               | Decrease in duration of impact by several seasons (< 1 year) | N/A   |
|          | 0  | Non-mitigated spill impact | <b>No detectable difference to unmitigated spill scenario.</b>  |  |   |
| Negative | 1N | Minor                      | Likely to result in: <ul style="list-style-type: none"> <li>behavioural impact to biological receptors</li> <li>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.</li> </ul> [See NOTE]   | 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: <ul style="list-style-type: none"> <li>significant impact to a single phase of reproductive cycle for biological receptors; or</li> <li>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.</li> </ul>     | 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: <ul style="list-style-type: none"> <li>significant proportion of population or breeding stages of biological receptors</li> <li>socio-economic receptors resulting in either:                             <ul style="list-style-type: none"> <li>significant impact to the sensitivity of protective designation; or</li> <li>significant and long-term impact to business/industry.</li> </ul> </li> </ul> | Increase in duration of impact by >5 years or unrecoverable  | Increase in risk by two categories (e.g. Minor (E) to Major (A))                              |

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.

## ANNEX B: OPERATIONAL MONITORING ACTIVATION AND TERMINATION CRITERIA

**Table B-1: Operational monitoring objectives, triggers and termination criteria**

| Operational Monitoring Operational Plan   | Objectives   | Activation triggers  | Termination criteria   |
|---|--|--|--|
| <p><b>Operational Monitoring Operational Plan 1 (OM01)</b><br/>Predictive Modelling of Hydrocarbons to Assess Resources at Risk</p> | <p>OM01 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. OM01 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.</p> <p>The objectives of OM01 are to:</p> <ul style="list-style-type: none"> <li>• Provide forecasting of the movement and weathering of spilled hydrocarbons</li> <li>• Identify resources that are potentially at risk of contamination</li> <li>• 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</li> </ul> | <p>OM01 will be triggered immediately following a level 2/3 hydrocarbon spill.</p> | <p>The criteria for the termination of OM01 are:</p> <ul style="list-style-type: none"> <li>• The hydrocarbon discharge has ceased, and no further surface oil is visible</li> <li>• Response activities have ceased</li> <li>• Hydrocarbon spill modelling (as verified by OM02 surveillance observations) predicts no additional natural resources will be impacted</li> </ul> |

| Operational Monitoring Operational Plan  | Objectives  | Activation triggers  | Termination criteria  |
|--|---|--|---|
| <p><b>Operational Monitoring Operational Plan 2 (OM02)</b></p> <p>Surveillance and reconnaissance to detect hydrocarbons and resources at risk</p> | <p>OM02 aims to provide regular, on-going hydrocarbon spill surveillance throughout a broad region, in the event of a spill.</p> <p>The objectives of OM02 are:</p> <ul style="list-style-type: none"> <li>• Verify spill modelling results and recalibrate spill trajectory models (OM01).</li> <li>• Understand the behaviour, weathering and fate of surface hydrocarbons.</li> <li>• Identify environmental receptors and locations at risk or contaminated by hydrocarbons.</li> <li>• Inform ongoing Net Environmental Benefit Analysis (NEBA) and continually assess the efficacy of available response options in order to reduce risks to ALARP.</li> <li>• 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.</li> </ul> | <p>OM02 will be triggered immediately following a level 2/3 hydrocarbon spill.</p> | <p>The termination triggers for the OM02 are:</p> <ul style="list-style-type: none"> <li>• 72 hours has elapsed since the last confirmed observation of surface hydrocarbons.</li> <li>• Latest hydrocarbon spill modelling results (OM01) do not predict surface exposures at visible levels.</li> </ul> |

| Operational Monitoring Operational Plan   | Objectives   | Activation triggers  | Termination criteria   |
|---|--|--|--|
| <p><b>Operational Monitoring Operational Plan 3 (OM03)</b></p> <p>Monitoring of hydrocarbon presence, properties, behaviour and weathering in water</p> | <p>OM03 will measure surface, entrained and dissolved hydrocarbons in the water column to inform decision-making for spill response activities.</p> <p>The specific objectives of OM03 are as follows:</p> <ul style="list-style-type: none"> <li>• Detect and monitor for the presence, quantity, properties, behaviour and weathering of surface, entrained and dissolved hydrocarbons.</li> <li>• Verify predictions made by OM01 and observations made by OM02 about the presence and extent of hydrocarbon contamination.</li> </ul> <p>Data collected in OM03 will also be used for the purpose of longer-term water quality monitoring during SM01.</p> | <p>OM03 will be triggered immediately following a level 2/3 hydrocarbon spill.</p> | <p>The criteria for the termination of OM03 are as follows:</p> <ul style="list-style-type: none"> <li>• The hydrocarbon release has ceased.</li> <li>• Response activities have ceased.</li> <li>• Concentrations of hydrocarbons in the water are below available ANZECC/ ARMCANZ (2018) trigger values for 99% species protection.</li> </ul> |

| Operational Monitoring Operational Plan   | Objectives   | Activation triggers   | Termination criteria  |
|---|--|---|---|
| <p><b>Operational Monitoring Operational Plan 4 (OM04)</b></p> <p>Pre-emptive assessment of sensitive receptors at risk</p> | <p>OM04 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.</p> <p>The primary objective of OM04 is to confirm understanding of the status and characteristics of environmental resources predicted by OM01 and OM02 to be at risk, to further assist in making decisions on the selection of appropriate response actions and prioritisation of resources.</p> <p>Indirectly, qualitative/semi-quantitative pre-contact information collected by OM04 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.</p> <p>OM04 would be undertaken in liaison with WA DoT as the control agency once the oil is in State Waters (if a Level 2/3 incident).</p> | <p>Triggers for commencing OM04 include:</p> <ul style="list-style-type: none"> <li>• Contact of a sensitive habitat or shoreline is predicted by OM01, OM02 and/or OM03.</li> <li>• The pre-emptive assessment methods can be implemented before contact from hydrocarbons (once a receptor has been contacted by hydrocarbons it will be assessed under OM05).</li> </ul> | <p>The criteria for the termination of OM04 at any given location are:</p> <ul style="list-style-type: none"> <li>• Locations predicted to be contacted by hydrocarbons have been contacted.</li> <li>• The location has not been contacted by hydrocarbons and is no longer predicted to be contacted by hydrocarbons (resources should be reallocated as appropriate).</li> </ul> |

| Operational Monitoring<br>Operational Plan  | Objectives   | Activation triggers   | Termination criteria  |
|---|--|---|---|
| <p><b>Operational monitoring operational plan 5 (OM05)</b><br/>Monitoring of contaminated resources</p> | <p>OM05 aims to implement surveys to assess the condition of wildlife and habitats contacted by hydrocarbons at sensitive habitat and shoreline locations.</p> <p>The primary objectives of OM05 are:</p> <ul style="list-style-type: none"> <li>Record evidence of oiled wildlife (mortalities, sub-lethal impacts, number, extent, location) and habitats (mortalities, sub-lethal impacts, type, extent of cover, area, hydrocarbon character, thickness, mass and content) throughout the response and clean-up at locations contacted by hydrocarbons to inform and prioritise clean-up efforts and resources, while minimising the potential impacts of these activities.</li> </ul> <p>Indirectly, the information collected by OM05 may also support the assessment of environmental impacts, as determined through subsequent SMPs.</p> <p>OM05 would be undertaken in liaison with WA DoT as the control agency once the oil is in State Waters (if a Level 2/3 incident).</p> | <p>OM05 will be triggered when a sensitive habitat or shoreline is predicted to be contacted by hydrocarbons by OM01, OM02 and/or OM03.</p> | <p>The criteria for the termination of OM05 at any given location are:</p> <ul style="list-style-type: none"> <li>No additional response or clean-up of wildlife or habitats is predicted.</li> <li>Spill response and clean-up activities have ceased.</li> </ul> <p>OM05 survey sites established at sensitive habitat and shoreline locations will continue to be monitored during SM02.</p> <p>The formal transition from OM05 to SM02 will begin on cessation of spill response and clean-up activities.</p> |

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## ANNEX C: OIL SPILL SCIENTIFIC MONITORING PROGRAM

### Oil Spill Environmental Monitoring

The following provides some further detail on Woodside's oil spill scientific monitoring Program and includes the following:

- The organisation, roles and responsibilities of the Woodside oil spill scientific monitoring team and external resourcing.
- A summary table of the ten scientific monitoring programs as per the specific focus receptor, objectives, activation triggers and termination criteria.
- Details on the oil spill environmental monitoring activation and termination decision-making processes.
- Baseline knowledge and environmental studies knowledge access via geo-spatial metadata databases.
- An outline of the reporting requirements for oil spill scientific monitoring programs.

### Oil Spill Scientific Monitoring – Delivery Team Roles and Responsibilities

#### *Woodside Oil Spill Scientific Monitoring Delivery Team*

The Woodside science team are responsible for the delivery of the oil spill scientific monitoring. The roles and responsibilities of the Woodside scientific monitoring delivery team are presented in Table C-1 and the organisational structure and Corporate Incident Management Team (CIMT) linkage provided in Figure C-1.

#### *Woodside Oil Spill Scientific monitoring program – External Resourcing*

In the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors, scientific monitoring personnel and scientific equipment to implement the appropriate SMPs will be provided by SMP Standby contractor who hold a standby contract for SMP via the Woodside Environmental Services Panel (ESP). In the event that additional resources are required other consultancy capacity within the Woodside ESP will be utilised (as needed and may extend to specialist contractors such as research agencies engaged in long-term marine monitoring programs). In consultation with the SMP Standby Contractor and/or specialist contractors, the selection, field sampling and approach of the SMPs will be determined by the nature and scale of the spill.

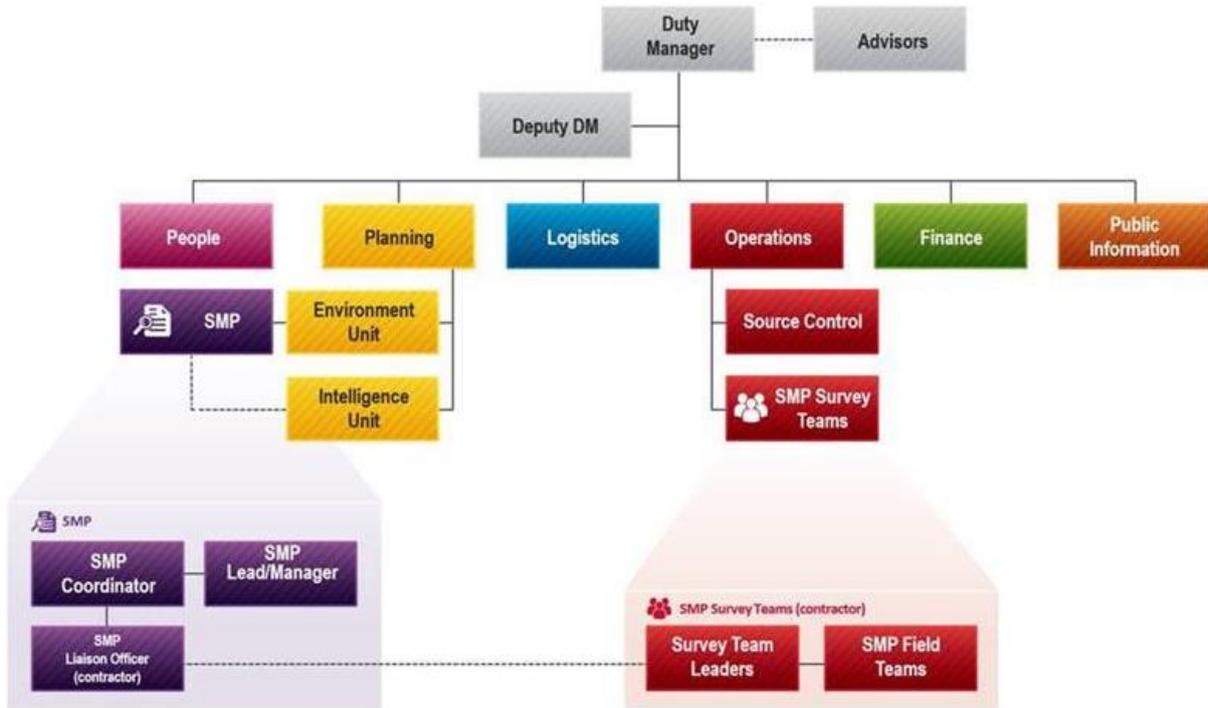
**Table C-1: Woodside and Environmental Service Provider – Oil Spill Scientific Monitoring Program Delivery Team Key Roles and Responsibilities**

| <b>Role</b>   | <b>Location</b> | <b>Responsibility</b>  |
|---|-----------------|--|
| <b>Woodside Roles</b>   |                 |  |
| SMP Lead/ Manager   | Onshore         | <ul style="list-style-type: none"> <li>• Approves activated the SMPs based on operational monitoring data provided by the Planning Function</li> <li>• Provides advice to the CIMT in relation to scientific monitoring</li> <li>• Provides technical advice regarding the implementation of scientific monitoring</li> <li>• Approves detailed sampling plans prepared for SMPs</li> <li>• Directs liaison between statutory authorities, advisors and government agencies in relation to SMPs.</li> </ul>  |
| SMP Co-ordinator  | Onshore         | <ul style="list-style-type: none"> <li>• Activates the SMPs based on operational monitoring data provided by the Planning Function</li> <li>• Sits in the Planning function of the CIMT.</li> <li>• Liaises with other CIMT functions to deliver required logistics, resources and operational support from Woodside to support the Environmental Service Provider in delivering on the SMPs. Acts as the conduit for advice from the SMP Lead/Manager to the Environmental Service Provider</li> <li>• Manages the Environmental Service Provider's implementation of the SMPs</li> <li>• Liaises with the Environmental Service Provider on delivery of the SMPs</li> <li>• Arranges all contractual matters, on behalf of Woodside, associated with the Environmental Service Provider's delivery of the SMPs.</li> </ul> |
| <b>Environmental Service Provider Roles</b>                                     |                 |  |
| SMP Standby Contractor – SMP Duty Manager/Project Manager (SMP Liaison Officer) | Onshore         | <ul style="list-style-type: none"> <li>• Coordinates the delivery of the SMPs</li> <li>• Provides costings, schedule and progress updates for delivery of SMPs</li> <li>• Determines the structure of the Environmental Service Provider's team to necessitate delivery of the SMPs</li> <li>• Verifies that HSE Plans, detailed sampling plans and other relevant deliverables are developed and implemented for delivery of the SMPs</li> <li>• Directs field teams to deliver SMPs</li> <li>• Arranges all contractual matters, on behalf of Environmental Service Provider, associated with the delivery of the SMPs to Woodside</li> <li>• Manages sub-consultant delivery to Woodside</li> <li>• Provides required personnel and equipment to deliver the SMPs.</li> </ul>   |

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| Role            | Location                        | Responsibility  |
|-----------------|---------------------------------|---|
| SMP Field Teams | Offshore – Monitoring Locations | <ul style="list-style-type: none"><li>• Delivers the SMPs in the field consistent with the detailed sampling plans and HSE requirements, within time and budget.</li><li>• Early communication of time, budget, HSE risks associated with delivery of the SMPs to the Environmental Service Provider – Project Manager</li><li>• Provides start up, progress and termination updates to the Environmental Service Provider – Project Manager (will be led in-field by a party chief).</li></ul> |

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**Figure C-1: Woodside Oil Spill Scientific Monitoring Program Delivery Team and Linkage to Corporate Incident Management Team (CIMT) organisational structure.**

**Table C-2: Oil Spill Environmental Monitoring: Scientific Monitoring Program – Objectives, Activation Triggers and Termination Criteria**

| Scientific monitoring Program (SMP)  | Objectives   | Activation Triggers   | Termination Criteria  |
|--|--|---|---|
| <b>Scientific monitoring program 1 (SM01)</b><br><b>Assessment of Hydrocarbons in Marine Waters</b>  | <p>SM01 will detect and monitor the presence, extent, persistence and properties of hydrocarbons in marine waters following the spill and the response. The specific objectives of SM01 are as follows:</p> <ul style="list-style-type: none"> <li>Assess and document the extent, severity and persistence of hydrocarbon contamination with reference to observations made during surveillance activities and / or in-water measurements made during operational monitoring; and</li> <li>Provide information that may be used to interpret potential cause and effect drivers for environmental impacts recorded for sensitive receptors monitored under other SMPs.</li> </ul>   | <p>SM01 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors</p>  | <p>SM01 will be terminated when:</p> <ul style="list-style-type: none"> <li>Operational monitoring data relating to observations and / or measurements of hydrocarbons on and in water have been compiled, analysed and reported; and</li> <li>The report provides details of the extent, severity and persistence of hydrocarbons which can be used for analysis of impacts recorded for sensitive receptors monitored under other SMPs.</li> </ul> <p>SMP monitoring of sensitive receptor sites:</p> <ul style="list-style-type: none"> <li>Concentrations of hydrocarbons in water samples are below NOPSEMA guidance note (2019.<sup>7</sup>) concentrations of 1 g/m<sup>2</sup> for floating, 10 ppb for entrained and dissolved; and</li> <li>Details of the extent, severity and persistence of hydrocarbons from concentrations recorded in water have been documented at sensitive receptor sites monitored under other SMPs.</li> </ul> |
| <b>Scientific monitoring program 2 (SM02)</b><br><b>Assessment of the Presence, Quantity and Character of Hydrocarbons in Marine Sediments</b> | <p>SM02 will detect and monitor the presence, extent, persistence and properties of hydrocarbons in marine sediments following the spill and the response. The specific objectives of SM02 are as follows:</p> <ul style="list-style-type: none"> <li>Determine the extent, severity and persistence of hydrocarbons in marine sediments across selected sites where hydrocarbons were observed or recorded during operational monitoring; and</li> <li>Provide information that may be used to interpret potential cause and effect drivers for environmental impacts recorded for sensitive receptors monitored under other SMPs.</li> </ul>   | <p>SM02 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented as follows:</p> <ul style="list-style-type: none"> <li>Response activities have ceased; and</li> <li>Operational monitoring results made during the response phase indicate that shoreline, intertidal or sub-tidal sediments have been exposed to surface, entrained or dissolved hydrocarbons (at or above 0.5 g/m<sup>2</sup> surface, 5 ppb for entrained/dissolved hydrocarbons and ≥1 g/m<sup>2</sup> for shoreline accumulation).</li> </ul>  | <p>SM02 will be terminated once pre-spill condition is reached and agreed upon as per the SMP termination criteria process and include consideration of:</p> <ul style="list-style-type: none"> <li>Concentrations of hydrocarbons in sediment samples are below ANZECC/ ARMCANZ (2013.<sup>8</sup>) sediment quality guideline values (SQGVs) for biological disturbance; and</li> <li>Details of the extent, severity and persistence of hydrocarbons from concentrations recorded in sediments have been documented.</li> </ul>  |
| <b>Scientific monitoring program 3 (SM03)</b><br><b>Assessment of Impacts and Recovery of Subtidal and Intertidal Benthos</b>                  | <p>The objectives of SM03 are:</p> <ul style="list-style-type: none"> <li>Characterize the status of intertidal and subtidal benthic habitats and quantify any impacts to functional groups, abundance and density that may be a result of the spill; and</li> <li>Determine the impact of the hydrocarbon spill and subsequent recovery (including impacts associated with the implementation of response options).</li> </ul> <p>Categories of intertidal and subtidal habitats that may be monitored include:</p> <ul style="list-style-type: none"> <li>Coral reefs</li> <li>Seagrass</li> <li>Macro-algae</li> <li>Filter-feeders</li> </ul> <p>SM03 will be supported by sediment contamination records (SM02) and characteristics of the spill derived from OMPs.</p> | <p>SM03 will be activated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented as follows:</p> <ul style="list-style-type: none"> <li>As part of a pre-emptive assessment of PBAs of receptor locations identified by time to hydrocarbon contact &gt;10 days, to target receptors and sites where it is possible to acquire pre-hydrocarbon contact baseline; and</li> <li>Operational monitoring identified shoreline potential contact of hydrocarbons (at or above 0.5 g/m<sup>2</sup> surface, 5 ppb for entrained/dissolved hydrocarbons and ≥1 g/m<sup>2</sup> for shoreline accumulation) for subtidal and intertidal benthic habitat.</li> </ul> | <p>SM03 will be terminated once pre-spill condition is reached and agreed upon as per the SMP termination criteria process and include consideration of:</p> <ul style="list-style-type: none"> <li>Overall impacts to benthic habitats from hydrocarbon exposure have been quantified.</li> <li>Recovery of impacted benthic habitats has been evaluated.</li> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul>  |
| <b>Scientific monitoring program 4 (SM04)</b>  | <p>The objectives of SM04 are:</p> <ul style="list-style-type: none"> <li>Characterize the status of mangroves (and associated salt marsh habitat) at shorelines exposed/contacted by spilled hydrocarbons;</li> </ul>   | <p>SM04 will be activated in the event of a Level 2 or 3 hydrocarbon release, or any release event with</p>   | <p>SM04 will be terminated once pre-spill condition is reached and agreed upon as per the SMP</p>   |

<sup>7</sup> NOPSEMA (2019) Bulletin #1 – Oil spill modelling – April 2019, <https://www.nopsema.gov.au/assets/Bulletins/A652993.pdf>

<sup>8</sup> Simpson SL, Batley GB and Chariton AA (2013). Revision of the ANZECC/ARMCANZ Sediment Quality Guidelines. CSIRO and Water Science Report 08/07. Land and Water, pp. 132.

| Scientific monitoring Program (SMP)  | Objectives   | Activation Triggers  | Termination Criteria  |
|--|--|--|---|
| <b>Assessment of Impacts and Recovery of Mangroves / Saltmarsh</b>   | <ul style="list-style-type: none"> <li>Quantify any impacts to species (abundance and density) and mangrove/saltmarsh community structure; and</li> <li>Determine and monitor the impact of the hydrocarbon spill and potential subsequent recovery (including impacts associated with the implementation of response options).</li> </ul> <p>SM03 will be supported by sediment sampling undertaken in SM02 and characteristics of the spill derived from OMPs.</p>   | <p>the potential to contact sensitive environmental receptors and implemented as follows:</p> <ul style="list-style-type: none"> <li>As part of a pre-emptive assessment of receptor locations identified by time to hydrocarbon contact &gt;10 days; and</li> <li>Operational monitoring identified shoreline potential contact of hydrocarbons (at or above 0.5 g/m<sup>2</sup> surface, 5 ppb for entrained/dissolved hydrocarbons and ≥1 g/m<sup>2</sup> for shoreline accumulation) for mangrove/saltmarsh habitat.</li> </ul>  | <p>termination criteria process and include consideration of:</p> <ul style="list-style-type: none"> <li>Impacts to mangrove and saltmarsh habitat from hydrocarbon exposure have been quantified.</li> <li>Recovery of impacted mangrove/saltmarsh habitat has been evaluated.</li> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul>   |
| <b>Scientific monitoring program 5 (SM05)</b><br><b>Assessment of Impacts and Recovery of Seabird and Shorebird Populations</b>        | <p>The Objectives of SM05 are to:</p> <ul style="list-style-type: none"> <li>Collate and quantify impacts to avian wildlife from results recorded during OM02 and OM05 (such as mortalities, oiling, rescue and release counts) and undertake a desk-based assessment to infer potential impacts at species population level; and</li> <li>Undertake monitoring to quantify and assess impacts of hydrocarbon exposure to seabirds and shorebird populations at targeted breeding colonies / staging sites / important coastal wetlands where hydrocarbon contact was recorded.</li> </ul>   | <p>SM05 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented as follows:</p> <ul style="list-style-type: none"> <li>As part of a pre-emptive assessment of receptor locations identified by time to hydrocarbon contact &gt;10 days;</li> <li>Operational monitoring predicts shoreline contact of hydrocarbons (at or above 0.5 g/m<sup>2</sup> surface, 5 ppb for entrained/dissolved hydrocarbons and ≥1 g/m<sup>2</sup> for shoreline accumulation) at important bird colonies / staging sites / important coastal wetland locations; or</li> <li>Records of dead, oiled or injured bird species made during the hydrocarbon spill or response.</li> </ul> | <p>SM05 will be terminated once it is agreed that the receptor has returned to pre-spill condition. The SMP termination criteria process will be followed and include consideration of:</p> <ul style="list-style-type: none"> <li>Impacts to seabird and shorebird populations from hydrocarbon exposure have been quantified.</li> <li>Recovery of impacted seabird and shorebird populations has been evaluated.</li> <li>Agreement with relevant stakeholders and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul>           |
| <b>Scientific monitoring program 6 (SM06)</b><br><b>Assessment of Impacts and Recovery of Nesting Marine Turtle Populations</b>        | <p>The objectives of SM06 are to:</p> <ul style="list-style-type: none"> <li>To quantify impacts of hydrocarbon exposure or contact on marine turtle nesting populations (including impacts associated with the implementation of response options);</li> <li>Collate and quantify impacts to adult and hatchling marine turtles from results recorded during OM02 and OM05 (such as mortalities, oiling, rescue and release counts) and undertake a desk-based assessment to infer potential impacts at species population levels (including impacts associated with the implementation of response options); and</li> <li>Undertake monitoring to quantify and assess impacts of hydrocarbon exposure to nesting marine turtle populations at known rookeries (including impacts associated with the implementation of response options).</li> </ul> | <p>SM06 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented if operational monitoring has:</p> <ul style="list-style-type: none"> <li>As part of a pre-emptive assessment of receptor locations identified by time to hydrocarbon contact &gt;10 days;</li> <li>Predicted shoreline contact of hydrocarbons (at or above 0.5 g/m<sup>2</sup> surface, 5 ppb for entrained/dissolved hydrocarbons and ≥1 g/m<sup>2</sup> for shoreline accumulation) at known marine turtle rookery locations; or</li> <li>Records of dead, oiled or injured marine turtle species made during the hydrocarbon spill or response.</li> </ul>                                   | <p>SM06 will be terminated once it is agreed that the receptor has returned to pre-spill condition. The SMP termination criteria process will be followed and include consideration of:</p> <ul style="list-style-type: none"> <li>Impacts to nesting marine turtle populations from hydrocarbon exposure have been quantified.</li> <li>Recovery of impacted nesting marine turtle populations has been evaluated.</li> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul> |
| <b>Scientific monitoring program 7 (SM07)</b><br><b>Assessment of Impacts to Pinniped Colonies including Haul-out Site Populations</b> | <p>The objectives of SM07 are to:</p> <ul style="list-style-type: none"> <li>Quantify impacts on pinniped colonies and haul-out sites as a result of hydrocarbon exposure/contact.</li> <li>Collate and quantify impacts to pinniped populations from results recorded during OM02 and OM05 (such as mortalities, oiling, rescue and release counts) and undertake a desk-based assessment to infer potential impacts at species population levels.</li> </ul>   | <p>SM07 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented if operational monitoring has:</p> <ul style="list-style-type: none"> <li>As part of a pre-emptive assessment of receptor locations identified by time to hydrocarbon contact &gt;10 days;</li> </ul>   | <p>SM07 will be terminated once it is agreed that the receptor has returned to pre-spill condition. The SMP termination criteria process will be followed and include consideration of:</p> <ul style="list-style-type: none"> <li>Impacts to pinniped populations from hydrocarbon exposure have been quantified.</li> <li>Recovery of pinniped populations has been evaluated.</li> </ul>   |

| Scientific monitoring Program (SMP)  | Objectives  | Activation Triggers   | Termination Criteria  |
|--|---|---|---|
|  |   | <ul style="list-style-type: none"> <li>Identified shoreline contact of hydrocarbons ((at or above 0.5 g/m<sup>2</sup> surface, ≥5 ppb for entrained/dissolved hydrocarbons and ≥1 g/m<sup>2</sup> for shoreline accumulation) at known pinniped colony or haul-out site(s) (i.e. most northern site is the Houtman Abrolhos Islands); or</li> <li>Records of dead, oiled or injured pinniped species made during the hydrocarbon spill or response.</li> </ul>  | <ul style="list-style-type: none"> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul>   |
| <b>Scientific monitoring program 8 (SM08)</b><br><b>Desk-Based Assessment of Impacts to Other Non-Avian Marine Megafauna</b>   | <p>The objective of SM08 is to provide a desk-based assessment which collates the results of OM02 and OM05 where observations relate to the mortality, stranding or oiling of mobile marine megafauna species not addressed in SM06 or SM07, including:</p> <ul style="list-style-type: none"> <li>Cetaceans;</li> <li>Dugongs;</li> <li>Whale sharks and other shark and ray populations;</li> <li>Sea snakes; and</li> <li>Crocodiles.</li> </ul> <p>The desk-based assessment will include population analysis to infer potential impacts to marine megafauna species populations.</p>   | <p>SM08 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented if operational monitoring reports records of dead, oiled or injured non-avian marine megafauna during the spill/ response phase.</p>   | <p>SM08 will be terminated when the results of the post-spill monitoring have quantified impacts to non-avian megafauna.</p> <ul style="list-style-type: none"> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul>  |
| <b>Scientific monitoring program 9 (SM09)</b><br><b>Assessment of Impacts and Recovery of Marine Fish associated with SM03 habitats</b>  | <p>The objectives of SM09 are:</p> <ul style="list-style-type: none"> <li>Characterise the status of resident fish populations associated with habitats monitored in SM03 exposed/contacted by spilled hydrocarbons;</li> <li>Quantify any impacts to species (abundance, richness and density) and resident fish population structure (representative functional trophic groups); and</li> <li>Determine and monitor the impact of the hydrocarbon spill and potential subsequent recovery (including impacts associated with the implementation of response options).</li> </ul>  | <p>SM09 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented with SMO3.</p>   | <p>SM09 will be undertaken and terminated concurrent with monitoring undertaken for SM03, as per the SMP termination criteria process</p> <ul style="list-style-type: none"> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul>   |
| <b>Scientific monitoring program 10 (SM10)</b><br><b>SM10 - Assessment of physiological impacts important fish and shellfish species (fish health and seafood quality/safety) and recovery</b> | <p>SM10 aims to assess any physiological impacts to important commercial fish and shellfish species (assessment of fish health) and if applicable, seafood quality/safety. Monitoring will be designed to sample key commercial fish and shellfish species and analyse tissues to identify fish health indicators and biomarkers, for example:</p> <ul style="list-style-type: none"> <li>Liver Detoxification Enzymes (ethoxyresorufin-O-deethylase (EROD) activity)</li> <li>Polyaromatic Hydrocarbon (PAH) Biliary Metabolites</li> <li>Oxidative DNA Damage</li> <li>Serum Sorbitol Dehydrogenase (SDH)</li> <li>Other physiological parameters, such as condition factor (CF), liver somatic index (LSI), gonado-somatic index (GSI) and gonad histology, total weight, length, condition, parasites, egg development, testes development, abnormalities.</li> <li>Seafood tainting may be included (where appropriate) using applicable sensory tests to objectively assess targeted finfish and shellfish species for hydrocarbon contamination.</li> </ul> <p>Results will be used to make inferences on the health of commercial fisheries and the potential magnitude of impacts to fishing industries.</p> | <p>SM10 will be initiated in the event of a Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors and implemented if operational monitoring (OM01, OM02 and OM05) indicates the following:</p> <ul style="list-style-type: none"> <li>The hydrocarbon spill will or has intersected with active commercial fisheries or aquaculture activities.</li> <li>Commercially targeted finfish and/or shellfish mortality has been observed/recorded.</li> <li>Commercial fishing or aquaculture areas have been exposed to hydrocarbons (≥0.5 g/m<sup>2</sup> surface and ≥5 ppb for entrained/dissolved hydrocarbons); and</li> <li>Taste, odour or appearance of seafood presenting a potential human health risk is observed.</li> </ul> | <p>SM10 will be terminated once it is agreed that the receptor has returned to pre-spill condition. The SMP termination criteria process will be followed and include consideration of:</p> <ul style="list-style-type: none"> <li>Physiological impacts to important commercial fish and shellfish species from hydrocarbon exposure have been quantified.</li> <li>Recovery of important commercial fish and shellfish species from hydrocarbon exposure has been evaluated.</li> <li>Impacts to seafood quality/safety (if applicable) have been assessed and information provided to the relevant stakeholders and regulators for the management of any impacted fisheries.</li> <li>Agreement with relevant persons/ organisations and regulators based on the nature and scale of the hydrocarbon spill impacts and/or that observed impacts can no longer be attributed to the spill.</li> </ul> |

## Activation Triggers and Termination Criteria

### **Scientific monitoring program Activation**

The Woodside oil spill scientific monitoring team will be stood up immediately with the occurrence of a hydrocarbon spill (actual or suspected) Level 2 or 3 hydrocarbon release, or any release event with the potential to contact sensitive environmental receptors via the FSRP for the PAP. The presence of any level of hydrocarbons in the marine environment triggers the activation of the oil spill scientific monitoring program (SMP). This is to ensure the full range of eventualities relating to the environmental, socio-economic and health consequences of the spill are considered in the planning and execution of the SMP. The activation process also takes into consideration the management objectives, species recovery plans, conservation advices and conservations plans for any World Heritage Area (WHA), CMRs, State Marine Parks, other protected area designations (e.g., State nature reserves) and Matters of National Environmental Significance (including listed species under part 3 of the Environment Protection and Biodiversity Conservation (EPBC) Act) potentially exposed to hydrocarbons. With the first 24-48 hours of a spill event, such information will be sourced and evaluated as part of the SMP planning process guided by Appendix D (identified receptors vulnerable to hydrocarbon contact), the information presented in the Existing Environment section of the EP as well as other information sources such as the Woodside Baseline Environmental Studies Database.

The starting point for decision-making on what SMPs are activated and spatial extent of monitoring activities will be based on the predictive modelling results (OM01) in the first 24-48 hours until more information is made available from other operational monitoring activities such as aerial surveillance and shoreline surveys. Pre-emptive Baseline Areas (WHA, CMRs and State Marine Parks encompassing key ecological and socio-economic values) are a key focus of the SMP activation decision-making process, particularly, in the early spill event/response phase. As the operational monitoring progresses and further situational awareness information becomes available, it will be possible to understand the nature and scale of the spill. The SMP activation and implementation decision-making will be revisited on a daily basis to account for the updates on spill information. One of the priority focus areas in the early phase of the incident will be to identify and execute pre-emptive SMP assessments at key receptor locations, as required. The SMP activation and implementation decision tree is presented in Figure C-2.

### **Scientific monitoring Program Termination**

The basis of the termination process for the active SMPs (SMPs 1-10) will include quantification of impacts, evaluation of recovery for the receptor at risk and consultation with relevant authorities, persons and organisations. Termination of each SMP will not be considered until the results (as presented in annual SMP reports for the duration of each program) indicate that the target receptor has returned to pre-spill condition.

Once the SMP results indicate impacted receptor(s) have returned to pre-spill condition (as identified by Woodside) a termination decision-making process will be triggered and a number of steps will be undertaken as follows:

- Woodside will engage expert opinion on whether the receptor has returned to pre-spill condition (based on monitoring data). Subject Matter Expert (SMEs) will be engaged (via the Woodside SME scientific monitoring terms of reference) to review program outcomes, provide expert advice and recommendations for the duration of each SMP.
- Where expert opinion agrees that the receptor has returned to pre-spill condition, findings will then be presented to the relevant authorities, persons and organisations (as defined by the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulation 11A). Stakeholder identification, planning and engagement will be managed by Woodside's Reputation Functional Support Team (FST) and follow the stakeholder management FST.

These guidelines outline the FST roles and responsibilities, competencies, persons/ organisations communications and planning processes. An assessment of the merits of any objection to termination will be documented in the SMP final report.

- Woodside will decide on termination of SMP based on expert opinion and merits of any persons'/ organisations' objections. The final report following termination will include: monitoring results, expert opinion and consultation including merits of any objections.
- Termination of SMPs will also consider applicable management objectives, species recovery plans, conservation advice and conservations plans for any World Heritage Area (WHA), CMRs, State Marine Parks, other protected area designations (e.g., State nature reserves) and Matters of National Environmental Significance (including listed species under part 3 of the EPBC Act).

The SMP termination decision-making process will be applied to each active SMP and an iterative process of decision steps continued until each SMP has been terminated (refer to decision-tree diagram for SMP termination criteria, Figure C-3).

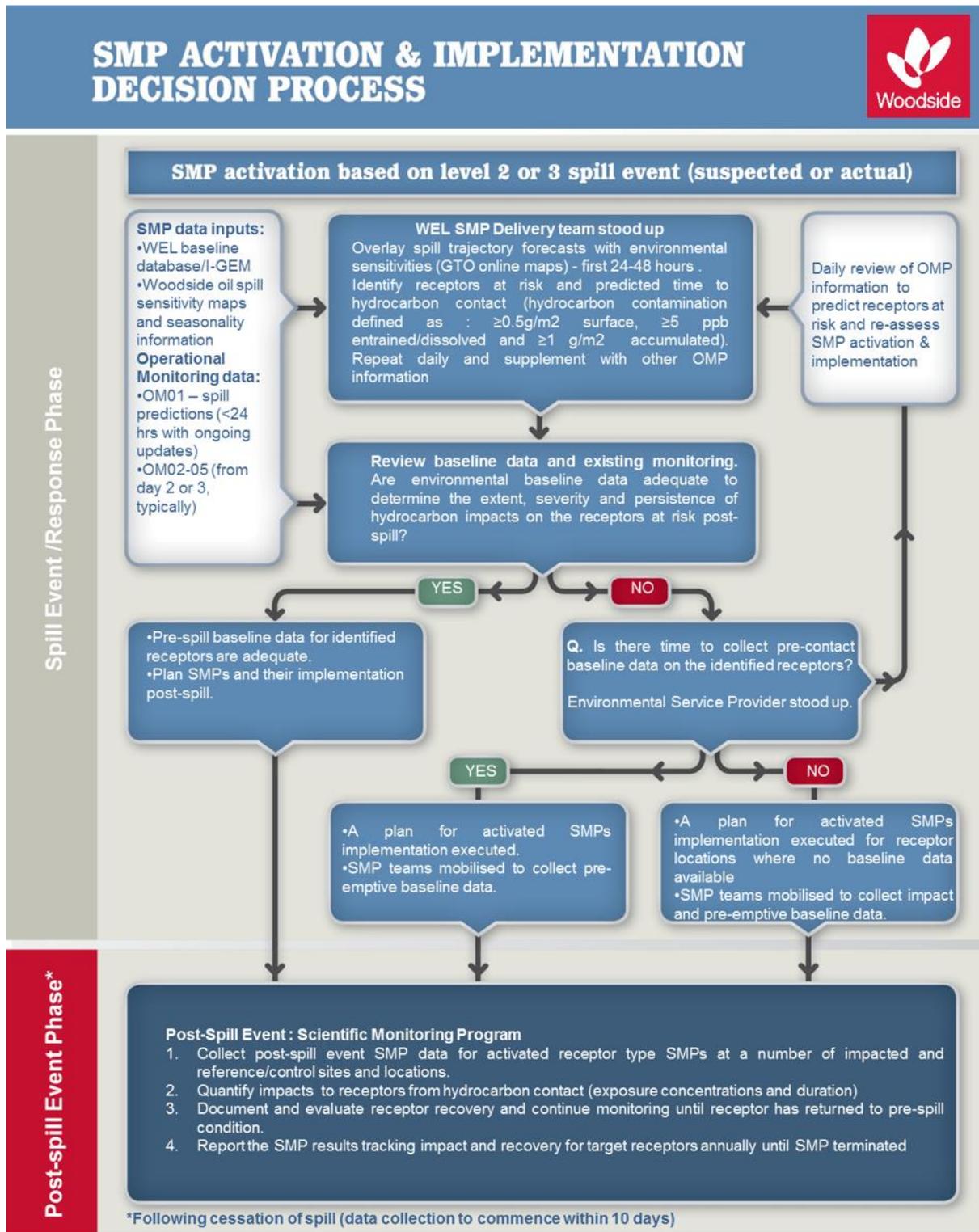


Figure C-2: Activation and implementation decision-tree for oil spill environmental monitoring

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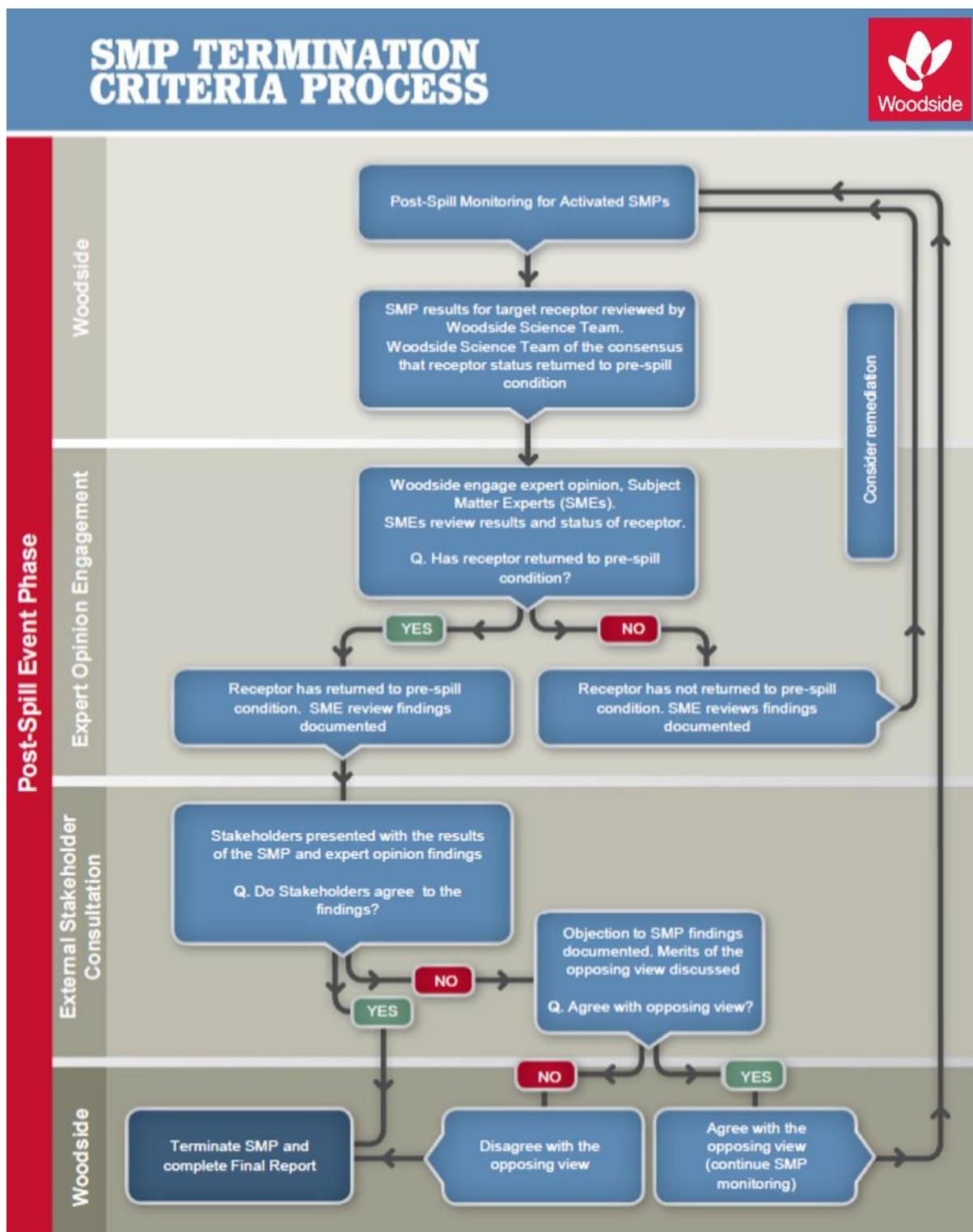


Figure C-3: Termination criteria decision-tree for oil spill environmental monitoring

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## Receptors at Risk and Baseline Knowledge

In order to assess the baseline studies available and suitability for oil spill scientific monitoring, Woodside maintains knowledge of environmental baseline studies through the upkeep and use of its Environmental Knowledge Management System.

Woodside's Environmental Knowledge Management System is a centralised platform for scientific information on the existing environment, marine biodiversity, Woodside environmental studies, key environmental impact topics, key literature and web-based resources. The system comprises a number of data directories and an environmental baseline database, as well as folders within the 'Corporate Environment' server space. The environmental baseline database was set up to support Woodside's SMP preparedness and as a SMP resource in the event of an unplanned hydrocarbon spill. The environmental baseline database is subject to updates including annual reviews completed as part of SMP standby contract. This database is accessed pre-PAP to identify Pre-emptive Baseline Areas (PBAs) where hydrocarbon contact is predicted to occur <10 days.

In addition to Woodside's Environmental Knowledge Management System, it is acknowledged that many relevant baseline datasets are held by other organisations (e.g. other oil and gas operators, government agencies, state and federal research institutions and non-governmental organisations). In order to understand the present status of environmental baseline studies a spatial environmental metadata database for Western Australia (Industry-Government Environmental Metadata, I-GEM) was established. IGEM is a collaboration comprising oil and gas operators (including Woodside), government and research agencies and other organisations. IGEM held data were integrated into the Department of Water and Environmental Regulation (WA) Index of Marine Surveys for Assessment (IMSA).<sup>9</sup> in 2020. The Index of Marine Surveys for Assessments (IMSA) is an online portal for information about marine-based environmental surveys in Western Australia. IMSA is a project of the Department of Water and Environmental Regulation (the department) for the systematic capture and sharing of marine data created as part of an environmental impact assessment (EIA).

In the event of an unplanned hydrocarbon release, Woodside intends to interrogate the information on baseline studies status as held by the various databases (e.g. Woodside Environmental Knowledge Management System, IMSA and other sources of existing baseline data) to identify Pre-emptive Baseline Areas (PBAs), i.e., receptors at risk where hydrocarbon contact is predicted to be >10 days, and baseline data can be collected before hydrocarbon contact.

## Reporting

For the scientific monitoring program relevant regulators will be provided with:

- Annual reports summarising the SMPs deployed and active, data collection activities and available findings; and
- Final reports for each SMP summarising the quantitative assessment of environmental impacts and recovery of the receptor once returned to pre-spill condition and termination of the monitoring program.

The reporting requirements of the scientific monitoring program will be specific to the individual SMPs deployed and terms of responsibilities, report templates, schedule, Quality Assurance/Quality Control (QA/QC) and peer-review will be agreed with the contractors engaged to conduct the SMPs. Compliance and auditing mechanisms will be incorporated into the reporting terms.

<sup>9</sup> <https://biocollect.ala.org.au/imsa#max%3D20%26sort%3DdateCreatedSort>

## **ANNEX D: SCIENTIFIC MONITORING PROGRAM AND BASELINE STUDIES FOR THE PETROLEUM ACTIVITIES PROGRAM**

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Table D-1: Oil Spill Environmental Monitoring – scientific monitoring program scope for the Petroleum Activities Program based on spill EMBA for CS-01 and CS-02

| Receptor Areas - Potential Impact and Reference Scientific Monitoring Sites (marked X)   |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
|--|----------------|---------------|-------------------------|----------------|-------------|----------------------|--------------|--------------|--------------------------------------|--------------|------------|---------------|------------------|----------------|-----------------------|----------------------|-------------------|------------------------------|----------------------|-----------------------------------|---------------------------------------|-------------|---------------|---|---------------|--------------|------------------|--|--|---|--|--|--|------------------|-----------------|-------------------|----------------------------|---|------------------------------|------------------------------------|-------------------------------|---|---|---|---|
| Receptors to be Monitored  | Applicable SMP | Kimberley AMP | Agro-Rowley Terrace AMP | Montebello AMP | Dampier AMP | Carnarvon Canyon AMP | Ningaloo AMP | Gascoyne AMP | Shark Bay Open Ocean (including AMP) | Abrilhos AMP | Jurien AMP | Two Rocks AMP | Perth Canyon AMP | Geographic AMP | South-west Corner AMP | Ashmore Reef and AMP | Seringapatam Reef | Scott Reef (North and South) | Mermaid Reef and AMP | Clerke Reef and State Marine Park | Imperieuse Reef and State Marine Park | Rankin Bank | Glomar Shoals | Rowley Shoals (including Sate Maine Park) | Fantome Shoal | Adele Island | Lacepede Islands | Montebello Islands (including State Marine Park) | Lowendal Islands (including State Nature Reserves) | Barrow Island (including State Nature Reserves, State Marine Park and Marine Management Area) | Muiron Islands (WHA, Marine Management Area) | Pilbara Islands - Southern Island Group (Serrurier, Thevenard and Bessieres Islands - State Nature Reserves) | Pilbara Islands - Northern Island Group (Sandy Island Passage Islands - State nature reserves) | Abrilhos Islands | Kimberley Coast | Dampier Peninsula | Northern Pilbara Shoreline | Ningaloo Coast (North/North West Cape, Middle and South) (WHA, and State Marine Park) | Shark Bay - Open Ocean Coast | Shark Bay (WHA, State Marine Park) | Ngari Capes State Marine Park |   |   |   |   |
| <b>Habitat</b>   |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
| Water Quality  | SM01           | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             |   |   |   |   |
| Marine Sediment Quality  | SM02           | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X |   |   |
| Coral Reef   | SM03           | X             |                         | X              |             |                      |              |              |                                      |              |            |               |                  |                |                       | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X |   |   |
| Seagrass / Macro-Algae   | SM03           | X             |                         |                |             |                      |              |              |                                      |              | X          |               |                  |                |                       | X                    | X                 | X                            |                      |                                   |                                       |             |               |   |               | X            |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   | X |   |   |
| Deeper Water Filter Feeders  | SM03           | X             |                         |                | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             |              |                  |  |  |   |  |  | X  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
| Mangroves and Saltmarsh  | SM04           |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              | X                |  |  |   |  |  |  |                  |                 | X                 | X                          | X   | X                            | X                                  | X                             | X | X |   |   |
| <b>Species</b>   |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
| Sea Birds and Migratory Shorebirds (significant colonies / staging sites / coastal wetlands)   | SM05           | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Marine Turtles (significant nesting beaches)   | SM06           | X             | X                       | X              | X           | X                    | X            | X            |                                      |              |            |               |                  |                |                       | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X |   |
| Pinnipeds (significant colonies / haul-out sites)  | SM07           |               |                         |                |             |                      |              |              |                                      | X            | X          | X             |                  |                |                       | X                    |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   | X |   |
| Cetaceans - Migratory Whales   | SM08           | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Oceanic and Coastal Cetaceans  | SM08           | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Dugongs  | SM08           | X             |                         |                |             |                      |              |              | X                                    |              |            |               |                  |                |                       | X                    |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Sea Snakes   | SM08           | X             |                         | X              | X           |                      | X            | X            | X                                    | X            |            |               |                  |                |                       | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Whale Sharks   | SM08           |               |                         | X              |             |                      | X            | X            |                                      |              |            |               |                  |                |                       |                      |                   | X                            |                      |                                   |                                       |             |               |   |               |              |                  | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X |   |
| Other Shark and Ray Populations  | SM08, SM09     | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Fish Assemblages   | SM09           | X             | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             | X                | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| <b>Socio-economic</b>  |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
| Fisheries - Commercial   | SM10           |               | X                       | X              | X           | X                    | X            | X            | X                                    | X            | X          | X             |                  |                |                       |                      |                   |                              |                      |                                   |                                       | X           | X             | X   | X             |              |                  | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X |   |
| Fisheries - Traditional  | SM10           |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       | X                    | X                 | X                            |                      |                                   |                                       |             |               |   |               | X            |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   | X |   |
| Tourism (incl. recreational fishing)   | SM10           | X             |                         | X              |             |                      | X            | X            | X                                    |              | X          |               |                  | X              | X                     | X                    | X                 | X                            | X                    | X                                 | X                                     | X           | X             | X   | X             | X            | X                | X  | X  | X   | X  | X  | X  | X                | X               | X                 | X                          | X   | X                            | X                                  | X                             | X | X | X | X |
| Receptor areas identified as Pre-emptive Baseline Areas (based on criteria of surface contact and/or entrained hydrocarbon contact ≤10 days (Offshore Australian Marine Parks contacted by hydrocarbons in this timeframe also noted)) |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
| Receptor areas identified as Pre-emptive Baseline Areas in the response phase >10 days (based on criteria of surface contact and/or entrained hydrocarbon contact >10 days)  |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |
| Receptor areas that may be identified as impact or reference sites in the event of major hydrocarbon release and would be identified as part of the SMP planning process   |                |               |                         |                |             |                      |              |              |                                      |              |            |               |                  |                |                       |                      |                   |                              |                      |                                   |                                       |             |               |   |               |              |                  |  |  |   |  |  |  |                  |                 |                   |                            |   |                              |                                    |                               |   |   |   |   |

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**Table D-2: Baseline Studies for the SMPs applicable to identified Pre-emptive Baseline Areas for the Petroleum Activities Program**

| Major Baseline  | Proposed Scientific monitoring operational plan and Methodology  | Ningaloo Coast and the Muiron Islands   | Rankin Bank & Glomar Shoal   | Barrow, Montebello and Lowendal Islands  | Montebello AMP   |
|---|--|---|--|--|--|
| Benthic Habitat (Coral Reef)  | SM03<br>Quantitative assessment using image capture using either diver held camera or towed video. Post analysis into broad groups based on taxonomy and morphology.   | <b>Studies:</b>   |  |  |  |
|   |  | <ol style="list-style-type: none"> <li>1. DBCA LTM Ningaloo Reef program: 1991-ongoing.</li> <li>2. AIMS/DBCA 2014 Baseline Ningaloo and Muiron Islands Survey – repeat and expansion on the LTM (Co-funded survey: Woodside and AIMS).</li> <li>3. Pilbara Marine Conservation Partnership.</li> <li>4. WAMSI LTM Study: Ningaloo Research node: 2009 -10 over the length of Ningaloo reef system (with a focus on coral and fish recruitment).</li> <li>5. Ningaloo Outlook (CSIRO) - Shallow and Deep Reefs Program (2015-ongoing).</li> <li>6. Ningaloo Collaboration Cluster: Habitats of the Ningaloo Reef and adjacent coastal areas determined through hyperspectral imagery</li> <li>7. Allen Coral Atlas</li> </ol> | <ol style="list-style-type: none"> <li>1. Glomar Shoal and Rankin Bank Environmental Survey Report, 2013, quantitatively surveyed benthic habitats and communities. AIMS report to Woodside. Scientific Publication - Biodiversity and spatial patterns of benthic habitat and associated demersal fish communities at two tropical submerged reef ecosystems, 2018.</li> <li>2. Rankin Bank Environmental Survey Extension, 2014, Habitat assessment of an area southeast of Rankin Bank.</li> <li>3. Glomar Shoal and Rankin Bank surveys, 2017. GWF-2 Monitoring Programme. Quantitatively surveyed benthic habitats and communities.</li> <li>4. Temporal Studies survey of Rankin Bank and Glomar Shoal, 2018.</li> </ol> | <p>Barrow Island:</p> <p>East and West Coast baseline and monitoring for soft sediment, limestone pavement and coral assemblages (Chevron)</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Benthic community monitoring as part of DBCA Western Australian Marine Monitoring Program (2015-ongoing).</li> <li>2. Pilbara Marine Conservation Partnership Seabed biodiversity survey (2013).</li> </ol> | <p>Coral Reefs &amp; Filter Feeders</p> <ol style="list-style-type: none"> <li>1. Montebello Marine Park, 2019, Identification and qualitative descriptions of benthic habitat.</li> <li>2. Montebello Australian Marine Parks – 2019 – Baseline survey on benthic habitats.</li> <li>3. Pluto Trunkline within Montebello Marine Park – Monitoring marine communities.</li> </ol> |
|   |  | <b>Methods:</b>   |  |  |  |
| <ol style="list-style-type: none"> <li>1. LTM transects, diver based (video) photo quadrats, specimen collection.</li> <li>2. LTM sites, transects, diver-based video quadrat.</li> <li>3. Diver video transects, still photography, video and in situ visual estimates from transects, quadrats, manta-tows, towed video and ROV.</li> <li>4. Video point intercept transects recorded by towed video or diver hand-held video camera.</li> <li>5. Video transects.</li> <li>6. LTM transects, diver based (video) photo quadrat.</li> <li>7. Combination of satellite imagery analysis and mapped/monitored areas.</li> </ol> | <ol style="list-style-type: none"> <li>1. Towed video transects, photo quadrats using towed video system.</li> <li>2. Towed video transects, photo quadrats using towed video system.</li> <li>3. Towed video transects, photo quadrats using towed video system.</li> <li>4. Towed video transects, photo quadrats using towed video system.</li> </ol> | <p>Barrow Island:</p> <p>Coral habitat – mapping, rapid visual assessment, size-class frequency, photoquadrats – live coral cover and survival, tagged corals – growth and survival and coral recruitment</p> <p>Benthic macro-invertebrate surveys – video belt transects</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Fixed long-term monitoring sites. Diver video transect.</li> <li>2. Towed video, benthic trawl and sled.</li> </ol>  | <ol style="list-style-type: none"> <li>1. ROV Transects</li> <li>2. Benthic habitat mapping, multibeam acoustic swathing.</li> <li>3. ROV video.</li> </ol>  |  |  |
| <b>References and Data:</b>   |  |   |  |  |  |

| Major Baseline                             | Proposed Scientific monitoring operational plan and Methodology  | Ningaloo Coast and the Muiron Islands  | Rankin Bank & Glomar Shoal  | Barrow, Montebello and Lowendal Islands  | Montebello AMP   |
|--|--|--|---|--|--|
|  |  | 1. DBCA unpublished data.<br>DATAHOLDER: DBCA<br>2. AIMS 2015.<br>DATAHOLDER: AIMS.<br>3. Pilbara Marine Conservation Partnership<br>DATAHOLDER: CSIRO<br>4. Depczynski et al. 2011<br>DATAHOLDER: AIMS, DBCA and WAMSI.<br>5. CSIRO 2019 – Ningaloo Outlook Program<br>6. Murdoch University – HyVista Corporation – April and May 2006 (Kobryn et al 2022)<br>7. <a href="https://allencoralatlas.org/atlas/#7.58/-21.5563/114.9133">https://allencoralatlas.org/atlas/#7.58/-21.5563/114.9133</a> (accessed 18/05/2022) | 1. AIMS 2014a and Abdul Wahab et al., 2018.<br>DATAHOLDER: AIMS.<br>2. AIMS 2014b.<br>DATAHOLDER: AIMS.<br>3. Currey-Randall et. al., 2019.<br>DATAHOLDER: AIMS<br>4. Currey-Randall et. al., 2019.<br>DATAHOLDER: AIMS | Barrow Island:<br>Chevron Australia (2015a and b)<br>DATAHOLDER: Chevron Australia<br>Barrow, Montebello and Lowendal Islands:<br>1. WA Department of Biodiversity, Conservation and Attractions (DBCA)<br>DATAHOLDER: DBCA<br>2. Pitcher et al. 2016<br>DATAHOLDER: CSIRO | 1. Advisian 2019<br>2. Keesing 2019<br>3. McLean et al. 2019 |
| Benthic Habitat (Seagrass and Macro-algae) | SM03<br>Quantitative assessment using image capture using either diver held camera or towed video. Post analysis into broad groups based on taxonomy and morphology. | <b>Studies:</b>  |   |  |  |
|  |  | 1. Quantitative descriptions of Ningaloo sanctuary zones habitats types including lagoon and offshore areas – Cassata and Collins (2008).<br>2. CSIRO/BHP Ningaloo Outlook Program.<br>3. Ningaloo Collaboration Cluster: Habitats of the Ningaloo Reef and adjacent coastal areas determined through hyperspectral imagery.<br>4. Australian Institute of Marine Science – CReefs: Ningaloo Reef Biodiversity Expeditions (2008-2010).  |   | Barrow Island:<br>East Barrow Island – Chevron baseline and monitoring   | N/A – see Table D-1  |
|  |  | <b>Methods:</b>  |   |  |  |
|  |  | 1. Video transects to ground truth aerial photographs and satellite imagery.<br>2. Diver video transects.<br>3. LTM transects, diver based (video) photo quadrat.<br>4. LTM transects, diver based (video) photo quadrats, specimen collection.<br>5. Satellite imagery, mapping and monitoring  |   | East Barrow- seagrass photoquadrats (30 m transects) during spring/summer and winter periods<br>Macroalgae photoquadrats, visual census and biomass and specimen sampling  |  |
|  |  | <b>References and Data:</b>  |   |  |  |

| Major Baseline                                       | Proposed Scientific monitoring operational plan and Methodology   | Ningaloo Coast and the Muiron Islands  | Rankin Bank & Glomar Shoal  | Barrow, Montebello and Lowendal Islands  | Montebello AMP              |
|--|---|--|-----------------------------|--|-----------------------------|
|  |   | <ol style="list-style-type: none"> <li>Cassata and Collins 2008. DATAHOLDER: Curtin University – Applied Geology.</li> <li>CSIRO – Ningaloo Outlook Program</li> <li>AIMS - AIMS (2010) - <a href="http://www.aims.gov.au/creefs">http://www.aims.gov.au/creefs</a></li> <li>Murdoch University - HyVista Corporation – April and May 2006 (Kobryn et al 2022)</li> <li><a href="https://allencoralatlas.org/atlas/#7.58/-21.5563/114.9133">https://allencoralatlas.org/atlas/#7.58/-21.5563/114.9133</a> (accessed 18/05/2022)</li> </ol> |                             | Barrow Island:<br>Chevron Australia (2015a and b)<br>DATAHOLDER: Chevron Australia                                 |                             |
| <b>Benthic Habitat (Deeper Water Filter Feeders)</b> | <b>SM03</b><br>Quantitative assessment using image capture using towed video. Post analysis into broad groups based on taxonomy and morphology.                   | <b>Studies:</b>  |                             |  |                             |
|  |   | <ol style="list-style-type: none"> <li>WAMSI 2007 deep-water Ningaloo benthic communities' study, Colquhoun and Heyward (2008).</li> <li>CSIRO/BHP Ningaloo Outlook Program - Deep reef themes 2020</li> </ol>   | As above (SM03 Coral Reefs) |  | As above (SM03 Coral Reefs) |
|  |   | <b>Methods:</b>  |                             |  |                             |
|  |   | <ol style="list-style-type: none"> <li>Towed video and benthic sled (specimen sampling).</li> <li>Side-scan sonar and AUV transects.</li> </ol>  |                             |  |                             |
|  |   | <b>References and Data:</b>  |                             |  |                             |
|  |   | <ol style="list-style-type: none"> <li>Colquhoun and Heyward (eds) 2008. DATAHOLDER: WAMSI, AIMS.</li> <li>CSIRO – Ningaloo Outlook 2020</li> </ol>  |                             |  |                             |
| <b>Mangroves and Saltmarsh</b>                       | <b>SM04</b><br>Aerial photography and satellite imagery will be used in conjunction with field surveys to map the range and distribution of mangrove communities. | <b>Studies:</b>  |                             |  |                             |
|  |   | <ol style="list-style-type: none"> <li>Atmospheric corrected land cover classification, NW Cape.</li> <li>Woodside hold Rapid Eye imagery of the Ningaloo Reef and coastal area.</li> <li>Hyperspectral survey (2006) of Ningaloo Reef and coastal area (not yet analysed for Mangroves).</li> <li>North West Cape sensitivity mapping 2012 included Mangrove Bay.</li> <li>Global mangrove distribution as mapped by the USGS and located on UNEP's Ocean Data viewer.</li> </ol>   | N/A – See Table D-1         | Barrow Island:<br>East and West Coast baseline and monitoring – mapping (HR aerial imagery) and vegetation surveys | N/A – see Table D-1         |
|  |   | <b>Methods:</b>  |                             |  |                             |

| Major Baseline              | Proposed Scientific monitoring operational plan and Methodology                                      | Ningaloo Coast and the Muiron Islands   | Rankin Bank & Glomar Shoal | Barrow, Montebello and Lowendal Islands   | Montebello AMP      |
|-----------------------------|--|---|----------------------------|---|---------------------|
|                             |  | <ol style="list-style-type: none"> <li>1. Modular Inversion Program. May 2017</li> <li>2. Rapid Eye imagery – High resolution satellite imagery from October/November/December 2011 and 2017.</li> <li>3. Remote sensing – acquisition of HyMap airborne hyperspectral imagery and ground truthing data collection.</li> <li>4. Reconnaissance surveys of the shorelines of the North West Cape and Muiron Islands.</li> <li>5. Remote sensing study of global mangrove coverage.</li> </ol>              |                            | Barrow – Chevron (2015a and b) – HR mapping (aerial images) and vegetation surveys using belt transects – species composition, estimated total canopy cover, total number of trees, pneumatophore density and canopy density.   |                     |
| <b>References and Data:</b> |  |   |                            |   |                     |
|                             |  | <ol style="list-style-type: none"> <li>1. EOMAP 2017<br/>DATAHOLDER: Woodside.</li> <li>2. AAM 2014.<br/>Dataholder: Woodside</li> <li>3. Kobryn et al. 2013.<br/>DATAHOLDER: Murdoch University, AIMS; Woodside.</li> <li>4. Joint Carnarvon Basin Operators, 2012.<br/>DATAHOLDER: Woodside and Apache Energy Ltd.</li> <li>5. <a href="http://data.unep-wcmc.org/">http://data.unep-wcmc.org/</a></li> </ol>   |                            | Barrow Island:<br>Chevron Australia (2015a and b)<br>DATAHOLDER: Chevron Australia  |                     |
| <b>Seabirds</b>             | <b>SM05</b><br>Visual counts of breeding seabirds, nest counts, intertidal bird counts at high tide. | <b>Studies:</b> <ol style="list-style-type: none"> <li>1. LTM Study of marine and shoreline birds: 1970-2011.</li> <li>2. LTM of shorebirds within the Ningaloo coastline (Shorebirds 2020).</li> <li>3. Exmouth Sub-basin Marine Avifauna Monitoring Program (Quadrant Energy/Santos).</li> <li>4. Seabird and Shorebird baseline studies, Ningaloo Region – Report on January 2018 bird surveys.</li> <li>5. Wedge-tailed shearwater foraging behaviour in the Exmouth Region – Final Report</li> </ol> | N/A – See Table D-1        | Barrow Island:<br>Barrow Island Seabird Monitoring Program (Chevron)<br>Barrow, Montebello and Lowendal Islands:<br>1. Johnston et al (2013) general inventory and distribution for the Pilbara region (WA Museum)<br>2. Santos – Integrated Shearwater Monitoring Program (1994-2016)<br>3. Santos – monitoring of seabird breeding colonies throughout the Lowendal Group of Islands. | N/A – see Table D-1 |
| <b>Methods:</b>             |  |   |                            |   |                     |

| Major Baseline | Proposed Scientific monitoring operational plan and Methodology | Ningaloo Coast and the Muiron Islands   | Rankin Bank & Glomar Shoal | Barrow, Montebello and Lowendal Islands   | Montebello AMP |
|----------------|---|---|----------------------------|---|----------------|
|                |   | <p>1. Counts of nesting areas, counts of intertidal zone during high tide.</p> <p>2. The Shorebirds 2020 database comprises the most complete shorebird count data available in Australia. The data have been collected by volunteer counters and BirdLife Australia staff for approximately 150 roosting and feeding sites, mainly in coastal Australia. The data go back as far as 1981 for key areas.</p> <p>3. The Exmouth Sub-basin Marine Avifauna Monitoring Program undertook a detailed assessment of seabird and shorebird use in the Exmouth Sub-basin. Four aerial surveys and four island surveys were conducted between February 2013 and January 2015 for this Program, inclusive of the mainland coasts, of shore islands and a 2,500 km<sup>2</sup> area of ocean adjacent to the Exmouth Sub-basin.</p> <p>4. Shorebird counts, Shearwater Burrow Density.</p> <p>5. Telemetry (GPS &amp; Satellite).</p> |                            | <p>Barrow Island – 2008-ongoing annual surveys: abundance, nest density, presence/absence of egg or chick/fledgling</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Desktop review (WA Museum)</li> <li>2. Nest burrow density, presence/absence of eggs or chicks in burrows</li> <li>3. The distribution and abundance of other nesting seabirds within the Lowendal Island group, including up to 45 islands and islets</li> </ol> |                |
|                |   | <b>References and Data:</b>   |                            |   |                |
|                |   | <ol style="list-style-type: none"> <li>1. Johnstone et al. 2013.<br/>DATAHOLDER: WA MUSEUM.<br/>AMOSC/DBCA (DPaW) 2014.</li> <li>2. BirdLife Australia<br/>DATAHOLDER: Woodside and BirdLife Australia</li> <li>3. Surman &amp; Nicholson 2015.</li> <li>4. BirdLife Australia:<br/>DATAHOLDER: Woodside</li> <li>5. Cannel et al. 2019<br/>DATAHOLDER: UWA and BirdLife Australia</li> </ol>   |                            | <p>Barrow – Chevron (2015c)<br/>DATAHOLDER: Chevron Australia</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Johnstone et al (2013)<br/>DATAHOLDER: (WA Museum)</li> <li>2. Santos DATAHOLDER: Santos</li> <li>3. Surman and Nicholson (2012)<br/>DATAHOLDER: Santos</li> </ol>  |                |
| <b>Turtles</b> | <b>SM06</b>   | <b>Studies:</b>   |                            |   |                |

| Major Baseline | Proposed Scientific monitoring operational plan and Methodology | Ningaloo Coast and the Muiron Islands   | Rankin Bank & Glomar Shoal | Barrow, Montebello and Lowendal Islands  | Montebello AMP      |
|----------------|---|---|----------------------------|--|---------------------|
|                | Beach surveys (recording species, nests, and false crawls).     | <ol style="list-style-type: none"> <li>1. Exmouth Islands Turtle Monitoring Program.</li> <li>2. Ningaloo Turtle Program</li> <li>3. Turtle activity and nesting on the Muiron Islands and Ningaloo Coast (2018).</li> <li>4. Spatial and temporal use of inter-nesting habitat by sea turtles along the Muiron Islands and Ningaloo Coast – 2018-2019</li> </ol>   | N/A – See Table D-1        | <p>Barrow Island:</p> <p>Chevron Australia: long term monitoring programs for flatback turtles</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Marine turtle monitoring as part of DBCA long-term turtle monitoring program (ongoing).</li> <li>2. LTM Study of Green, Flatback, Hawksbill turtles on beaches within the Barrow, Lowendal and Montebello Island Complex.</li> <li>3. Santos 2013 turtle nesting survey on the Lowendal islands.</li> <li>4. Varanus Island Turtle monitoring program (2005 – present).</li> </ol> <p>North West Shelf Flatback Conservation Program – conserve North West Shelf stock – scope covers all summer nesting flatback turtles - <a href="https://flatbacks.dbca.wa.gov.au/about">https://flatbacks.dbca.wa.gov.au/about</a></p> | N/A – see Table D-1 |
|                |   | <b>Methods:</b>   |                            |  |                     |
|                |   | <ol style="list-style-type: none"> <li>1. Astron (on behalf of Santos) to address a gap in the knowledge of turtle numbers at key locations (offshore islands within the region) that are not currently part of an existing monitoring programs (e.g. the NTP). Field surveys were conducted in October 2013 and January 2014. Surveys were conducted on 12 islands, with each island surveyed once (with the exception of Beach 8 at North Muiron Island) and all tracks counted.</li> <li>2. Long term trends in marine turtle populations, beach surveys, track counts, best location, mortality counts.</li> <li>3. On-beach monitoring and aerial surveys.</li> <li>4. Tagging (satellite transmitter), analysis of internesting, migration and foraging grounds movements and behaviour.</li> </ol> |                            | <p>Barrow Island – Chevron Australia: 2005 - ongoing annual surveys, flatback turtles – nesting success, track counts and satellite tracking, hatchling survival and dispersal.</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Nesting demographics</li> <li>2. Nesting demographics</li> <li>3. Tagging and nest counts</li> <li>4. Tagging and nest counts at Varanus, Beacon, Bridled, Abutilon and Parakeelya islands.</li> </ol> <p>North West Shelf Flatback Conservation Program - <a href="https://flatbacks.dbca.wa.gov.au/program-activities">https://flatbacks.dbca.wa.gov.au/program-activities</a></p>   |                     |
|                |   | <b>References/Data:</b>   |                            |  |                     |

| Major Baseline | Proposed Scientific monitoring operational plan and Methodology   | Ningaloo Coast and the Muiron Islands  | Rankin Bank & Glomar Shoal   | Barrow, Montebello and Lowendal Islands   | Montebello AMP  |
|----------------|---|--|--|---|---|
|                |   | 1.Santos – Report.<br>2. NTP Annual Reports<br>DATAHOLDERS: DBCA. Reports available at <a href="http://www.ningalooturtles.org.au/media_reports.html">http://www.ningalooturtles.org.au/media_reports.html</a><br>3.Rob et al. 2019<br>DATAHOLDER: DBCA<br>4.Tucker et al. 2019<br>DATAHOLDER: DBCA  |  | Barrow Island – Chevron (2015c)<br>DATAHOLDER: Chevron Australia<br>Barrow, Montebello and Lowendal Islands:<br>1. DBCA<br>2. Pendoley 2005. AMOSC/DBCA (DPaW) 2014.<br>3. Santos (2014) DATAHOLDER: Santos<br>4. Santos (2005-prsesent)<br>DATAHOLDER: Santos<br>North West Shelf Flatback Conservation Program<br><a href="https://flatbacks.dbca.wa.gov.au/program-activities">https://flatbacks.dbca.wa.gov.au/program-activities</a> |   |
| <b>Fish</b>    | <b>SM09</b><br>Baited Remote Underwater Video Stations (BRUVS), Visual Underwater Counts (VUC), Diver Operated Video (DOV). | <b>Studies:</b><br>1. AIMS/DBCA 2014 Baseline Ningaloo Survey – repeat and expansion on the LTM (Co-funded survey: Woodside and AIMS).<br>2. Demersal fish populations – baseline assessment (AIMS/WAMSI).<br>3. DBCA study measured Species Richness, Community Composition, and Target Biomass, through UVC. BRUVS studies determining max N, Species Richness, and Biomass.<br>4. Pilbara Marine Conservation Partnership Stereo BRUVS in shallow water (~10m) in 2014 in northern region of the Ningaloo Marine Park, in shallow water (~10m) inside the lagoonal reef of the Ningaloo Marine Park in 2016, in deep water (~40m) across the length of the Ningaloo Marine Park in 2015, in shallow water outside of Ningaloo Reef from Waroora to Jurabi in 2015 and offshore of the Muiron Islands in 2015.<br>5. Elasmobranch faunal composition of Ningaloo Marine Park.<br>6. Juvenile fish recruitment surveys at Ningaloo reef.<br>7. Demersal fish assemblage sampling method comparison<br>8. Ningaloo Outlook (CSIRO) - Shallow and Deep Reefs Program<br><br><b>Methods:</b> | 1. Glomar Shoal and Rankin Bank Environmental Survey Report, 2013, quantitatively surveyed benthic habitats and communities. AIMS report to Woodside. Scientific Publication - Biodiversity and spatial patterns of benthic habitat and associated demersal fish communities at two tropical submerged reef ecosystems, 2018.<br>2. Rankin Bank Environmental Survey Extension, 2014, Habitat assessment of an area southeast of Rankin Bank.<br>3. Glomar Shoal and Rankin Bank surveys, 2017. GWF-2 Monitoring Programme. Quantitatively surveyed benthic habitats and communities.<br>4. Temporal Studies survey of Rankin Bank and Glomar Shoal, 2018. | Barrow Island:<br>Chevron: East and West Coast intertidal and subtidal baseline and monitoring<br><br>Barrow, Montebello and Lowendal Islands:<br>1. Pilbara Marine Conservation Partnership Stereo BRUVS drops in shallow water (~10m) from Exmouth to Barrow Islands in 2015.<br>2. Finfish monitoring as part of DBCAs Western Australian Marine Monitoring Program (2015-ongoing).  | 1. CSIRO – Fish Diversity.<br>2. Fish species richness and abundance. |

| Major Baseline | Proposed Scientific monitoring operational plan and Methodology | Ningaloo Coast and the Muiron Islands   | Rankin Bank & Glomar Shoal  | Barrow, Montebello and Lowendal Islands  | Montebello AMP   |
|----------------|---|---|---|--|--|
|                |   | <ol style="list-style-type: none"> <li>1. UVC surveys.</li> <li>2. BRUVS Study with 304 video samples at three specific depth ranges (1-10 m, 10-30 m and 30-110m).</li> <li>3. UVC surveys.</li> <li>4. Stereo BRUVS</li> <li>5. Snorkel and Scuba surveys.</li> <li>6. Underwater visual census.</li> <li>7. Diver operated video.</li> <li>8. Diver UVC.</li> <li>9. Diver UVC, stereo BRUVs</li> </ol>  | <ol style="list-style-type: none"> <li>1. BRUVs.</li> <li>2. BRUVs.</li> <li>3. BRUVs.</li> <li>4. BRUVs.</li> </ol>  | <p>Barrow Island – Chevron (2015a and b) – demersal fish: stereo BRUVS (subtidal habitats) and netting combination for mangrove habitat</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Stereo BRUVS.</li> <li>2. Diver underwater visual surveys (UVS)</li> </ol> | <ol style="list-style-type: none"> <li>1. Semi V Wing trawl net or an epibenthic sled.</li> <li>2. ROV Video.</li> </ol> |
|                |   | <b>References/Data:</b>   |   |  |  |
|                |   | <ol style="list-style-type: none"> <li>1. AIMS 2014. DATAHOLDER: AIMS/Woodside.</li> <li>2. Fitzpatrick et al. 2012. DATAHOLDERS: WAMSI, AIMS.</li> <li>3. DBCA unpublished data. DATAHOLDER: DBCA/AIMS.</li> <li>4. CSIRO Data DATAHOLDER: CSIRO Data Centre ( ).</li> <li>5. Stevens, J.D., P.R., White, W.T., McAuley, R.B., Meekan, M.G. 2009.</li> <li>6. WAMSI unpublished data DATAHOLDER: AIMS ( ).</li> <li>7. DATAHOLDER: WAMSI</li> <li>8. CSIRO – Ningaloo Outlook 2020.</li> </ol> | <ol style="list-style-type: none"> <li>1. AIMS 2014a and Abdul Wahab et al., 2018. DATAHOLDER: AIMS.</li> <li>2. AIMS 2014b. DATAHOLDER: AIMS.</li> <li>3. Currey-Randall et. al., 2019. DATAHOLDER: AIMS</li> <li>4. Currey-Randall et. al., 2019. DATAHOLDER: AIMS</li> </ol> | <p>Barrow Island – Chevron Australia (2015a and b) DATAHOLDER: Chevron</p> <p>Barrow, Montebello and Lowendal Islands:</p> <ol style="list-style-type: none"> <li>1. Unpublished report CSIRO DATAHOLDER: CSIRO, CSIRO Data centre ( )</li> <li>2. DBCA</li> </ol>   | <ol style="list-style-type: none"> <li>1. Keesing 2019.</li> <li>2. McLean et al. 2019.</li> </ol>                       |

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## ANNEX E: 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

Abrohlos Islands: Pelseart Group

Abrohlos Islands: Wallabi Group

Abrohlos Islands: Easter Group

#### Dampier

Rankin Bank & Glomar Shoals

Barrow and Lowendal Islands

Pilbara Islands – Southern Island Group

Montebello Island – Stephenson Channel Nth TRP

Montebello Island – Champagne Bay and Chippendale channel TRP

Montebello Island – Claret Bay TRP

Montebello Island – Hermite/Delta Island Channel TRP

Montebello Island – Hock Bay TRP

Montebello Island – North and Kelvin Channel TRP

Montebello Island – Sherry Lagoon Entrance TRP

Withnell Bay

Holden Bay

King Bay

No Name Bay / No Name Beach

Enderby Island – Dampier

Rosemary Island – Dampier

Legendre Island – Dampier

#### Karratha Gas Plant

KGP to Whitnell Creek

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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

## APPENDIX E NOPSEMA REPORTING FORMS

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NOPSEMA Recordable Environmental Incident monthly Reporting Form

<https://www.nopsema.gov.au/assets/Forms/A198750.doc>

Report of an accident, dangerous occurrence or environmental incident

<https://www.nopsema.gov.au/assets/Forms/N-03000-FM0831-Report-of-an-Accident-Dangerous-Occurrence-or-Environmental-Incident-Rev-8-Jan-2015-MS-Word-2010.docx>

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## APPENDIX F CONSULTATION

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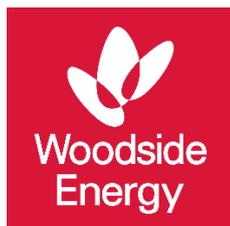
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**Table 1 and 2, Appendix F – TPA03 Well Intervention Environment Plan**

Date: November 2023

Revision: 3

**Table 1: Consultation Report with Relevant Persons or Organisations**

| Commonwealth and WA State Government Departments or Agencies – Marine   |   |   |
|---|---|---|
| <b>Australian Border Force (ABF)</b>  |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with ABF for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to Australia Border Force on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has sent follow up emails seeking feedback on the proposed activities.</li> <li>• Woodside has provided the ABF with the opportunity to provide feedback over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed ABF, advising of the proposed activity (Appendix F, reference 1.1) and provided a Consultation Information Sheet.</li> <li>• On 12 July 2022, Woodside emailed ABF, following up on the proposed activity (Appendix F, reference 2.6), and provided a Consultation Information Sheet.</li> <li>• On 15 September 2022, Woodside provided an activity update to ABF regarding changes to activity timing and vessel requirements (Appendix F, reference 3.1).</li> <li>• On 15 February 2023, Woodside emailed ABF providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed the ABF following up on the proposed activity (Appendix F, reference 5.2) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed ABF to provide an update on activity timing (Appendix F, reference 6.1).</li> </ul> |   |   |
| Summary of Feedback, Objection or Claim   | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | Woodside has addressed maritime security-related issues in <b>Section 6</b> of this EP based on previous offshore activities.<br><br>No additional measures or controls are required. |
| <b>Australian Fisheries Management Authority (AFMA)</b>   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with AFMA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p>   |   |   |

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to AFMA on 22 June 2022 based on their function, interest and activities.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside has addressed and responded to AFMA over a 17 month period.

**Summary of information provided and record of consultation:**

- On 22 June 2022, Woodside emailed AFMA, advising of the proposed activity (Appendix F, reference 1.2) and provided a Consultation Information Sheet and fisheries map.
- On 12 July 2022, Woodside emailed AFMA, following up on the proposed activity (Appendix F, reference 2.7), and provided a Consultation Information Sheet and fisheries map.
- On 13 July 2022, AFMA responded advising that it had no further comment and encouraged Woodside to continue consulting with all fishers who have entitlements to fish within the proposed area.
- On 13 July 2022, Woodside responded thanking AFMA for its feedback and confirmed that Woodside has provided information to relevant representative organisations on behalf of Commonwealth fishery licence holders who have entitlements to fish within the proposed area.
- On 15 September 2022, Woodside provided an activity update to AFMA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.4).
- On 15 February 2023, Woodside emailed AFMA providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.
- On 7 March 2023, Woodside emailed the AFMA following up on the proposed activity (Appendix F, reference 5.2) and to request any feedback.
- On 22 May 2023, Woodside emailed AFMA requesting Commonwealth fishery licence holder contact details unrelated to this proposed activity.
- On 30 May 2023, AFMA responded to advise there will be a change in providing this information. In a further follow up email on the same day, AFMA advised there is a fee payable for this information and a need to sign a Deed of Confidentiality.
- On 17 July 2023, an agreement was reached with AFMA for Woodside to consult directly with Commonwealth fisheries as per contact details provided by AFMA under the new Deed of Confidentiality.
- On 12 October 2023, Woodside emailed AFMA to provide an update on activity timing (Appendix F, reference 6.1).

**Summary of Feedback, Objection or Claim**

**Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response**

**Inclusion in Environment Plan**

|  |   |   |
|--|---|---|
| <p>AFMA has requested Woodside consult with operators who have entitlements to fish within the proposed area.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>  | <p>Woodside has addressed AFMA's request to consult operators who have entitlements to fish within the proposed area.</p> <p>Woodside has provided consultation information to AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional controls are required.</p> |
| <b>Australian Hydrographic Office (AHO)</b>  |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with AHO for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information and shipping lanes map provided to AHO on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has addressed and responded to AHO over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed the AHO, advising of the proposed activity (Appendix F, reference 1.3) and provided a Consultation Information Sheet and shipping lanes map.</li> <li>• On 22 June 2022, the AHO responded acknowledging receipt of Woodside's email.</li> <li>• On 15 September 2022, Woodside provided an activity update to AHO regarding changes to activity timing and vessel requirements (Appendix F, reference 3.5).</li> <li>• On 15 February 2023, Woodside emailed AHO providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet</li> <li>• On 7 March 2023, Woodside emailed the AHO following up on the proposed activity (Appendix F, reference 5.1) and provided a shipping lane map.</li> <li>• On 8 March 2023, AHO responded, acknowledging receipt of Woodside's email.</li> <li>• On 12 October 2023, Woodside emailed AHO to provide an update on activity timing (Appendix F, reference 6.2).</li> <li>• On 13 October 2023, AHO responded, acknowledging receipt of Woodside's email.</li> </ul> |   |   |

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
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| <p>AHO acknowledged receipt of consultation emails.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>  | <p>AHO responded and acknowledged receipt of Woodside's consultation email.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside will notify the AHO no less than four working weeks before operations commence, as referenced as a <b>Control 1.3</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <b>Australian Maritime Safety Authority (AMSA) - Marine Safety</b>   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with AMSA – Marine Safety for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to AMSA – Marine Safety on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside addressed and responded to AMSA – Marine Safety's requests over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed AMSA advising of the proposed activity (Appendix F, reference 1.3) and provided a Consultation Information Sheet and shipping lanes map.</li> <li>• On 12 July 2022, Woodside emailed AMSA following up on the proposed activity (Appendix F, reference 2.8), and provided a Consultation Information Sheet and shipping lanes map.</li> <li>• On 14 July 2022, AMSA emailed Woodside requesting: <ul style="list-style-type: none"> <li>○ The AHO be contacted no less than four working weeks before operations commence for the promulgation of related notices to mariners;</li> <li>○ AMSA's Joint Rescue Coordination Centre (JRCC) be notified at least 24–48 hours before operations commence;</li> <li>○ Provide updates to the AHO and JRCC should there be changes to the activity;</li> <li>○ Vessels exhibit appropriate lights and shapes to reflect the nature of operations and comply with the International Rules of Preventing Collisions at Sea</li> <li>○ AMSA provided advice on obtaining vessel traffic plots, including digital datasets and maps.</li> </ul> </li> <li>• On 14 July 2022, Woodside responded to AMSA confirming it will contact/notify: <ul style="list-style-type: none"> <li>○ The AHO no less than 4 weeks before operations commence;</li> </ul> </li> </ul> |   |   |

- AMSA's JRCC at least 24-48 hours before operations commence; and
- Provide updates to both the AHO and AMSA on any changes.
- Confirmed vessels will exhibit appropriate lights and shapes to reflect the nature of operations and the obligation to comply with the International Rules for Preventing Collisions at Sea.
- On 15 September 2022, Woodside provided an activity update to AMSA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.6).
- On 15 September 2022, AMSA responded thanking Woodside for the update and advised that AMSA's previous advice remains unchanged.
- On 16 September 2022, Woodside responded thanking AMSA for the confirmation.
- On 15 February 2023, Woodside emailed AMSA providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.
- On 16 February 2023, AMSA messaged/called Woodside requesting the digital data.
- On 17 February 2023, Woodside responded to AMSA and provided a shapefile containing the operational areas of the project / EP.
- On 22 February 2023, AMSA emailed Woodside requesting:
  - The AHO be contacted no less than four working weeks before operations commence for the promulgation of related notices to mariners;
  - AMSA's Joint Rescue Coordination Centre (JRCC) be notified at least 24–48 hours before operations commence;
  - Provide updates to the AHO and JRCC should there be changes to the activity;
  - Vessels exhibit appropriate lights and shapes to reflect the nature of operations and comply with the International Rules of Preventing Collisions at Sea
  - AMSA provided advice on obtaining vessel traffic plots, including digital datasets and maps.
- On 7 March 2023, Woodside responded thanking AMSA for its feedback and confirmed we will:
  - Notify the AHO no less than 4 weeks before operations commence;
  - notify AMSA's JRCC at least 24-48 hours before operations commence;
  - Notify AMSA's JRCC when operations end; and
  - Provide updates to both the AHO and AMSA on any material changes to planned activities.
  - Woodside also provided shipping lane figures and associated Operational Areas along with figures showing the Environment that May Be Affected (EMBA).
  - On 12 October 2023, Woodside emailed AMSA – Marine Safety to provide an update on activity timing (Appendix F, reference 6.3).

| Summary of Feedback, Objection or Claim | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response | Inclusion in Environment Plan |
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| <p>AMSA has provided feedback and requested that:</p> <ul style="list-style-type: none"> <li>• AMSA’s Joint Rescue Coordination Centre (JRCC) be notified at least 24–48 hours before operations commence;</li> <li>• the AHO be contacted no less than four working weeks before operations commence for the promulgation of related notices to mariners;</li> <li>• all vessels exhibit appropriate lights and shapes to reflect the nature of operations; and</li> <li>• all vessels comply with the International Rule for Preventing Collisions at Sea.</li> </ul> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>Woodside has addressed AMSA’s requests and provided further information for the proposed activity (<b>Appendix F, reference 3.4</b>) including an operational area polygons in shapefile format, and the shipping lane figure for the Operational Areas and EMBA.</p> <p>Woodside will contact/notify:</p> <ul style="list-style-type: none"> <li>• The AHO no less than 4 weeks before operations commence</li> <li>• AMSA’s JRCC at least 24-48 hours before operations commence</li> <li>• Provide updates to both the AHO and AMSA on any changes.</li> </ul> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside will notify AMSA’s JRCC at least 24–48 hours before operations commence for each survey, as referenced as <b>Control 1.5</b> in this EP.</p> <p>Woodside will notify the AHO no less than four working weeks before operations commence, as referenced as a <b>Control 1.3</b> in this EP.</p> <p>Woodside considers the measures and controls in the EP are appropriate.</p> |
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**Australian Maritime Safety Authority (AMSA) – Marine Pollution**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with AMSA – Marine Pollution for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to AMSA – Marine Pollution on 22 June 2022 based on their function, interest and activities.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside has sent follow up emails seeking feedback on the proposed activities.
- Woodside has provided AMSA – Marine Pollution with the opportunity to provide feedback over a 17 month period.

**Summary of information provided and record of consultation:**

- On 30 June 2022, Woodside emailed AMSA – Marine Pollution (Appendix F, reference 1.5) and provided a copy of the Oil Pollution First Strike Plan (Appendix F, reference 1.5).
- On 15 February 2023, Woodside emailed AMSA – Marine Pollution providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.

| <ul style="list-style-type: none"> <li>On 7 March 2023, Woodside emailed AMSA – Marine Pollution following up on the proposed activity (Appendix F, reference 5.2) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed AMSA – Marine Pollution to provide an update on activity timing (Appendix F, reference 6.1).</li> </ul>  |   |  |
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| Summary of Feedback, Objection or Claim  | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan  |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has provided AMSA – Marine Pollution with a copy of the Oil Pollution First Strike Plan Woodside and has addressed oil pollution planning and response at Error! Reference source not found..</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside and has addressed oil pollution planning and response at Error! Reference source not found..</p> <p>No additional measures or controls are required.</p> |
| <b>Department of Defence (DoD)</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DoD for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to Department of Defence on 15 February 2023 based on their function, interest and activities.</li> <li>Woodside has addressed and responded to DoD over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 15 February 2023, Woodside emailed DoD providing information on the proposed activity (Appendix F, reference 4.5), and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed DoD following up on the proposed activity (Appendix F, reference 5.3) and to request any feedback.</li> <li>On 16 March 2023, DoD responded, advising that: <ul style="list-style-type: none"> <li>all activities in the area are conducted at its own risk; and</li> <li>the Commonwealth of Australia, represented by the Department of Defence, takes no responsibility for: <ul style="list-style-type: none"> <li>i. reporting the location and type of UXO that may be in the areas;</li> </ul> </li> </ul> </li> </ul> |   |  |

- ii. identifying or removing any UXO from these areas; and
- iii. any loss or damage suffered or incurred by Woodside or any third party arising out of, or directly related to, UXO in the area.

DoD also advised that:

- i. It requires a minimum of five weeks notification prior to the commencement of activities.
- ii. any activities undertaken within Restricted Airspace comply with the relevant Notice to Air Mission (NOTAM) restrictions continued liaison with the Australian Hydrographic Service (AHS) for Notices to Mariners (NOTMAR), in particular ensure that the AHS is notified three weeks prior to the actual commencement of activities.

- On 30 March 2023, Woodside responded thanking the DoD for its feedback and:

- noted DoD's advice on the location of the Operational Area for the proposed activities and the presence of the North West Exercise Area (NWXA) and restricted airspace.
- note its advice with respect to the location, identification, removal, or damage to equipment from unexploded ordinances (UXOs).

And confirmed Woodside will:

- notify the Department of Defence at least five weeks prior to the commencement of activities.
- confirm restricted air space status with the Department of Defence as part of its commencement of activity notification.
- and the AHO will be notified four weeks prior to the start of activities in line with its request.

- On 12 October 2023, Woodside emailed DoD to provide an update on activity timing (Appendix F, reference 6.4).

| Summary of Feedback, Objection or Claim | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response | Inclusion in Environment Plan |
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| <p>DOD has provided feedback and requested:</p> <ul style="list-style-type: none"> <li>iii. a minimum of five weeks notification prior to the commencement of activities;</li> <li>iv. Woodside to liaise with Airservices Australia regarding any notification requirements in restricted airspace; and</li> <li>v. Woodside to notify the AHO of the activities three weeks prior to commencement.</li> </ul> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>Woodside has addressed DoDs feedback, including:</p> <ul style="list-style-type: none"> <li>• providing DoD activity notification five weeks prior to commencement (<b>Control 1.8</b>) and AHO four weeks prior to commencement (<b>Control 1.3</b>) of activities;</li> <li>• noted the requirement and contact details provided by DoD to engage with Airservices Australia if the restricted airspace is activated; and</li> <li>• advised that Woodside will confirm restricted air space status with DoD as part of the commencement of activity notification.</li> </ul> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has addressed DoDs expectations on notifications – Defence restricted air space and AHO (<b>Control 1.8</b> and <b>Control 1.3</b>). AHO have been consulted on the activity and are included in Woodside's activity notification protocols. AHO will be notified four weeks prior to the start of activities.</p> <p>No additional measures or controls are required.</p> |
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**Department of Primary Industries and Regional Development (DPIRD)**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DPIRD for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to DPIRD on 22 June 2022 based on their function, interest and activities.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside has sent follow up emails seeking feedback on the proposed activities.
- Woodside has provided DPIRD with the opportunity to provide feedback over a 17 month period.

**Summary of information provided and record of consultation:**

- On 22 June 2022, Woodside emailed DPIRD, advising of the proposed activity (Appendix F, reference 1.8) and provided a Consultation Information Sheet and fisheries map.
- On 11 July 2022, Woodside emailed DPIRD, following up on the proposed activity (Appendix F, reference 2.2), and provided a Consultation Information Sheet and fisheries map.
- On 15 September 2022, Woodside provided an activity update to DPIRD regarding changes to activity timing and vessel requirements (Appendix F, reference 3.9).
- On 15 February 2023, Woodside emailed DPIRD following provided additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.

| <ul style="list-style-type: none"> <li>On 7 March 2023, Woodside emailed the DPRID following up on the proposed activity (Appendix F, reference 5.2) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed DPIRD to provide an update on activity timing (Appendix F, reference 6.1).</li> </ul>  |  |  |
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| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to DPIRD, WAFIC, and relevant Fishery Licence Holders that have the potential to be directly impacted by planned activities in the Operational Area (Pilbara Line Fishery) prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <b>Department of Transport (DoT)</b>   |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DoT for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Consultation information provided to DoT on 22 June 2022 based on their function, interest and activities.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Woodside has addressed and responded to DoT over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 22 June 2022, Woodside emailed DoT, advising of the proposed activity (Appendix F, reference 1.1) and provided a Consultation Information Sheet.</li> <li>On 30 June 2022, Woodside emailed DoT (Appendix F, reference 1.4) and provided a copy of the Oil Pollution First Strike Plan (Appendix D).</li> <li>On 12 July 2022, Woodside emailed DoT following up on the proposed activity (Appendix F, reference 2.6), and provided a Consultation Information Sheet.</li> <li>On 15 July 2022, DoT responded thanking Woodside for the information and advised that it would review and revert back with any comments/queries.</li> <li>On 9 August 2022, DoT responded thanking Woodside for the Oil Pollution First Strike Plan and: <ul style="list-style-type: none"> <li>Queried whether there's a chance that oil could enter State waters at lower concentrations than response thresholds, and if so, the timeframe and Scientific Monitoring Plans that would be activities.</li> </ul> </li> </ul> |  |  |

- Requested detail on the oil spill trajectory modelling undertaken and a diagram.
- On 11 August 2022, Woodside responded advising:
  - timeframes and probability of oil entering State waters and the Scientific Monitoring Plans that would be activated.
  - provided additional information on the stochastic modelling undertaken and a figure.
- On 1 September 2022, DoT responded thanking Woodside for the information and advised that it had no further comment.
- On 15 September 2022, Woodside provided an activity update to DoT regarding changes to activity timing and vessel requirements (Appendix F, reference 3.1).
- On 15 February 2023, Woodside emailed DoT providing additional information on the proposed activity (Appendix F, reference 4.5), and provided an updated Consultation Information Sheet.
- On 21 February 2023, DoT responded and asked to be consulted if there any changes that may result in an increased risk of a spill impacting Statewaters from the proposed activities.
- On 31 March 2023, Woodside responded confirming that if there is a risk of a spill impacting State waters, the Department of Transport will be consulted.
- On 12 October 2023, Woodside emailed DoT to provide an update on activity timing (Appendix F, reference 6.5).

| Summary of Feedback, Objection or Claim  | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
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| <p>DoT responded and asked to be consulted if there is a risk of a spill impacting State waters or further, if there is an increased risk of a spill impacting State waters from the proposed activities.</p> <p>DoT also:</p> <ul style="list-style-type: none"> <li>• queried whether there’s a chance that oil could enter State waters at lower concentrations than response thresholds, and if so, the timeframe and Scientific Monitoring Plans that would be activities; and</li> <li>• requested detail on the oil spill trajectory modelling undertaken and a diagram.</li> </ul> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>Woodside has addressed the DoT’s feedback, including confirming that if there is a risk of a spill impacting State waters, DoT will be consulted.</p> <p>Woodside addressed DoT’s comments, including:</p> <ul style="list-style-type: none"> <li>• advising timeframes and probability of oil entering State waters and the Scientific Monitoring Plans that would be activated; and</li> <li>• provided additional information on the stochastic modelling undertaken and a figure.</li> </ul> <p>Woodside will provide DoT with a copy of the accepted Oil Pollution First Strike Plan, as referenced in the OSPRMA (<b>Appendix D</b>).</p> <p>Woodside will consult DoT if there is a spill impacting State water from the proposed activity, as referenced in the OSPRMA (<b>Appendix D</b>).</p> <p>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</p> | <p>Woodside will provide DoT with a copy of the accepted Oil Pollution First Strike Plan, as referenced in the OSPRMA (<b>Appendix D</b>).</p> <p>Woodside will consult DoT if there is a spill impacting State water from the proposed activity, as referenced in the OSPRMA (<b>Appendix D</b>).</p> <p>No additional measures or controls are required.</p> |

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|  | Management of Change and Revision process (see <b>Section 7.7.1</b> ).  |   |
| <b>Department of Planning, Lands and Heritage (DPLH)</b>   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DPLH for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to DPLH on 15 February 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded to DPLH over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 15 February 2023, Woodside emailed DPLH advising of the proposed activity (Appendix F, reference 4.6), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed the DPLH following up on the proposed activity (Appendix F, reference 5.4) and requested any feedback.</li> <li>• On 9 May 2023, Woodside emailed the DPLH following up on the proposed activity (Appendix F, reference 5.4.1 and requested any feedback.</li> <li>• On 11 May 2023, DPLH emailed Woodside to advise it would have feedback for Woodside by the following week.</li> <li>• On 11 May 2023, Woodside emailed DPLH to thank it for the update.</li> <li>• On 16 May 2023, DPLH emailed Woodside thanking it for the opportunity to provide feedback on the proposed activities and confirmed it did not have any feedback.</li> <li>• On 18 May 2023, Woodside emailed DPLH to thank it for its feedback.</li> <li>• On 12 October 2023, Woodside emailed DPLH to provide an update on activity timing (Appendix F, reference 6.6).</li> </ul> |   |   |
| <b>Summary of Feedback, Objection or Claim</b>   | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>  |
| <p>DPLH confirmed it doesn't have any feedback on the proposed activities.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>   | <p>Woodside notes DPLH's confirmation that it doesn't have any feedback on the proposed activities.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>The Environment Plan demonstrates that there are no known underwater heritage sites or shipwrecks within the Petroleum Activities Area and identifies that there are no credible impacts to the values of any underwater heritage or shipwrecks as a result of planned activities (<b>Section 4.6.1.8</b>). While impacts to underwater heritage sites or shipwrecks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a</p> |

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|  |  | hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b> .<br>No additional measures or controls are required.  |
| <b>Commonwealth and WA State Government Departments or Agencies – Environment</b>  |  |  |
| <b>Department of Climate Change, Energy Efficiency and Water (DCCEEW) /Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries and Biosecurity (marine pests, vessels, aircraft and personnel) (formerly DAWE)</b>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DCCEEW/DAFF for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to DCCEW/DAFF on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has sent follow up emails seeking feedback on the proposed activities.</li> <li>• Woodside has provided the DCCEW/DAFF with the opportunity to provide feedback over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed DCCEEW/DAFF, advising of the proposed activity including biosecurity matters (Appendix F, reference 1.6) and provided a Consultation Information Sheet.</li> <li>• On 12 July 2022, Woodside emailed DCCEEW/DAFF, following up on the proposed activity (Appendix F, reference 2.9), and provided a Consultation Information Sheet.</li> <li>• On 15 September 2022, Woodside provided an activity update to DCCEEW/DAFF regarding changes to activity timing and vessel requirements (Appendix F, reference 3.7).</li> <li>• On 15 February 2023, Woodside emailed DCCEEW/DAFF providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed the DCCEW/DAFF following up on the proposed activity (Appendix F, reference 5.2) and requested any feedback.</li> <li>• On 12 October 2023, Woodside emailed DCCEEW/DAFF to provide an update on activity timing (Appendix F, reference 6.1).</li> </ul> |  |  |
| <b>Summary of Feedback, Objection or Claim</b>   | <b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b>   | <b>Inclusion in Environment Plan</b>   |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has consulted AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia, WAFIC and individual relevant licence holders.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has</p> | The Environment Plan demonstrates that the proposed activities are outside the boundaries of a proclaimed Commonwealth Marine Park and identifies that there are no credible impacts to the values of any Commonwealth Marine Parks as a result of planned activities ( <b>Section</b> |

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|  | <p>been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see <b>Section 7.7.1</b>).</p> | <p><b>4.5.4</b>). While impacts to Commonwealth Marine Parks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b>.</p> <p>The Environment Plan demonstrates that there are no known underwater heritage sites or shipwrecks within the Petroleum Activities Area and identifies that there are no credible impacts to the values of any underwater heritage or shipwrecks as a result of planned activities (<b>Section 4.6.1.9</b>). While impacts to underwater heritage sites or shipwrecks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b>.</p> <p>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 <b>Section 6.7.8</b>).</p> <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to DPIRD, WAFIC, and relevant Fishery Licence Holders that have the potential to be directly impacted by planned activities in the Operational Area (Pilbara Line Fishery and Pilbara Trap Fishery) prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Director of National Parks (DNP)</b></p> |   |  |

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DNP for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to DNP on 22 June 2022 based on their function, interest and activities.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside has addressed and responded to DNP over a 17 month period.

**Summary of information provided and record of consultation:**

- On 22 June 2022, Woodside emailed DNP, advising of the proposed activity (Appendix F, reference 1.7), and provided a Consultation Information Sheet.
- On 11 July 2022, Woodside emailed DNP, following up on the proposed activity (Appendix F, reference 2.1), and provided a Consultation Information Sheet.
- On 22 July 2022, DNP responded thanking Woodside for the opportunity to comment on the EP and:
  - Noted the planned activities do not overlap any AMPs
  - Advised there are no authorisation requirements from the DNP and there are no claims and objections at this time.
  - Advised that the DNP doesn't require further notification of progress made in relation to this activity unless details regarding the activity change and result in an overlap with or new impact to a marine park, or for emergency responses.
  - The DNP also referenced the NOPSEMA and Parks Australia guidance note that outlines what titleholders need to consider and evaluate for an EP and the North-west Marine Parks Network Management Plan 2018.
  - The DNP advised that it should be made aware of oil/gas pollution incidences which occur within a marine park or are likely to impact on a marine park as soon as possible.
- On 25 July 2022, Woodside responded thanking DNP for its feedback and noted the DNP's confirmation that:
  - Planned activities do not overlap any AMPs.
  - There are no authorisation requirements from the DNP at this time.
  - There are no claims or objections at this time.
  - Woodside confirmed that it would contact the DNP if details regarding the activity change and result in an overlap with or new impact to a marine park, or for emergency responses.
- On 15 September 2022, Woodside provided an activity update to DNP regarding changes to activity timing and vessel requirements (Appendix F, reference 3.8).
- On 15 February 2023, Woodside emailed DNP providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.
- On 7 March 2023, Woodside emailed the DNP following up on the proposed activity (Appendix F, reference 5.2) and requested any feedback.
- On 21 April 2023, the DNP responded, thanked Woodside for the opportunity to comment.

- The DNP advised it had no objections or claims as this activity is outside of any Australian Marine Parks (AMP) and as such there are no approvals required from DNP.
- The DNP noted it has worked closely with NOPSEMA to develop and publish a guidance note and included link to the online document.
- The DNP noted that the EP should:
  - identify and manage all impacts and risks on Australian marine park values (including ecosystem values) to an acceptable level and consider all options to avoid or reduce them to as low as reasonably practicable.
  - clearly demonstrate that the activity will not be inconsistent with the management plan.
- The DNP also noted:
  - the North-west Marine Parks Network Management Plan 2018 (management plan) came into effect on 1 July 2018 and provides further information on values for Gascoyne Marine Park, which is the nearest to the proposed activity.
  - Australian marine park values are broadly defined into four categories: natural (including ecosystems), cultural, heritage and socio-economic. Information on the values for the marine parks is also located on the Australian Marine Parks Science Atlas.
- The DNP asked to be made aware of incidences which occur within a marine park or are likely to impact on a marine park as soon as possible.
- The DNP requested notification to be provided to the 24 hour Marine Compliance Duty Officer and should include:
  - titleholder details
  - time and location of the incident (including name of marine park likely to be affected)
  - proposed response arrangements as per the Oil Pollution Emergency Plan (e.g. dispersant, containment, etc.)
  - confirmation of providing access to relevant monitoring and evaluation reports when available; and
  - contact details for the response coordinator.
- The DNP noted it may request daily or weekly Situation Reports, depending on the scale and severity of the pollution incident.
- On 2 May 2023, Woodside responded to the DNP thanking it for its response and:
  - confirmed the planned activities and operational areas under the above proposed EP does not overlap any AMPs.
  - noted the DNP's advice that it has no objections or claims with respect to the proposed EPs, and as such there are no approvals required from DNP.
  - confirmed Woodside will contact the DNP if details regarding the activity change and result in an overlap with or new impact to a marine park, or for emergency responses.
- On 12 October 2023, Woodside emailed DNP to provide an update on activity timing (Appendix F, reference 6.7).

| Summary of Feedback, Objection or Claim | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response | Inclusion in Environment Plan |
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| <p>DNP responded and:</p> <ul style="list-style-type: none"> <li>• advised it had no objections or claims with respect to the proposed activity.</li> <li>• confirmed that planned activities do not overlap any AMPS and there are no authorisation requirements from the DNP.</li> <li>• asked to be made aware of incidences which occur within a marine park or are likely to impact on a marine park as soon as possible.</li> <li>• requested notification to be provided to the 24 hour Marine Compliance Duty Officer.</li> </ul> <p>Whilst feedback has been received, there were no objections or claims.</p>   | <p>Woodside has addressed the DNP's feedback including:</p> <ul style="list-style-type: none"> <li>• confirming that planned activities and the Operational Area for this EP do not overlap any AMPs;</li> <li>• noted DNP's advice that it had no objections or claims with respect to the proposed activity; and</li> <li>• confirmed that Woodside will contact the DNP if details regarding the activity change and result in an overlap with or new impact to a marine park, or for emergency responses.</li> </ul> <p>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 <b>Section 7.7.1</b>).</p> | <p>The Environment Plan demonstrates that the proposed activities are outside the boundaries of a proclaimed Commonwealth Marine Park and identifies that there are no credible impacts to the values of any Commonwealth Marine Parks as a result of planned activities (<b>Section 4.5.4</b>). While impacts to Commonwealth Marine Parks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b>.</p> <p>This EP demonstrates how Woodside will identify and managed 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 (<b>Section 6.8</b>).</p> <p>Woodside will ensure DNP is made aware of any incidences within a marine park for the activity, as per the commitment in the Oil Pollution First Strike Plan (<b>Appendix H</b>).</p> <p>No additional measures or controls are required.</p> |
| <b>Ningaloo Coast World Heritage Advisory Committee (NCWHAC)</b>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with NCWHAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to NCWHAC on 15 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided the NCWHAC with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 15 February 2023, Woodside emailed NCWHAC advising of the proposed activity (Appendix F, reference 4.7), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed the NCWHAC following up on the proposed activity (Appendix F, reference 5.5) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed NCWHAC to provide an update on activity timing (Appendix F, reference 6.8).</li> </ul> |  |  |

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
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| No feedback, objections or claims received despite follow up.  | <p>Woodside notes the consultation information was provided to the NCWHAC. No feedback was received on the proposed activities directly from NCWHAC despite follow up or via NOPSEMA.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>The Environment Plan demonstrates that the proposed activities are outside the boundaries of the Ningaloo Marine Park and identifies that there are no credible impacts to the values of the Ningaloo Marine Park (<b>Section 4.5.4</b>). While impacts to the Ningaloo Marine Park are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b>.</p> <p>No additional measures or controls are required.</p> |
| <b>Department of Biodiversity, Conservation and Attractions (DBCA)</b>   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DBCA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to DBCA on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has addressed and responded to DBCA over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed DBCA, advising of the proposed activity (Appendix F, reference 1.1) and provided a Consultation Information Sheet.</li> <li>• On 8 July 2022, DBCA responded thanking Woodside for the consultation information and advised that it had no comments.</li> <li>• On 11 July 2022, Woodside responded thanking DBCA for its feedback.</li> <li>• On 15 September 2022, Woodside provided an activity update to DBCA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.2).</li> <li>• On 15 February 2023, Woodside emailed DBCA providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.</li> <li>• On 24 February 2023, DBCA responded with several points:</li> </ul> |   |   |

- Baseline values and state of the potentially affected environment of ecologically important areas should be appropriately understood and documented prior to any operations commencing that have the potential to lead to hydrocarbon releases.
- Woodside should establish appropriate baseline survey data on the current state of areas supporting important ecological values and any current contamination if present within the area of potential impact of hydrocarbon releases.
- DBCA encourages Woodside to acquire the necessary information to implement a Before-After, Control-Impact (BACI) framework in planning and evaluating its management response. This may include independently monitoring and collecting data where required or identifying other data sources.
- DBCA also provided an 'Incidents and Emergency Response' in case of a hydrocarbon release.
- On 13 March 2023, Woodside responded, thanking DBCA for providing feedback and confirming that an overview of their comments and response will be included in the proposed EP following acceptance of the EPs by NOPSEMA. Woodside also advised DBCA:
  - Areas of ecological importance in the proximity of the Environment Plan Operational Areas will not be impacted by planned activities.
  - Woodside's oil spill scientific monitoring program (SMP) will provide 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.
  - Woodside informed DBCA of its National Light Pollution Guidelines.
  - Woodside provided information on its Incidents and Emergency Response.
  - Woodside notes that DBCA will not implement an oiled wildlife management response on behalf of a petroleum operator.
- On 12 October 2023, Woodside emailed DBCA to provide an update on activity timing (Appendix F, reference 6.9).

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
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| <p>DBCA provided feedback relating to:</p> <ul style="list-style-type: none"> <li>● documentation of areas potentially affected by any operations commencing that have the potential to lead to hydrocarbon releases</li> <li>● requesting Woodside to establish appropriate baseline survey data on the current state of areas</li> <li>● DBCA encourages Woodside to acquire the necessary information to implement a Before-After, Control-Impact (BACI) framework</li> <li>● DBCA also provided an 'Incidents and Emergency Response' in case of a hydrocarbon release</li> </ul> | <p>Woodside has addressed the DBCA's feedback, including:</p> <ul style="list-style-type: none"> <li>● Areas of ecological importance in the proximity of the Environment Plan Operational Areas will be not impacted by planned activities.</li> <li>● Woodside's oil spill scientific monitoring program (SMP) will provide 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.</li> </ul> <p>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 <b>Section 7.7.1</b>).</p> | <p>The Environment Plan demonstrates that the proposed activities are outside the boundaries of a proclaimed State Marine Park and identifies that there are no credible impacts to the values of any State Marine Parks as a result of planned activities (<b>Section 4.8</b>). While impacts to Commonwealth Marine Parks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b>.</p> <p>Woodside considers the measures and controls in the EP address DBCA's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |

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| Whilst feedback has been received, there were no objections or claims.  |   |  |
| <b>Commonwealth and State Government Departments or Agencies – Industry</b>   |   |  |
| <b>Department of Industry, Science and Resources (DISR) (formerly DISER)</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DISR for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to DISR on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has sent follow up emails seeking feedback on the proposed activities.</li> <li>• Woodside has provided DISR with the opportunity to provide feedback over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed DISR, advising of the proposed activity (Appendix F, reference 1.1) and provided a Consultation Information Sheet.</li> <li>• On 12 July 2022, Woodside emailed DISR, following up on the proposed activity (Appendix F, reference 2.6), and provided a Consultation Information Sheet.</li> <li>• On 15 September 2022, Woodside provided an activity update to DISR regarding changes to activity timing and vessel requirements (Appendix F, reference 3.1).</li> <li>• On 15 February 2023, Woodside emailed DISR providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed DISR following up on the proposed activity (Appendix F, reference 5.2) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed DISR to provide an update on activity timing (Appendix F, reference 6.1).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Department of Mines, Industry Regulation and Safety (DMIRS)</b>  |   |  |

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with DMIRS for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to DMIRS on 22 June 2022 based on their function, interest and activities.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside has addressed and responded to DMIRS over a 17 month period.

**Summary of information provided and record of consultation:**

- On 22 June 2022, Woodside emailed DMIRS, advising of the proposed activity (Appendix F, reference 1.1) and provided a Consultation Information Sheet.
- On 12 July 2022, Woodside emailed DMIRS, following up on the proposed activity (Appendix F, reference 2.6), and provided a Consultation Information Sheet.
- On 22 July 2022, DMIRS responded:
  - a. Acknowledging receipt consultation information.
  - b. Advising that it had reviewed the information and did not require any further information at this stage.
  - c. Requested that commencement and cessation notifications for the activity are sent to DMIRS; and
  - d. Noted its Consultation Guidance Note for reporting of incidents that could potentially impact on any land or water under State jurisdiction
- On 25 July 2022, Woodside responded:
  - e. thanking DMIRS for its feedback confirming that DMIRS had reviewed the consultation information and did not require any further information at this stage
  - f. confirmed that Woodside would send DMIRS commencement and cessation notifications for the activity.
- On 15 September 2022, Woodside provided an activity update to DMIRS regarding changes to activity timing and vessel requirements (Appendix F, reference 3.3).
- On 15 September 2022, DMIRS responded:
  - o Acknowledging receipt of the information.
  - o Confirmed that it had reviewed the update and did not require any further information at this stage.
  - o Requested that commencement and cessation notifications for the activity are sent to DMIRS
- On 16 September 2022, Woodside responded:
  - o Thanking DMIRS for reviewing the update and confirming it does not require any further information at this stage.
  - o Re-confirmed Woodside's commitment to provide DMIRS with commencement and cessation notifications for the activity.
- On 15 February 2023, Woodside emailed DMIRS providing additional information on the proposed activity (Appendix F, reference 4.4), and provided an updated Consultation Information Sheet.
- On 7 March 2023, Woodside emailed the DMIRS following up on the proposed activity (Appendix F, reference 5.2) and requested any feedback.
- On 12 October 2023, Woodside emailed DMIRS to provide an update on activity timing (Appendix F, reference 6.1).

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan  |
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| <p>DMIRS requested notifications for both the start and conclusion of activities.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>   | <p>Woodside has addressed DMIRS feedback including confirming that it will provide notifications to DMIRS prior to the commencement and at the end of the activity, as referenced at <b>Section 7.8.2.1</b> of this EP.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside will provide notifications to DMIRS prior to the commencement and at the end of the activity, as referenced at <b>Section 7.9.2.1</b> of this EP.</p> <p>Woodside considers the measures and controls in the EP are appropriate.</p> |
| <b>Commonwealth Commercial fisheries and representative bodies</b>  |   |  |
| <b>North West Slope and Trawl Fishery</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with North West Slope and Trawl Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to North West Slope and Trawl Fishery on 15 February 2023 based on their function, interest and activities..</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided the North West Slope and Trawl Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 15 February 2023, Woodside emailed North West Slope and Trawl Fishery advising of the proposed activity (Appendix F, reference 4.8), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed the North West Slope and Trawl Fishery following up on the proposed activity (Appendix F, reference 5.6) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed North West Slope and Trawl Fishery to provide an update on activity timing (Appendix F, reference 6.10).</li> </ul> |   |  |
| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan  |

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| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has consulted AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Western Deepwater Trawl Fishery</b></p>  |  |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Western Deepwater Trawl Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Western Deepwater Trawl Fishery on 15 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Western Deepwater Trawl Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 15 February 2023, Woodside emailed Western Deepwater Trawl advising of the proposed activity (Appendix F, reference 4.8), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Western Deepwater Trawl following up on the proposed activity (Appendix F, reference 5.7) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Western Deepwater Trawl Fishery to provide an update on activity timing (Appendix F, reference 6.11).</li> </ul> |  |   |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>   |
| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has consulted AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational</p>  |

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|  |   | <p>Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Commonwealth Fisheries Association (CFA)</b></p>   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with CFA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to CFA on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside has sent follow up emails seeking feedback on the proposed activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside addressed and responded to CFA over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed CFA, advising of the proposed activity (Appendix F, reference 1.12) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 12 July 2022, Woodside emailed CFA, following up on the proposed activity (Appendix F, reference 2.11), and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 15 September 2022, Woodside provided an activity update to CFA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.13).</li> <li>• On 15 February 2023, Woodside emailed CFA providing additional information on the proposed activity (Appendix F, reference 4.9), and provided an updated Consultation Information Sheet.</li> <li>• On 15 February 2023, CFA responded thanking Woodside for its email and advised that CFA is not resourced to give feedback and Woodside will need to direct enquiries directly to the associations that represent the directly affected fisheries/fishers.</li> <li>• On 17 March 2023, Woodside responded thanking CFA for its email and confirmed that Woodside has provided consultation information directly to licence holders it has assessed as 'relevant persons' for the above proposed EPs as well as their fishery representative bodies.</li> <li>• On 12 October 2023, Woodside emailed CFA to provide an update on activity timing (Appendix F, reference 6.32).</li> </ul> |   |   |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>   | <p><b>Inclusion in Environment Plan</b></p>   |
| <p>CFA responded and advised that CFA is not resourced to give feedback and asked Woodside to direct enquiries directly to the</p>   | <p>Woodside has addressed the CFA's feedback, including confirming it has provided consultation information directly to licence holders it has assessed as 'relevant persons' for</p> | <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p>   |

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| <p>associations that represent the directly affected fisheries/fishers.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>  | <p>the proposed EP as well as their fishery representative bodies.</p> <p>Woodside has consulted AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on CFA’s functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| <p><b>State Commercial fisheries and representative bodies</b></p>   |   |   |
| <p><b>Marine Aquarium Managed Fishery</b></p>  |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Marine Aquarium Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Marine Aquarium Managed Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Marine Aquarium Managed Fishery with the opportunity to provide over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent a letter to Marine Aquarium Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent a letter to Marine Aquarium Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC’s consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |   |   |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>   | <p><b>Inclusion in Environment Plan</b></p>   |

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| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Mackerel Managed Fishery (Area 2)</b></p>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Mackerel Managed Fishery (Area 2) for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to Mackerel Managed Fishery (Area 2) on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has addressed and responded to Mackerel Managed Fishery (Area 2) over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside sent a letter to Mackerel Managed Fishery (Area 2), advising of the proposed activity (Appendix F, reference 1.9) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 11 July 2022, Woodside sent a letter to Mackerel Managed Fishery (Area 2), following up on the proposed activity (Appendix F, reference 2.3) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 15 September 2022, Woodside sent a letter to Mackerel Managed Fishery (Area 2) regarding changes to activity timing and vessel requirements (Appendix F, reference 3.10).</li> <li>• On 17 February 2023, Woodside sent a letter to Mackerel Managed Fishery (Area 2 and 3) providing additional information on the proposed activity (Appendix F, reference 4.21) and provided an updated Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent a letter Mackerel Managed Fishery (Area 2 and 3) following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC’s consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |  |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>  |

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| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Pilbara Crab Managed Fishery</b></p>   |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Pilbara Crab Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Pilbara Crab Managed Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up letter seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Pilbara Crab Managed Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent letter to Pilbara Crab Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet</li> <li>• On 9 March 2023, Woodside sent letter to Pilbara Crab Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC's consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |  |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>  |
| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has</p>  | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders</p>   |

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|   | <p>been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see <b>Section 7.7.1</b>).</p>  | <p>and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p>   |
| <b>West Coast Deep Sea Crustacean Managed Fishery</b>   |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with West Coast Deep Sea Crustacean Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to West Coast Deep Sea Crustacean Managed Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up letter seeking feedback on the proposed activities.</li> <li>• Woodside has provided the West Coast Deep Sea Crustacean Managed Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent a letter to West Coast Deep Sea Crustacean Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent a letter to West Coast Deep Sea Crustacean Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC's consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>   | <b>Inclusion in Environment Plan</b>   |
| <p>No feedback, objections or claims received despite follow up.</p>  | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |

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| <b>Specimen Shell Managed Fishery</b>   |  |                                      |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Specimen Shell Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Specimen Shell Managed Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up letter seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Specimen Shell Managed Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent a letter to Specimen Shell Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent a letter to Specimen Shell Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC's consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |                                      |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b> | <b>Inclusion in Environment Plan</b> |

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| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Onslow Prawn Managed Fishery (Area 2 and 3)</b></p>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Onslow Prawn Managed Fishery (Area 2 and 3) for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Onslow Prawn Managed Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up letter seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Onslow Prawn Managed Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent a letter to Onslow Prawn Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent a letter to Onslow Prawn Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC's consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |  |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>  |

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| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Western Australian Sea Cucumber Fishery</b></p>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Western Australian Sea Cucumber Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Western Australian Sea Cucumber Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up letter seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Western Australian Sea Cucumber Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent a letter to Western Australian Sea Cucumber Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent a letter to Western Australian Sea Cucumber Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC's consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |  |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>  |
| <p>No feedback, objections or claims received despite follow up.</p>   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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,</p>   | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational</p>  |

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|   | Woodside will apply its Management of Change and Revision process (see <b>Section 7.7.1</b> ).   | Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.<br><br>No additional measures or controls are required.   |
| <b>Exmouth Gulf Prawn Managed Fishery</b>   |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Exmouth Gulf Prawn Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Exmouth Gulf Prawn Managed Fishery on 17 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up letter seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Exmouth Gulf Prawn Managed Fishery with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 17 February 2023, Woodside sent letter to Exmouth Gulf Prawn Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.</li> <li>• On 9 March 2023, Woodside sent letter to Exmouth Gulf Prawn Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.</li> <li>• Woodside has applied WAFIC's consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).</li> </ul> |  |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>   | <b>Inclusion in Environment Plan</b>   |
| No feedback, objections or claims received despite follow up.   | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <b>Nickol Bay Prawn Managed Fishery</b>   |  |  |

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Nickol Bay Prawn Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Nickol Bay Prawn Managed Fishery on 17 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up letter seeking feedback on the proposed activities.
- Woodside has provided the Nickol Bay Prawn Managed Fishery with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 17 February 2023, Woodside sent a letter to Nickol Bay Prawn Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet.
- On 9 March 2023, Woodside sent a letter to Nickol Bay Prawn Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.
- Woodside has applied WAFIC’s consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).

| <b>Summary of Feedback, Objection or Claim</b>                | <b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b>   | <b>Inclusion in Environment Plan</b>   |
|---|--|--|
| No feedback, objections or claims received despite follow up. | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |

**Pilbara Trawl Fishery**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Pilbara Trawl Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.

- Consultation information provided to Pilbara Trawl Fishery on 8 March 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided the Pilbara Trawl Fishery with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 8 March 2023, Woodside emailed Pilbara Trawl Fishery advising of the proposed activity (Appendix F, reference 5.26) and provided a Consultation Information Sheet.
- On 31 March 2023, Woodside emailed Pilbara Trawl Fishery following up on the proposed activity Appendix F, reference 5.32).
- On 12 October 2023, Woodside emailed Pilbara Trawl Fishery to provide an update on activity timing (Appendix F, reference 6.12).

| Summary of Feedback, Objection or Claim                       | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
|---|--|--|
| No feedback, objections or claims received despite follow up. | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |

**Pilbara Trap Fishery**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Pilbara Trap Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to Pilbara Trap Fishery on 22 June 2022 based on their function, interest and activities.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided the Pilbara Trap Fishery with the opportunity to provide feedback over a 17 month period.

**Summary of information provided and record of consultation:**

- On 22 June 2022, Woodside emailed the Pilbara Trap Fishery, advising of the proposed activity (Appendix F, reference 1.10) and provided a Consultation Information Sheet and fisheries map.

| <ul style="list-style-type: none"> <li>On 11 July 2022, Woodside emailed the Pilbara Trap Fishery, following up on the proposed activity (Appendix F, reference 2.4) and provided a Consultation Information Sheet and fisheries map.</li> <li>On 15 September 2022, Woodside provided an activity update to Pilbara Trap Fishery regarding changes to activity timing and vessel requirements (Appendix F, reference 3.11). On 8 March 2023, Woodside emailed Pilbara Trap Fishery providing additional information on the proposed activity (Appendix F, reference 5.26) and provided an updated Consultation Information Sheet.</li> <li>On 31 March 2023, Woodside emailed Pilbara Trap Fishery following up on the proposed activity (Appendix F, reference 5.32).</li> <li>On 12 October 2023, Woodside emailed Pilbara Trap Fishery to provide an update on activity timing (Appendix F, reference 6.12).</li> </ul>  |  |  |
|--|--|--|
| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <b>Pilbara Line Fishery</b>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Pilbara Line Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Consultation information provided to Pilbara Line Fishery on 22 June 2022 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside has provided the Pilbara Line Fishery with the opportunity to provide feedback over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 22 June 2022, Woodside emailed the Pilbara Line Fishery, advising of the proposed activity (Appendix F, reference 1.10) and provided a Consultation Information Sheet and fisheries map.</li> </ul> |  |  |

| <ul style="list-style-type: none"> <li>On 11 July 2022, Woodside emailed the Pilbara Line Fishery, following up on the proposed activity (Appendix F, reference 2.4) and provided a Consultation Information Sheet and fisheries map</li> <li>On 15 September 2022, Woodside provided an activity update to Pilbara Line Fishery regarding changes to activity timing and vessel requirements (Appendix F, reference 3.11).</li> <li>On 8 March 2023, Woodside emailed Pilbara Line Fishery providing additional information on the proposed activity (Appendix F, reference 5.26) and provided an updated Consultation Information Sheet.</li> <li>On 31 March 2023, Woodside emailed Pilbara Line Fishery following up on the proposed activity (Appendix F, reference 5.32).</li> <li>On 12 October 2023, Woodside emailed Pilbara Line Fishery to provide an update on activity timing (Appendix F, reference 6.12).</li> </ul>  |  |  |
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| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| Western Australian Fishing Industry Council (WAFIC)  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with WAFIC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Consultation information provided to WAFIC on 22 June 2022 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Woodside has addressed and responded to WAFIC over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 22 June 2022, Woodside emailed WAFIC advising of the proposed activity (Appendix F, reference 1.14 and 1.16) and provided a Consultation Information Sheet and fisheries map</li> </ul> |  |  |

- On 11 July 2022, Woodside emailed WAFIC following up on the proposed activity (Appendix F, reference 2.5) and provided a Consultation Information Sheet and fisheries map.
- On 14 July 2022, WAFIC responded thanking Woodside for the consultation information and advised that WAFIC had no specific comments regarding the planned activity.
- On 14 July 2022, Woodside responded, thanking WAFIC for its feedback.
- On 15 September 2022, Woodside provided an activity update to WAFIC regarding changes to activity timing and vessel requirements (Appendix F, reference 3.16).
- On 16 February 2023, Woodside emailed WAFIC providing additional information on the proposed activity (Appendix F, reference 4.11), and provided an updated Consultation Information Sheet.
- On 7 March 2023, Woodside emailed WAFIC following up on the proposed activity (Appendix F, reference 5.9) and requested any feedback.
- On 5 May 2023, Woodside had a phone call with WAFIC to follow up on a number of EPs, including the activities proposed under this EP, and to request any further feedback. Woodside committed to providing WAFIC with a consolidated email outlining all the EPs Woodside is currently consulting WAFIC on for ease of feedback.
- On 5 May 2023, Woodside sent an email to WAFIC providing the status of feedback on a number of EPs, including the activities proposed under this EP. Woodside advised it would soon be submitting the EP for assessment and requested any further feedback.
- On 19 May 2023, Woodside had a phone call with WAFIC to follow up on a number of EPs, including the activities proposed under this EP and to request any feedback.
- On 20 June 2023, Woodside emailed WAFIC advising the fisheries it had assessed as having a potential for interaction in the Operational Area and EMBA for a number of EPs, including the activities proposed under this EP, in line with its consultation approach for unplanned events. Woodside re-provided the Consultation Information Sheet and followed up on any further feedback with respect to the proposed EP.
- On 27 June 2023, Woodside emailed WAFIC providing a response to feedback on a separate EP and followed up on feedback with respect to the activities proposed under this EP.
- On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
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| <p>WAFIC advised it had no specific comments regarding the planned activity.</p> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>WAFIC advised it had no specific comments regarding the planned activity.</p> <p>Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.</p> <p>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</p> | <p>Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>Woodside considers the measures and controls described within this EP address the potential impact from the</p> |

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|  | Management of Change and Revision process (see <b>Section 7.7.1</b> ).  | proposed activities on WAFIC's functions, interests or activities.<br><br>No additional measures or controls are required. |
| <b>Recreational marine users and representative bodies</b>   |   |  |
| <b>Exmouth recreational marine users</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Exmouth Recreational Marine Users for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Exmouth Recreational Marine Users on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Exmouth Recreational Marine Users with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Exmouth Recreational Marine Users advising of the proposed activity (Appendix F, reference 4.14), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Exmouth Recreational Marine Users following up on the proposed activity (Appendix F, reference 5.11) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Exmouth Recreational Marine Users to provide an update on activity timing (Appendix F, reference 6.13).</li> <li>• On 12 October 2023, a member of the Exmouth Recreational Marine Users emailed Woodside to request being removed from the mailing list.</li> <li>• On 18 October 2023, Woodside replied and confirmed that the member has been removed from the mailing list.</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>   | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>   |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.</p> <p>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 <b>Section 7.7.1</b>).</p> | No additional measures or controls are required.   |

**Gascoyne Recreational Marine Users**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Gascoyne Recreational Marine Users for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Gascoyne Recreational Marine Users on 17 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Gascoyne Recreational Marine Users with the opportunity to provide feedback over a 9 month.

**Summary of information provided and record of consultation:**

- On 17 February 2023, Woodside sent letter to Gascoyne Recreational Marine Users advising of the proposed activity (Appendix F, reference 4.20), and provided a Consultation Information Sheet.
- On 9 March 2023, Woodside sent letter to Gascoyne Recreational Marine Users following up on the proposed activity (Appendix F, reference 5.28) and to request any feedback.
- On 13 October 2023, Woodside sent a letter to Gascoyne Recreational Marine Users to provide an update on activity timing (Appendix F, reference 6.34).

**Summary of Feedback, Objection or Claim**

**Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response**

**Inclusion in Environment Plan**

No feedback, objections or claims received despite follow up.

Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.

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 7.7.1**).

No additional measures or controls are required.

**Pilbara/Kimberley Recreational Marine Users**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Pilbara/Kimberley Recreational Marine Users for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.

- Consultation information provided to Pilbara/Kimberley Recreational Marine Users on 17 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Pilbara/Kimberley Recreational Marine Users with the opportunity to provide feedback over a 9 month.

**Summary of information provided and record of consultation:**

- On 17 February 2023, Woodside sent letter to Pilbara/Kimberley Recreational Marine Users advising of the proposed activity (Appendix F, reference 4.20), and provided a Consultation Information Sheet.
- On 9 March 2023, Woodside sent letter to Pilbara/Kimberley Recreational Marine Users following up on the proposed activity (Appendix F, reference 5.28) and to request any feedback.
- On 13 October 2023, Woodside sent a letter to Pilbara/Kimberley Recreational Marine Users to provide an update on activity timing (Appendix F, reference 6.34).

| Summary of Feedback, Objection or Claim                       | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |
|---|---|--|
| No feedback, objections or claims received despite follow up. | <p>Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.</p> <p>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 <b>Section 7.7.1</b>).</p> | No additional measures or controls are required. |

**Karratha Recreational Marine Users**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Karratha Recreational Marine Users for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Karratha Recreational Marine Users on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Karratha Recreational Marine Users with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

| <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed Karratha Recreational Marine Users advising of the proposed activity (Appendix F, reference 4.14), and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed Karratha Recreational Marine Users following up on the proposed activity (Appendix F, reference 5.11) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed Karratha Recreational Marine Users to provide an update on activity timing (Appendix F, reference 6.13).</li> </ul>  |   |  |
|---|---|--|
| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |
| No feedback, objections or claims received despite follow up.   | <p>Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.</p> <p>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 <b>Section 7.7.1</b>).</p> | No additional measures or controls are required. |
| <b>Recfishwest</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Recfishwest for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p>  |   |  |
| <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to Recfishwest on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has addressed and responded to Recfishwest over a 9 month period.</li> </ul>  |   |  |
| <b>Summary of information provided and record of consultation:</b>  |   |  |
| <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed Recfishwest advising of the proposed activity (Appendix F, reference 4.12), and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed Recfishwest following up on the proposed activity (Appendix F, reference 5.10) and to request any feedback.</li> <li>On 9 March 2023, Recfishwest responded with the following comments: <ul style="list-style-type: none"> <li>While activities will be conducted approximately 138 km northwest of Dampier and more than 70 km from the Montebello Islands, recreational fishing is likely to be more infrequent in the area.</li> </ul> </li> </ul> |   |  |

| <ul style="list-style-type: none"> <li>○ Noted the operational areas and exclusion zones, and the importance of being informed on the proposal's progress to communicate with the recreational fishing community.</li> <li>○ No objection to Woodside's proposed activities.</li> <li>● On 18 March 2023, Woodside responded thanking Recfishwest for their feedback and confirmed that Woodside will provide commencement and cessation of activity notifications to Recfishwest for the proposed activities.</li> <li>● On 12 October 2023, Woodside emailed Recfishwest to provide an update on activity timing (Appendix F, reference 6.14).</li> <li>● On 13 October 2023, Recfishwest confirmed having no further comments.</li> <li>● On 13 October 2023, Woodside responded thanking Recfishwest for their feedback and confirmed that Woodside will continue to provide activity updates.</li> </ul>   |   |   |
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| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
| <p>Response from Recfishwest advising:</p> <ul style="list-style-type: none"> <li>● It had no objections to the proposed activity.</li> <li>● Recreational fishing is likely to be more infrequent in the area.</li> <li>● Acknowledgment of the operational areas and exclusion zones, and the importance of being informed on the proposal's progress to communicate with the recreational fishing community.</li> </ul>  | <p>Woodside has addressed Recfishwest's feedback including confirming it will provide commencement and cessation of activity notifications.</p> <p>Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside will provide notifications to Recfishwest prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on Recfishwest's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| Marine Tourism WA   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Marine Tourism WA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>● Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>● Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>● Consultation information provided to Marine Tourism WA on 16 February 2023 based on their function, interest and activities.</li> <li>● Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>● Woodside has provided Marine Tourism with the opportunity to provide feedback over a 9 month period.</li> </ul> |   |   |
| <p><b>Summary of information provided and record of consultation:</b></p>   |   |   |

| <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed Marine Tourism WA, advising of the proposed activity (Appendix F, reference 4.12) and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed Marine Tourism WA, following up on the proposed activity (Appendix F, reference 5.10) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed Marine Tourism WA to provide an update on activity timing (Appendix F, reference 6.14).</li> </ul>   |   |  |
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| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |
| No feedback, objections or claims received despite follow up.  | <p>Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.</p> <p>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 <b>Section 7.7.1</b>).</p> | No additional measures or controls are required. |
| WA Game Fishing Association  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with WA Game Fishing Association for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to WA Game Fishing Association on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside has provided WA Game Fishing Association with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed WA Game Fishing Association advising of the proposed activity (Appendix F, reference 4.12) and provided a Consultation Information Sheet</li> <li>On 7 March 2023, Woodside emailed WA Game Fishing Association following up on the proposed activity (Appendix F, reference 5.10) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed WA Game Fishing Association to provide an update on activity timing (Appendix F, reference 6.14).</li> </ul> |   |  |
| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |

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| <p>No feedback, objections or claims received despite follow up.</p>  | <p>Woodside has provided consultation information to Recfishwest, Marine Tourism Association of WA, WA Game Fishing Association and individual recreational marine users.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>No additional measures or controls are required.</p> |
| <p><b>Titleholders and Operators</b></p>  |   |   |
| <p><b>Chevron Australia/ Osaka Gas Gorgon/ Tokyo Gas Gorgon/ JERA Gorgon</b></p>  |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Chevron Australia for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Chevron Australia on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside addressed and responded to Chevron Australia over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Chevron Australia providing advising of the proposed activity (Appendix F, reference 4.15) and provided a Consultation Information Sheet</li> <li>• On 7 March 2023, Woodside emailed Chevron Australia following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 22 March 2023, Chevron responded, thanking Woodside for the consultation information, advising that they are actively reviewing the information (expected completion by mid-April), and requesting GIS shape files for the EP.</li> <li>• On 3 April 2023, Woodside responded, thanking Chevron for the feedback and provided the GIS shape files for the EP as requested.</li> <li>• On 26 April 2023, Woodside emailed Chevron Australia following up on feedback with respect to the proposed activity.</li> <li>• On 1 June 2023, Woodside emailed Chevron Australia following up on feedback with respect to the proposed activity (Appendix F Reference 5.36).</li> <li>• On 16 June 2023, Chevron emailed Woodside and thanked Woodside for its consideration of Chevron Australia’s functions, interests, activities in relation to its planned activities. Chevron had reviewed the EP and no impact had been identified. Chevron requested if the work plan is executed during cyclone season, Woodside is to provide cyclone anchor configuration, mooring design, site specific geophysical and geotechnical data and risk mitigations.</li> <li>• On 30 June 2023, Woodside emailed Chevron thanking them for their feedback and confirms it will provide Chevron with the following requested information, should drilling occur during the cyclone season:</li> </ul> |   |   |

- cyclone anchor configuration
- mooring design
- site specific geophysical and geotechnical data
- anchor analysis
- risk mitigations.
- On 12 October 2023, Woodside emailed Chevron to provide an update on activity timing (Appendix F, reference 6.15).

| Summary of Feedback, Objection or Claim   | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan   |
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| <p>Chevron responded, requesting GIS shape files to review the potential effect on their interests and activities.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>  | <p>Woodside has provided Chevron with GIS shape files for the EP as requested. Chevron has advised it will provide feedback on the EP in mid-April, which Woodside will address as applicable.</p> <p>In June Chevron had reviewed the EP and whilst no impact had been identified. If the work plan is executed during cyclone season, Woodside is to provide cyclone anchor configuration, mooring design, site specific geophysical and geotechnical data and risk mitigations. Woodside confirmed it will provide the requested information should drilling occur during the cyclone season.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on Chevron’s functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| <b>Exxon Mobil Australia Resources Company</b>  |  |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Exxon Mobil Australia Resources for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>● Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>● Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>● Consultation information provided to Exxon Mobil Australia Resources on 16 February 2023 based on their function, interest and activities.</li> <li>● Woodside has sent a follow up email seeking feedback on the proposed activities.</li> </ul> |  |   |

- Woodside has provided Exxon Mobil Australia Resources with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed Exxon Mobil Australia Resources, advising of the proposed activity (Appendix F, reference 4.15) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed Exxon Mobil Australia Resources Company following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.
- On 12 October 2023, Woodside emailed Exxon Mobil Australia Resources Company to provide an update on activity timing (Appendix F, reference 6.15).

| Summary of Feedback, Objection or Claim                       | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |
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| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Shell Australia**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Shell Australia for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Shell Australia on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Shell Australia with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed Shell Australia, advising of the proposed activity (Appendix F, reference 4.15) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed Shell Australia following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.
- On 12 October 2023, Woodside emailed Shell Australia to provide an update on activity timing (Appendix F, reference 6.15).

| Summary of Feedback, Objection or Claim | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response | Inclusion in Environment Plan |
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| <p>Shell Australia advised it had no comments on the proposed EP.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>   | <p>Shell Australia has confirmed it has no feedback relating to the proposed activity.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on Shell Australia's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| <p><b>BP Developments Australia</b></p>   |  |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with BP Developments Australia for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to BP Developments Australia on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided BP Developments Australia with the opportunity to provide feedback over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed BP Developments Australia advising of the proposed activity (Appendix F, reference 1.11 and 1.18) and provided a Consultation Information Sheet and Titleholder map.</li> <li>• On 12 July 2022, Woodside emailed BP Developments Australia following up on the proposed activity (Appendix F, reference 2.10), and provided a Consultation Information Sheet and Titleholder map.</li> <li>• On 15 September 2022, Woodside provided an activity update to BP Developments Australia regarding changes to activity timing and vessel requirements (Appendix F, reference 3.12).</li> <li>• On 16 February 2023, Woodside emailed BP Developments Australia advising of the proposed activity (Appendix F, reference 4.15), and provided a Updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed BP Developments Australia following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed BP Developments Australia to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |  |   |
| <p><b>Summary of Feedback, Objection or Claim</b></p>   | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>   |

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| 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 <b>Section 7.7.1</b> ).   | No additional measures or controls are required.   |
| <b>Carnarvon Energy</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Carnarvon Energy for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Carnarvon Energy on 15 February 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded to Carnarvon Energy over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Carnarvon Energy advising of the proposed activity (Appendix F, reference 4.15), and provided an updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Carnarvon Energy following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 8 March 2023, Carnarvon Energy responded thanking Woodside for its email and confirmed they had no comments.</li> <li>• On 8 March 2023, Woodside responded thanking Carnarvon Energy for its email.</li> <li>• On 12 October 2023, Woodside emailed Carnarvon Energy to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>   |
| <p>Carnarvon Energy advised it had no comments on the proposed EP.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>  | <p>Carnarvon Energy has confirmed it has no feedback relating to the proposed activity.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on Carnarvon Energy's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| <b>PE Wheatstone</b>  |   |  |

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with PE Wheatstone for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to PE Wheatstone on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided PE Wheatstone with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed PE Wheatstone, advising of the proposed activity (Appendix F, reference 4.15) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed PE Wheatstone following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.
- On 12 October 2023, Woodside emailed PE Wheatstone to provide an update on activity timing (Appendix F, reference 6.15).

| <b>Summary of Feedback, Objection or Claim</b>                | <b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
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| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Kyushu Electric Wheatstone**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Kyushu Electric Wheatstone for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Kyushu Electric Wheatstone on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Kyushu Electric Wheatstone with the opportunity to provide feedback over a 9 month period.

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| <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed Kyushu Electric Wheatstone, advising of the proposed activity (Appendix F, reference 4.15) and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed Kyushu Electric Wheatstone following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed Kyushu Electric Wheatstone to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul>  |   |   |
| <p><b>Summary of Feedback, Objection or Claim</b></p>   | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>   | <p><b>Inclusion in Environment Plan</b></p>             |
| <p>No feedback, objections or claims received despite follow up.</p>  | <p>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 <b>Section 7.7.1</b>).</p> | <p>No additional measures or controls are required.</p> |
| <p><b>Eni Australia</b></p>   |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with ENI Australia for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to ENI Australia on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside has provided ENI Australia with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed ENI Australia advising of the proposed activity (Appendix F, reference 4.15), and provided an Updated Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed ENI Australia following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed ENI Australia to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |   |   |
| <p><b>Summary of Feedback, Objection or Claim</b></p>   | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>   | <p><b>Inclusion in Environment Plan</b></p>             |
| <p>No feedback, objections or claims received despite follow up.</p>  | <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has</p>  | <p>No additional measures or controls are required.</p> |

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|  | been accepted, it will be assessed and, where appropriate, Woodside will apply its Management of Change and Revision process (see <b>Section 7.7.1</b> ).   |  |
| <b>Fugro Exploration</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Fugro Exploration for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Fugro Exploration on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided Fugro Exploration with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Fugro Exploration advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Fugro Exploration following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Fugro Exploration to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>   | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Finder Energy (Finder No 9/10/16/17)</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Finder Energy for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Finder Energy on 16 February 2023 based on their function, interest and activities.</li> </ul>  |   |  |

| <ul style="list-style-type: none"> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided Finder Energy with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Finder Energy advising of the proposed activity (Appendix F, reference 4.15), and provided an Updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Finder Energy following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Finder Energy to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul>   |   |  |
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| Summary of Feedback, Objection or Claim  | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| KUFPEC   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with KUFPEC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to KUFPEC on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided KUFPEC with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed KUFPEC advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed KUFPEC following up on the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed KUFPEC to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |   |  |
| Summary of Feedback, Objection or Claim  | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |

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| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Santos NA Energy Holdings / Santos Ltd / Santos WA Northwest / Santos Offshore / Santos WA Southwest / Santos (BOL) / Santos WA PVG</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Santos for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Santos on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided Santos with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Santos advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Santos following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Santos to provide an update on activity timing (Appendix F, reference 6.15).</li> <li>• On 25 October 2023, Santos emailed Woodside and confirmed it has no comments or objections to the proposed activities.</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>   | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| Whilst feedback has been received, there was no objections or claims.  | 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Vermilion Oil and Gas Australia</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Vermilion Oil and Gas for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> </ul>  |   |  |

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Vermilion Oil and Gas on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Vermilion Oil and Gas with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed Vermilion Oil and Gas advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed Vermilion Oil and Gas following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.
- On 12 October 2023, Woodside emailed Vermilion Oil and Gas to provide an update on activity timing (Appendix F, reference 6.15).

| Summary of Feedback, Objection or Claim                       | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                    |
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| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Lightmark Enterprises**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Lightmark Enterprises for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Lightmark Enterprises on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Lightmark Enterprises with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed Lightmark Enterprises advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed Lightmark Enterprises following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.

| <ul style="list-style-type: none"> <li>On 12 October 2023, Woodside emailed Lightmark Enterprises to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul>  |   |  |
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| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>OMV Australia / Sapura OMV Upstream</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Sapura OMV Upstream / OMV Australia for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to Sapura OMV Upstream / OMV Australia on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside has provided Sapura OMV Upstream / OMV Australia with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed Sapura OMV Upstream / OMV Australia advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed Sapura OMV Upstream / OMV Australia and Gas following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed OMV Upstream / OMV Australia to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ).  |  |
| <b>KATO Energy / KATO Corowa / KATO NWS / KATO Amulet</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with KATO Energy for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Kato Energy on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided Kato Energy with the opportunity to provide feedback over a 9 month period.</li> <li>• <b>Summary of information provided and record of consultation:</b></li> <li>• On 16 February 2023, Woodside emailed Kato Energy advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Kato Energy following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Kato Energy to provide an update on activity timing (Appendix F, reference 6.15).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>INPEX Alpha</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with INPEX Alpha for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to INPEX Alpha on 16 February 2023 based on their function, interest and activities.</li> </ul>   |   |  |

- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided INPEX Alpha with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed INPEX Alpha advising of the proposed activity (Appendix F, reference 4.15), and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed INPEX Alpha following up of the proposed activity (Appendix F, reference 5.12) and to request any feedback.
- On 12 October 2023, Woodside emailed INPEX Alpha to provide an update on activity timing (Appendix F, reference 6.15).

| Summary of Feedback, Objection or Claim                       | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**JX Nippon O&G Exploration (Australia)**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with JX Nippon for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to JX Nippon on 24 February 2023 based on their function, interest and activities.
- Woodside has addressed and responded with JX Nippon over a 9 month period.

**Summary of information provided and record of consultation:**

- On 24 February 2023, Woodside emailed JX Nippon advising of the proposed activity (Appendix F, reference 4.35), and provided a Consultation Information Sheet.
- On 24 February 2023, JX Nippon responded, thanking Woodside for its email and confirmed it will revert back.
- On 7 March 2023, Woodside emailed JX Nippon following up of the proposed activity (Appendix F, reference 5.21) and to request any feedback.
- On 10 March 2023, Woodside emailed JX Nippon following up of the proposed activity (Appendix F, reference 5.29) provided a Consultation Information Sheet and to request any feedback.
- On 12 October 2023, Woodside emailed JX Nippon to provide an update on activity timing (Appendix F, reference 6.15).

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required.  |
| <b>National Energy Resource Australia (NERA) Collaborative Seismic Environment Plan Project (CSEP) acting for a consortium of operators</b>  |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with NERA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to NERA on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded with NERA over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed NERA advising of the proposed activity (Appendix F, reference 4.13), and provided a Consultation Information Sheet</li> <li>• On 24 February 2023, NERA responded, thanking Woodside for its email and confirmed it had no feedback for the proposed EP and would like to kept up to date with when the activities occur.</li> <li>• On 28 February 2023, Woodside responded, thanking NERA for their feedback and confirmed that Woodside will provide NERA with commencement and cessation of activity notifications.</li> <li>• On 1 March 2023, NERA responded confirming NERA will also keep Woodside updated with the progress of the CSEP.</li> <li>• On 1 May 2023, NERA emailed Woodside on a separate project advising the Collaborative Seismic EP had been withdrawn and will no longer go ahead. NERA requested that the CSEP be removed from relevant person consultation.</li> <li>• On 5 July 2023, NERA emailed Woodside and said the CSEP has been withdrawn from NOPSEMA and will not be progressing due to the significant changes in the requirements for stakeholder consultation that was not included in the original project.</li> <li>• On 7 July 2023, Woodside emailed NERA noting its response regarding the CSEP no longer being a relevant person.</li> </ul> |   |   |
| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
| NERA advised it had no feedback on the proposed activities but requested to be kept up to date with when the activities occur. NERA  | Woodside has addressed NERA's feedback including confirming it would provide NERA with commencement and cessation of activity notifications. However, Woodside was  | Woodside considers the measures and controls described within this EP address the potential impact from the |

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| <p>subsequently advised the Collaborative Seismic EP had been withdrawn and will no longer go ahead.</p> <p>NERA emailed Woodside and said the CSEP has been withdrawn from NOPSEMA and will not be progressing due to the significant changes in the requirements for stakeholder consultation that was not included in the original project.</p>   | <p>subsequently updated that the Collaborative Seismic EP had been withdrawn. Activity notifications are therefore not required as there is no potential for interaction with NERA's activities.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>proposed activities on NERA's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Peak Industry Representative bodies</b></p>  |  |  |
| <p><b>APPEA</b></p>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with APPEA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to APPEA on 22 June 2022 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided APPEA with the opportunity to provide feedback over a 17 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed APPEA, advising of the proposed activity (Appendix F, reference 1.1) and provided a Consultation Information Sheet.</li> <li>• On 12 July 2022, Woodside emailed APPEA, following up on the proposed activity (Appendix F, reference 2.6), and provided a Consultation Information Sheet.</li> <li>• On 15 September 2022, Woodside provided an activity update to APPEA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.1).</li> <li>• On 16 February 2023, Woodside emailed APPEA providing additional information on the proposed activity (Appendix F, reference 4.13), and provided an updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed APPEA following up on the proposed activity (Appendix F, reference 5.14) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed APPEA to provide an update on activity timing (Appendix F, reference 6.16).</li> </ul> |  |  |
| <p><b>Summary of Feedback, Objection or Claim</b></p>  | <p><b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b></p>  | <p><b>Inclusion in Environment Plan</b></p>  |

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| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Traditional Custodians and nominated representative corporations</b>  |   |  |
| <p><b>Murujuga Aboriginal Corporation (MAC)</b></p> <p>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.</p>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with MAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <p><b>Sufficient Information:</b></p> <ul style="list-style-type: none"> <li>• Woodside sought direction on MAC’s preferred method of consultation. This resulted in face-to-face meetings being coordinated at the location of MAC’s choosing, with MAC nominated representatives. These meetings included information that was readily accessible and appropriate.</li> <li>• Provided Consultation Information Sheets and Consultation Summary Sheets to MAC. Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Articulated planned and unplanned environmental risks and impacts, with proposed controls.</li> <li>• Confirmed the purpose of consultation and set out in detail what was being sought through consultation.</li> <li>• Asked for the consultation and information sheets to be distributed to members and individuals.</li> <li>• Provided NOPSEMA’s Brochure “Consultation on offshore petroleum environment plans” and Guideline “Guideline: Consultation in the course of preparing an environment plan”.</li> <li>• Provided response to questions asked about the activity through consultation. Through these questions, MAC has displayed an understanding of the activities under this Environment Plan.</li> <li>• Advised that MAC can request that particular information provided in the consultation not be published (to align with 11A(2)(4)).</li> </ul> <p><b>Reasonable Period:</b></p> <ul style="list-style-type: none"> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to MAC on 24 February 2023 based on their function, interest and activities.</li> <li>• Woodside addressed and responded to MAC over a 9 month period.</li> </ul> <p>Woodside asked MAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.</p> |   |  |

Woodside has provided a reasonable opportunity for input since February 2023 and a genuine two-way dialogue has occurred via meetings and written exchanges to further understand the environment in which the activity will take place. MAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on MAC's functions, interests or activities.

**Summary of information provided and record of consultation:**

- On 24 February 2023, Woodside emailed MAC advising of the proposed activity (Appendix F, reference 4.37) and provided a Consultation Information Sheet.
- On 7 March, Woodside spoke with MAC to follow up on the material provided.
- On 30 March, Woodside spoke with MAC and followed up on the material provided.
- On 3 April MAC emailed Woodside asking for a list of outstanding issues that Woodside would like to progress.
- **(1)** On 5 April 2023 Woodside responded to MAC via email with a list of open topics, which included the request for feedback on the proposed activity. Woodside requested advice from MAC on:
  - How the activity could impact cultural values
  - If MAC proposed anything to be included in the EP prior to submission
  - If MAC wanted a meeting to discuss the activity
  - Whether MAC does not intend to provide advice prior to EP submission.
- On 12 April, Woodside spoke with MAC regarding a number of topics including feedback on the proposed activity. MAC responded that their Board of Directors were meeting soon and that Woodside could expect a forward plan on EP consultation.
- On 5 June Woodside received an invitation for the 22 June 2023 to meet and consult with the MAC Board and Circle of Elders.
- **(1)** On 22 June Woodside presented to the MAC Board and Circle of Elders, Woodside:
  - Described the Environment Plan framework, referring to the Offshore Petroleum and Greenhouse Gas Storage Act (Environment) Regulations, NOPSEMA's role as regulator and general contents of Environment Plans.
  - Displayed a map of activities open for feedback to be discussed in the meeting and provided a list of other upcoming activities which will be open for consultation in 2023.
  - Provided an overview of the broader EP activities.
  - Described the proposed activity, noting that this was restoration of an existing well and the depths of the drilling would be approximately 150m.
  - Described the types of vessels involved.

- Described the planned impacts and respective controls of the above activities including: the presence of vessels, seabed disturbance, underwater noise, discharge from vessels, emissions to air and external lighting.
- Described planned and unplanned environmental risks and impacts in accordance with tables provided in the Information Sheets for the activities, emphasising that unplanned risks were not expected to occur and were unlikely.
- Displayed and spoke to the EMBA for each proposed activity, and the individual worst case loss of containment scenarios identified, noting that they were all diesel fuel releases which would only be caused by vessel collisions.
- Stated that Woodside wanted to understand how the functions, activities or interests of MAC and the people it represents may be impacted by any of those activities.
- Specifically asked the following:
  - How could these activities impact your cultural values, interests and activities - does protecting the environment do enough to protect your cultural values?
  - What are your concerns about the proposed activities and what do you think we should do about them?
  - Is there anything you would like included in the EPs before submission?
  - Is there anyone else Woodside should consult with about the activities?
- **(2)** Advised that Woodside would continue to take feedback from MAC for the life of the EP
- Provided personal contact details for further feedback. Woodside provided NOPSEMA contact details, should MAC desire to provide feedback directly to the regulator.
- At the 22 June Meeting MAC asked:
  - whether any of the proposed activities were close to Pluto/Murujuga.
    - Woodside advised that the activity proposed under this EP would occur off the coast of the Karratha and Roebourne region.
  - how old Woodside's assets were.
    - Woodside advised that Rankin was discovered in 1975, but by the time Woodside had approvals and built the Karratha Gas Plant (KGP) and other infrastructure, operation began in the 1980s. KGP had been operating for around 40 years.
  - the condition of the infrastructure.
    - Woodside advised it runs large maintenance campaigns to look after all the infrastructure.
- On 18 July 2023, Woodside emailed MAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that MAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- **(2)** On 21 July 2023, MAC emailed a letter to Woodside. The letter confirmed that MAC had no concerns at this time with regards to the TPA03 Well intervention EP. MAC confirmed its desire for ongoing engagement and appreciated Woodside's commitment to this.
- **(2)** On 26 July 2023, Woodside emailed MAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- **(3)** On 1 September 2023, MAC emailed a letter to Woodside noting the following in response to Woodside's query regarding consultation on another activity unrelated to this EP:

- MAC consulted with women appointed to their Circle of Elders regarding the query
- MAC is comfortable that the women in the Circle of Elders are the right people to be consulted about these matters.
- MAC notes that it would be extremely unusual for knowledge to be held by an individual without surrounding groups knowing about it.
- The Circle of Elders themselves represent the Ngarda-Ngarli; the collective term for the Traditional Custodians who look after Murujuga Country.
- On 13 September 2023, Woodside emailed MAC requesting any further feedback on the activity. The Summary Information Sheet was attached to this email.
- On 23 October 2023, Woodside emailed MAC to provide an activity timing update.

**Ongoing Relationship Building**

- Woodside will continue to pursue an ongoing two-way relationship with MAC focused on future opportunities to work together.

| Summary of Feedback, Objection or Claim   | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan   |
|---|--|---|
| <p>(1) MAC has provided significant valuable input into the management of known and potential cultural and heritage values across several EPs, including this one.</p> <p>During face-to-face engagement on 22 June 2023, MAC asked:</p> <ul style="list-style-type: none"> <li>○ Whether any activities were close to Pluto/Murujuga.</li> <li>○ How old Woodside’s assets are.</li> <li>○ What condition the infrastructure is in.</li> </ul> <p>Woodside responded to queries within the meeting.</p> <p>(2) MAC has written to Woodside on 21 July 2023 noting they had no concerns at present with this EP.</p> <p>(3) On 1 September 2023, MAC has confirmed that they are the approved body corporate and cultural authority over Murujuga</p> | <p>(1) The feedback raised by MAC in the 22 June meeting in relation to location of activities, age of assets and condition of infrastructure were addressed by Woodside in the meeting.</p> <p>(2) Woodside has accepted MAC’s feedback on 21 July 2023 that they have no concerns with this EP at the time of writing, and their desire for ongoing engagement.</p> <p>The EP and supporting Sensitive Information document shows that Woodside has demonstrated that a genuine two-way dialogue has taken place between Woodside and MAC, since February 2023. Woodside has:</p> <ul style="list-style-type: none"> <li>● Sought MAC’s direction on their preferred method of consultation.</li> <li>● Set out in detail what is being sought through consultation.</li> <li>● Asked MAC to distribute the request for consultation and information sheets to their members.</li> <li>● Asked whether MAC was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult, providing reasonable time since 18 July 2023 for responses. Consultation has not identified any other groups or individuals relevant to communally held functions, activities, or interests.</li> </ul> | <p>(1) Existing controls considered sufficient as described in <b>Section 6.6 and 6.7.</b></p> <p>(2) Not required</p> <p>(3) Although consultation for the purpose of Reg 11A is complete, Woodside will continue to consult with MAC as the cultural authority over Murujuga for ongoing consultation</p> |

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|  | <ul style="list-style-type: none"> <li>• Provided MAC with NOPSEMA’s guidelines and brochure on consultation.</li> <li>• Proposed a Program of Ongoing Engagement with Traditional Custodians.</li> </ul> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> <p><b>(3)</b> Woodside accepts that MAC is the cultural authority over Murujuga.</p> |  |
| <p><b>Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC)</b></p> <p>NTGAC is established under the Native Title Act 1993 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.</p>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with NTGAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <p><b>Sufficient Information:</b></p> <ul style="list-style-type: none"> <li>• Woodside sought direction on NTGAC’s preferred method of consultation. This resulted in two face-to-face meetings being coordinated at the location of NTGAC’s choosing, with NTGAC nominated representatives. These meetings included information that was readily accessible and appropriate.</li> <li>• Provided Consultation Information Sheet and Consultation Summary Sheets to NTGAC. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity in a digestible, plain English format. Consultation Information Sheet was publicly available on the BHP website in February 2022, and the updated Consultation Information Sheet has been available on the Woodside website since September 2022.</li> <li>• Articulated planned and unplanned environmental risks and impacts, with proposed controls to manage potential impacts to ALARP and acceptable levels.</li> <li>• Confirmed the purpose of consultation and set out in detail what is being sought through consultation.</li> <li>• Asked for the consultation and information sheets to be distributed to members and individuals.</li> <li>• Provided NOPSEMA’s Brochure “Consultation on offshore petroleum environment plans” and Guideline “Guideline: Consultation in the course of preparing an environment plan”.</li> <li>• Provided response to questions asked about the activity through consultation. Through these questions, NTGAC have displayed an understanding of the activities under this Environment Plan.</li> <li>• Advised that NTGAC can request that particular information provided in the consultation not be published (to align with 11A(2)(4)).</li> </ul> <p><b>Reasonable Period:</b></p> |  |  |

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Consultation information provided to NTGAC on 16 February 2023 based on their function, interest and activities.
- Woodside commenced consultation with NTGAC in February 2023. Woodside has addressed and responded to NTGAC over 9 months, demonstrating a “reasonable period” of consultation.

Woodside asked NTGAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.

Woodside has provided a reasonable opportunity for input since February 2023 and a genuine two-way dialogue has occurred via meetings and written exchanges to further understand the environment in which the activity will take place. NTGAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1** of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on NTGAC functions, interests or activities.

#### **Summary of information provided and record of consultation:**

YMAC is the Native Title Representative Body (NTRB) for the Yamatji and Pilbara regions which includes NTGAC. NTRBs exist to provide assistance to native title claimants and holders in regard to their native title rights. No native title has been recognised over the Project Area, however YMAC is identified in the North West Marine Parks Network Management Plan as the contact for identifying cultural values in nearby Australian Marine Parks.

- On 6 January 2023, Woodside phoned NTGAC via the representative body Yamatji Marlpa Aboriginal Corporation (YMAC) for the purpose of introduction and to explain that Woodside will be sending information concerning EPs.
- Between 1 and 13 February 2023, Woodside and YMAC had a series of phone conversations and emails confirming a meeting with the NTGAC Board on 16 February 2023.
- On 10 February 2023, Woodside spoke with NTGAC to inform that the petroleum activity will be advertised for feedback and that Woodside will provide information on the activity and include it in the scope of the meeting planned for 16 February 2023.
- **(1)** On 16 February 2023, Woodside presented to a meeting of the NTGAC Board and YMAC representatives. Woodside:
  - Described the Environment Plan framework, referring to the Offshore Petroleum and Greenhouse Gas Storage Act (Environment) Regulations, NOPSEMA’s role as regulator and general contents of Environment Plans.
  - Displayed a map of activities open for feedback to be discussed in the meeting and provided a list of other upcoming activities which would be open for consultation in 2023.
  - Provided an overview of the EP activities.
  - Described the proposed activity, noting that this is an existing well which is plugged/blocked. A tool will be lowered into the well to remove the plug and restore it to production.
  - Described the types of vessels involved.

- Described planned and unplanned environmental risks and impacts in accordance with tables provided in the Information Sheets for the activities, emphasising that unplanned risks were not expected to occur and were unlikely.
- Displayed and spoke to the EMBA for each proposed activity, and the individual worst case loss of containment scenarios identified, noting that they were all diesel fuel releases which would only be caused by vessel collisions.
- Stated that Woodside wanted to understand how the functions, activities or interests of NTGAC PBC and the people it represents may be impacted by any of those activities.
- Specifically asked the following:
  - How could these activities impact your cultural values, interests and activities - does protecting the environment do enough to protect your cultural values?
  - What are your concerns about the proposed activities and what do you think we should do about them?
  - Is there anything you would like included in the EPs before submission?
  - Is there anyone else Woodside should consult with about the activities?
- Advised that Woodside would continue to take feedback from NTGAC for the life of the EP
- Provided personal contact details for further feedback. Woodside provided NOPSEMA contact details, should NTGAC desire to provide feedback directly to the regulator.
- YMAC/ NTGAC asked about risk to marine parks and whale sharks in relation to another EP. Woodside explained that vessels move slowly to minimise impacts to marine fauna, and that nothing is planned to go into marine parks.
- **(1)** At the meeting on 16 February 2023 NTGAC asked:
  - Woodside to explain how EMBA's were developed.
    - Woodside responded that they were composite of many modelling scenarios of the same release with different wind, wave and current conditions. A video was shown as a way to show any individual spill would in place only a small portion of the overall EMBA.
  - About the probability of a well blowout.
    - Woodside responded that the probability of a well blowout or a vessel collision is typically about 1 in 10,000 years.
  - Woodside noted this concluded the drilling and wells section of the meeting and called for any further questions or feedback. None were received.
  - Woodside stated that there was significant work and consultation coming up, and it hoped to spend more time with NTGAC to understand expectations and desire of how Woodside could work with NTGAC.
  - YMAC expressed that they were being inundated with requests for consultation from oil and gas operators and were working internally on processes and priorities for consultation.
  - Woodside welcomed the transparency and discussion on capacity.
  - **(2)** NTGAC expressed that consulting on these types of activities was not viewed as wasting time, but consultation which gives nothing back to the community was not a priority. They were interested in partnership programs and on-country engagements.
  - Woodside stated that while all the big companies would have deadlines and need to get feedback to meet legal requirements, Woodside desired it to be a jointly held process and that if NTGAC desired any support or assistance to please request it.
- On 21 February 2023, NTGAC/YMAC emailed Woodside to seek clarification of the attendee names at the 16 February 2023 Board meeting.

- On 21 February 2023, Woodside emailed NTGAC/YMAC the attendee names at the 16 February 2023 Board meeting and provided a copy of the presentation pack.
- On 21 February 2023, Woodside followed up on request for any further feedback on the proposed activity (Appendix F, reference 4.31).
- On 22 February 2023, NTGAC (via YMAC) responded thanking and acknowledging Woodside for its email.
- On 22 March 2023, Woodside emailed NTGAC (via YMAC) following up on the proposed activity and to request any feedback.
- On 24 March 2023, NTGAC (via YMAC) responded that it would let Woodside know as soon as the Board had the opportunity to review and provide comments.
- On 24 March 2023, Woodside emailed NTGAC (via YMAC) if Woodside could assist with anything.
- On 28 March 2023, NTGAC (via YMAC) emailed Woodside requested few images and a diagram of a wellhead so that this could be forwarded through to the relevant NTGAC Directors.
- On 31 March 2023, Woodside emailed NTGAC (via YMAC) provided pictures and diagram of wellhead as requested.
- On 19 July 2023, Woodside emailed NTGAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that NTGAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- On 14 September 2023, Woodside emailed NTGAC requesting any further feedback on the activity and again providing the Summary Information Sheet.
- On 23 October 2023, Woodside sent two emails to NTGAC to provide an activity timing update (the second email was sent following an out of office message received in response to the first email).

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan   |
|---|--|---|
| <p>(1) During face-to-face engagement, the NTGAC requested further information on topics related to this proposed activity which was responded to during the meeting:</p> <ul style="list-style-type: none"> <li>○ How EMBA's are developed.</li> <li>○ The expected probability of well loss of containment and vessel collision</li> <li>○ An image of a wellhead for information.</li> </ul> <p>Woodside responded to queries within the meeting.</p> <p>(2) The NTGAC expressed a desire for ongoing engagement and partnership. No further feedback has been provided.</p> | <p>(1) Woodside responded to NTGAC's queries in the 16 February 2023 meeting.</p> <p>(2) Woodside continues to engage NTGAC via YMAC in relation to feedback following the 16 February 2023 Board meeting.</p> <p>Woodside has:</p> <ul style="list-style-type: none"> <li>• Sought NTGAC's direction on their preferred method of consultation;</li> <li>• Set out in detail what is being sought through consultation;</li> <li>• Asked NTGAC to distribute the request for consultation and information sheets to their members;</li> <li>• Asked whether NTGAC was aware of any other Traditional Custodian groups or</li> </ul> | <p>(1) Existing controls considered sufficient as described in <b>Section 6.6 and 6.7.</b></p> <p>(2) Woodside will engage in ongoing consultation as outlined in <b>Section 7.9.2.</b></p> <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on NTGAC's functions, interests or activities.</p> <p>Although consultation for the purpose of Reg 11A is complete, Woodside is implementing a program to actively support Traditional Custodians' capacity for ongoing engagement (<b>Appendix I</b>).</p> <p>Based on the engagement to date, no additional controls have been identified.</p> |

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|  | <p>individuals with whom Woodside should consult.</p> <ul style="list-style-type: none"> <li>• Provided NTGAC with NOPSEMA's guidelines and brochure on consultation.</li> </ul> <p>No material issues or concerns related to the proposed activity were raised during consultation to date. Woodside invited further feedback in accordance with Woodside's approach to ongoing consultation (see <b>Section 7.11.2.1</b>).</p> <p>NTGAC has had a reasonable opportunity to participate in consultation.</p> <p>Consultation with NTGAC has not identified any other groups or individuals relevant to communally held functions, activities or interests.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> |  |
| <p><b>Buurabalayji Thalanyji Aboriginal Corporation (BTAC)</b></p>   |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with BTAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <p><b>Sufficient Information:</b></p> <ul style="list-style-type: none"> <li>• Woodside sought direction on BTAC's preferred method of consultation. This has not resulted in a face-to-face meeting with the Board, however, BTAC has exchanged multiple correspondence on the activity and telephone engagements with BTAC representatives. Woodside has offered to coordinate meetings at the location of BTAC's choosing, with BTAC nominated representatives. As sufficient information and a reasonable period have been provided (see below), any meetings would be considered as ongoing engagement post regulation 11A consultation.</li> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Consultation information provided to BTAC on 10 January 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded to BTAC over a 9 month period.</li> <li>• Provided Consultation Information Sheets and Consultation Summary Sheets developed by Indigenous staff to BTAC. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity with controls in a digestible, plain English format.</li> <li>• Confirmed the purpose of consultation and set out in detail what was being sought through consultation.</li> <li>• Asked for the consultation and information sheets to be distributed to members and interested individuals.</li> </ul> |  |  |

- Provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing an environment plan"
- Provided response to questions asked about the activity through consultation. Through these questions, BTAC has displayed an understanding of the activities under this environment plan.

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Woodside commenced consultation with BTAC in January 2023. Woodside has since addressed and responded to BTAC queries over 9 months, demonstrating a "reasonable period" of consultation.
- Woodside advised that BTAC could request the particular information provided in the consultation not be published (to align with 11A(2)(4)).

Woodside asked BTAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.

Woodside has provided a reasonable opportunity for input since January 2023 and a genuine two-way dialogue has occurred via discussions and written exchanges to further understand the environment in which the activity will take place. BTAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on BTAC's functions, interests or activities.

**Summary of information provided and record of consultation:**

- On 10 January 2023, Woodside emailed BTAC to set up an introductory discussion on a number of proposed activities:
  - Woodside advised it would like to and is required to consult with Thalanyji about the nature of any interests Thalanyji have in the "environment that may be affected" (EMBA) by this work, and any concerns Thalanyji may have about potential environmental impacts, so these concerns can be addressed through the environmental planning and approvals process.
  - Woodside provided further information about government guidelines for these consultations and provided a link to <https://consultation.nopsema.gov.au/environment-division/consultation-guideline/>.
  - Woodside advised information sheets on proposed activities will be provided.
- On 20 February 2023, BTAC provided a letter to Woodside specific to consultation on activities unrelated to this EP, however this correspondence did also make assertions and requests that concern general consultation matters between BTAC and Woodside, including:
  - **(1) (2)** BTAC confirmed that BTAC on behalf of Thalanyji people has interests and that the Thalanyji people have an 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.
  - BTAC advised it was seeking the opportunity to engage with Woodside and NOPSEMA on activities unrelated to this EP.
  - **(5)** BTAC advised it has not specifically developed values regarding Sea Country into a format that could be articulated for consultation and seeks support from Woodside to enable BTAC to define and articulate its values on Sea Country in a manner that could be more clearly understood by the

offshore sector, government, and the community. This would enable BTAC and Woodside to collaborate to develop effective management plans that can provide adequate protection to Sea Country values.

- **(3)** BTAC advised the information in the consultation fact sheets it has received as very general. BTAC seeks support from Woodside to obtain technical support to review the information and provide BTAC and its members with feedback on the project risks to Sea Country and help BTAC contemplate the potential management controls that could be developed to protect its values and interests.
- **(4)** BTAC requested that emergency response capability is developed and locally provided to be able to respond to potential activities/actions that may cause an impact in the EMBA. BTAC encouraged Woodside and industry to build capacity and capability in BTAC's ranger program so that it could participate in response planning and management activities.
- **(6)** BTAC noted that ongoing consultation with BTAC will be imperative and likely continuous given recent changes to consultation requirements and this will continue to be a burden on the organisation. BTAC requested that Woodside enter a consultation or engagement framework to ensure BTAC can be properly resourced financially and intellectually to participate in the consultation and management planning processes for the activities.
- On 22 February 2023, Woodside emailed BTAC advising of the proposed activity (Appendix F, reference 4.33) and provided a Consultation Information Sheet.
- On 13 March 2023, BTAC emailed Woodside asking it to confirm if there is a revised submission date in relation to the proposed activities.
- On 17 March 2023, Woodside emailed BTAC suggesting a forward plan for consultation on all EPs that Woodside has notified BTAC about:
  - Woodside will formalise the matters outlined in its correspondence by including in each of the Environment Plans statements along the following lines:
    - BTAC for and on behalf of Thalanyji has interests and values in the EMBA and is concerned about the possible impact on these interests and values, including to Sea Country, arising from Woodside's proposed activities.
    - BTAC, with support from Woodside and through the provision of independent expertise, will on an ongoing basis:
      - convey to Woodside the nature of Thalanyji's interests and values, noting that BTAC would like to conduct work to articulate those values in a manner that Woodside understands.
      - provide information to Woodside about how those interests and values intersect with the EMBA and how that should be managed.
  - Woodside will engage in ongoing consultation with BTAC for the purposes of ongoing monitoring, management and emergency response associated with environmental risk.
  - Woodside and BTAC will work under an adaptive management approach as the understanding of each other's values and interests, activities, needs and aspirations grow during the course of ongoing consultation. This means that Woodside's Environment Plans may be updated from time to time so they accurately reflect environmental risk as they relate to BTAC's interests and values, and the management measures that Woodside and BTAC will put in place to avoid and otherwise mitigate and manage environmental risk.
  - BTAC can at any time make direct representations to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) about the nature of BTAC's interests and how they may be affected by Woodside's activities.
  - **(3)** Woodside advised that in response to the provision of independent expert environmental management advice to BTAC, Woodside would be pleased to provide the resources necessary for BTAC to obtain and retain this advice on the basis that such advice is provided by an experienced and reputable oil and gas environmental management expert who is independent of Woodside, and who has the capacity to undertake this work to meet consultation schedules.
  - Woodside suggested a range of organisations for BTAC's consideration who are not working for Woodside.

- **(4)** Woodside also advised it would also be pleased to support BTAC to acquire anthropological advice.
- Woodside advised, with reference to the timeframes described about activities unrelated to this EP, that environmental protection and management associated with these activities is subject to an adaptive management approach. This means that consultation between Woodside and BTAC about environmental risk and management responses is ongoing, and changes can be made to improve environmental protection and management practices over time, including in the associated Environment Plans (EPs). Woodside proposed the following next steps:
- Woodside will formalise the matters outlined in correspondence between Woodside and BTAC by including in each of the Environment Plans statements along the following lines:
- BTAC for and on behalf of Thalanyji has interests and values in the EMBA and is concerned about the possible impact on these interests and values, including to Sea Country, arising from Woodside's proposed activities.
- BTAC, with support from Woodside and through the provision of independent expertise, will on an ongoing basis:
  - (5) convey to Woodside the nature of Thalanyji interests and values, noting that BTAC would like to conduct work to articulate those values in a manner that Woodside understands.
  - provide information to Woodside about how those interests and values intersect with the EMBA and how that should be managed.
- **(4)** Woodside will engage in ongoing consultation with BTAC for the purposes of ongoing monitoring, management and emergency response associated with environmental risk.
- Woodside and BTAC will work under an adaptive management approach as the understanding of each other's values and interests, activities, needs, and aspirations grow during ongoing consultation. This means that Woodside's Environment Plans may be updated from time to time so they accurately reflect environmental risk as they relate to BTAC's interests and values, and the management measures that Woodside and BTAC will put in place to avoid and otherwise mitigate and manage environmental risk.
- BTAC can at any time make direct representations to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) about the nature of BTAC's interests and how they may be affected by Woodside's activities.
- Woodside proposed if BTAC considers it appropriate, that the principles discussed in its correspondence (this 17 March 2023 letter and BTAC's correspondence of 20 February 2023 that was regarding matters unrelated to this EP) apply to the various decommissioning and drilling EPs that Woodside has notified BTAC about. This will ensure these arrangements are formalised into regulatory processes and documentation. As per Woodside's ongoing consultation approach, feedback continues to be assessed through the life of the EPs.
- Woodside advised BTAC that its letter of 20 February 2023 and this response will be included in the EP. Woodside requested that if their feedback is sensitive, please inform Woodside, and it will make this known to NOPSEMA upon submission of the Environment Plans to ensure this information remains confidential to NOPSEMA.
- On 30 March 2023, Woodside spoke with BTAC to follow up on correspondence described above. BTAC indicated that they desire a consultation agreement and intend to provide correspondence accordingly.
- **(1) (2)** On 17 April 2023, Woodside spoke with BTAC by telephone. The BTAC representative stated that they were aware that there were archaeological sites identified on nearshore islands and a cultural obligation to care for the environmental values of Sea Country. The BTAC representative stated there was in principle agreement to submission of current EPs while continuing to negotiate the collaboration agreement for support for rangers and support for recording of cultural values.
- On 18 April 2023, BTAC emailed a response regarding Woodside's consultation activities:

- **(6)** BTAC agreed that subject to formalising arrangements, BTAC agrees in principle for Woodside to include the statements described in our letter dated 17 March.
- **(6)** BTAC proposed that a Collaboration Agreement would be an appropriate mechanism to provide ongoing feedback to Woodside regarding its activities.
- BTAC invited Woodside to a board meeting to discuss Woodside's short, medium and longer term activities, discuss BTAC's strategic plan and details of a collaboration agreement.
- On 19 April 2023, Woodside emailed to accept an invitation from BTAC to attend their forthcoming board meeting and requesting half a day of the board's time, preferably before the first week of May.
- On 28 April 2023, Woodside emailed BTAC to follow up in relation to BTAC's proposed collaboration agreement and confirmed Woodside's intention to submit this EP on the understanding that BTAC is agreeable to this course of action, on the basis that we will progress the collaboration agreement. Woodside asked BTAC to identify if it had misinterpreted BTAC's position.
- On 4 May 2023, Woodside spoke with BTAC who then sent a follow up email. It was discussed that:
  - Woodside would be sending BTAC more EPs (for other activities) for consultation
  - **(6)** Woodside is working on draft key terms/principles for the collaboration agreement for BTAC's consideration
  - A meeting between Woodside and the BTAC board may be possible in June
  - Woodside intended to submit EPs (including this proposed activity) soon
- On 4 May 2023, BTAC emailed Woodside to continue discussion regarding a potential future meeting between Woodside and the BTAC board to discuss activities on Thalanyji Country, activities for which BTAC's ongoing consultation is sought, the collaboration agreement and other items not related to this proposed activity.
- On 19 May 2023, BTAC emailed Woodside in response to Woodside's email regarding consultation on 2 other EPs. BTAC noted the aim that all relevant matters requiring ongoing consultation and engagement with BTAC could be addressed in eg a framework agreement.
- On 14 June 2023, Woodside emailed BTAC attaching a letter setting out draft framework for ongoing consultation which includes recording of Sea Country values, commitments to regular three monthly meetings, support for BTAC's capacity to engage, a set of milestones for agreeing the framework and commencement of implementation.
- On 19 July 2023, Woodside emailed BTAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that BTAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- On 19 July 2023, Woodside emailed BTAC seeking a time to continue discussion regarding a draft presentation to a meeting between Woodside and the BTAC Board about activities on Thalanyji Country including other items not related to this proposed activity, and the collaboration principles.
- On 19 July 2023, BTAC emailed Woodside to organise a time for the discussion.
- On 20 July 2023, Woodside emailed BTAC a draft presentation for discussion. Slide 9 provided a consolidated EMBA for all EPs that BTAC had been consulted on to date. Slide 11 provided a map which showed activities for which ongoing presentation is sought. "TPA03 EP" is shown at the top right of this map.
- On 26 July 2023, Woodside emailed BTAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- On 26 July 2023, Woodside emailed BTAC Woodside's template presentation further to an earlier draft for consideration.

- On 28 July 2023, Woodside emailed BTAC meeting details to join a Teams meeting of 28 July 2023.
- On 28 July 2023, BTAC emailed Woodside with outcomes of meeting, confirming Woodside has set aside funding for engagement, Woodside wish to meet with BTAC board (or sub-committee) as soon as available to discuss offshore activities/EPs. Woodside will prepare a draft framework agreement which would address Woodside's support for BTAC for ongoing consultation in relation to NOPSEMA matters.
- On 31 July 2023, Woodside emailed BTAC noting that Woodside would be open to funding a special meeting with the board or sub-committee and requesting a cost estimate for such a meeting.
- On 31 July 2023, Woodside emailed 3 letters to BTAC, 2 of those letters related to other Woodside activities. The 3<sup>rd</sup> letter outlined support for an ethnographic assessment to:
  - **(2)** identify Sea Country values generally sufficient to inform all Woodside EPs.
  - Support any work necessary to clarify or define the offshore areas that are relevant to the Thalanyji People.
  - Propose the delivery of interim reports if this will enable prioritising matters considered most critical by BTAC.
  - Confirm Woodside will be responsible for all reasonable costs to complete the assessment.
  - Confirm BTAC retains intellectual property.
- On 15 August 2023, Woodside emailed BTAC thanking them for their time on the phone regarding another activity unrelated to this EP. Woodside reaffirmed its commitment to building a positive ongoing relationship with BTAC and expressed a desire to meet again soon.
- On 22 August 2023, BTAC emailed Woodside acknowledging correspondence and noting they will come back with a time to meet and progress matters.
- On 23 August 2023, Woodside emailed BTAC requesting to meet for an initial discussion to layout the various matters that have been under discussion, including BTAC's capacity and priority areas previously identified by BTAC.
- On 13 September 2023, Woodside emailed BTAC advising of the planned start date for the activity, and once again requesting whether BTAC is aware of any other people with whom Woodside should consult, and if there is any information BTAC wish to provide on cultural values, and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. The Summary Information Sheet for this activity was attached (Appendix F, reference 3.2).
- **(5)** On 14 September 2023, BTAC emailed a letter to Woodside regarding a framework agreement with BTAC. The intent of the agreement would be to formalise a co-ordinated, streamlined approach to progressing meaningful ongoing engagement and consultation. The letter included areas the agreed framework could address, and confirmed that the agreed framework would allow BTAC to meaningfully comment on a range of issues including:
  - **(6) (7)** BTAC thanked Woodside for committing to on-going consultation throughout the life of relevant various EPs and associated activities.
  - BTAC noted that Woodside has commenced consultation, or intends to consult, with Thalanyji people through BTAC for more than 24 separate activities including this activity.
  - How/whether EP activities could impact cultural values, interests and customary or organisational activities, concerns and useful ways these can be addressed.
  - The content of EPs prior to submission to NOPSEMA
  - Appropriate ways for mitigating risk and ensuring ongoing social licence.
  - **(7)** A further letter attached to the letter outlining a proposed cost recovery mechanism for consultation activities, and BTAC stated that it did not sanction or endorse any consultation occurring without cost recovery.

- On 14 September 2023, Woodside emailed BTAC acknowledging BTAC's email of 14 September and planning further review and discussion.
- **(7)** On 20 September 2023, BTAC emailed Woodside requesting a response from Woodside about accepting the proposed costs acceptance letter which BTAC sent on 14 September 2023 and requesting a list of current and ongoing activities Woodside were seeking ongoing consultation for.
- **(5) (6)** On 20 September 2023, BTAC emailed Woodside further to their earlier email, requesting a response to BTAC's cost proposal, a list of Woodside activities for ongoing consultation and an update on the status of the framework agreement to assist in ongoing consultation, for BTAC's review.
- **(6) (7)** On 22 September 2023, Woodside emailed BTAC accepting BTAC's proposed consultation fee structure, the list of activities that Woodside has consulted BTAC on and advising that the draft framework agreement to assist in ongoing consultation was under internal review.
- **(7)** On 26 September BTAC emailed Woodside acknowledging EP information received, signed costs and acceptance letter and that a draft agreement was currently under internal Woodside review. The email confirmed BTAC will be assisted with legal advice from Banks-Smith & Associates (BSA).
- On 27 September 2023, Banks-Smith + Associates (BSA) emailed Woodside clarifying that they are instructed by BTAC on this matter.
- On 4 October 2023, Woodside emailed BTAC via BSA thanking them and stating that they look forward to an ongoing relationship with BTAC and its legal representation.
- On 23 October 2023, Woodside emailed BTAC to provide an update on activity timing.
- On 1 November 2023, BTAC emailed Woodside to invite Woodside to provide an update on project activities at a Common Law Holder meeting on Monday 27 November.
- On 1 November 2023, Woodside emailed BTAC accepting the invitation to present at the Common Law Holder meeting.

### Ongoing Relationship Building

Woodside will continue to pursue an ongoing two-way relationship with BTAC including the development of a Collaboration Agreement focused on future opportunities to work together and working towards a meeting with the BTAC board.

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
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| <p>(1) BTAC stated that their interests include archaeological sites identified on nearshore islands including the Montebello Islands, Barrow Island and the Montebello Islands.</p> <p>(2) BTAC has a cultural obligation to care for the environmental values of Sea Country.</p> <p>(3) Requested Woodside supports BTAC in obtaining technical advice relating to the proposed activity which was sent to BTAC.</p> <p>(4) Expressed desire to be involved in local emergency response capability, potentially via an Indigenous Ranger Program.</p> | <p><b>(1)</b> The nearshore islands identified by BTAC do not fall within the EMBA and will not be impacted by any of the activities set out in the EP.</p> <p><b>(2)</b> Woodside assessed BTAC's cultural obligation to care for environmental values of Sea Country to represent potential cultural values in Section 4.8.1.5.1 in the EP.</p> <p><b>(3)</b> Woodside has offered support for technical advice and other support that has not been taken up.</p> <p><b>(4)</b> Woodside has offered to support BTAC to engage in management and emergency response.</p> <p><b>(5)</b> Woodside agreed to support the articulation and recording of Sea Country values. Since Woodside formally</p> | <p>(1) Not required</p> <p>(2) Woodside updated <b>Section 4.6.1.5</b> to record BTAC's interests and potential cultural values and assessed potential impact on these, including controls, in section 6.7.</p> <p>(3) Not required</p> <p>(4) The Program for Ongoing Engagement with Traditional Custodians (<b>Appendix I</b>) includes commitments to social investment to support Indigenous Ranger programs, and support for Indigenous oil spill response capabilities.</p> <p>(5) Woodside has taken all reasonable steps to identify cultural features and heritage features of Thalanyji people within the EMBA. This is described in <b>Section 4.6.1</b>. The</p> |

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| <p>(5) BTAC has not specifically developed values regarding Sea Country into a format that could be articulated for consultation. BTAC sought support from Woodside to enable BTAC to define and articulate its values on Sea Country in a manner that could be more clearly understood by the offshore sector, government, and the community.</p> <p>(6) BTAC proposed a Collaboration Agreement as an appropriate mechanism to provide ongoing feedback to Woodside regarding its activities.</p> <p>(7) BTAC does not endorse any consultation without appropriate cost recovery.</p> | <p>offered to support BTAC undertake an ethnographic assessment in July 2023, BTAC has not indicated that it desires to initiate the activity. Completion of an ethnographic assessment is not required to undertake or complete consultation under Reg 11A and/or for a comprehensive description of the environment. Opportunity to undertake this work continues under the proposed Collaboration Agreement (see 6) as part of ongoing engagement. Woodside has been able to develop a robust understanding of Thalanyji Sea Country cultural values and features in absence of this assessment.</p> <p>(6) Separate from consultation under Reg 11A, Woodside will establish a Collaboration Agreement with BTAC to assist in ongoing consultation. The agreement would be used to frame ongoing consultation. Sufficient information to allow informed assessment has already been provided by other means, including Consultation Information Sheets and a Summary Information Sheet developed by Indigenous staff members, and slide packs associated with offered face-to-face meetings.</p> <p>Woodside has developed a Framework Agreement for ongoing consultation which is under internal review and will be forwarded to BTAC for their consideration in October 2023. The agreement includes support for recording and articulation of Sea Country values and will help support ongoing consultation as set out by BTAC in their 14 September 2023 letter to Woodside, which requested such an agreement.</p> <p><b>(7)</b> Woodside and BTAC have agreed on a Costs Acceptance Letter. On 22 September 2023 Woodside requested that BTAC send an estimate cost for the remainder of 2023 so that a purchase order could be raised. BTAC and Woodside's signed costs and acceptance letter shared, and BTAC confirmed that they will be assisted with legal advice from Banks-Smith &amp; Associates (BSA) who were included in this correspondence.</p> <p>Woodside assesses that the proposed Collaboration Agreement is an appropriate mechanism for addressing appropriate cost recovery for BTAC. Woodside has already offered BTAC support for technical advice (see 3), and</p> | <p>proposed Collaboration Agreement (<b>Appendix I</b>) enables an ethnographic survey to be undertaken at a later date, but is not required to discharge Regulation 11A requirements. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> <p>(6) and (7) Although consultation for the purpose of Reg 11A is complete, Woodside is implementing a program to actively support Traditional Custodians' capacity for ongoing engagement (<b>Appendix I</b>). This includes continued engagement regarding the Collaboration Agreement that Woodside seeks with BTAC, which could include ongoing support for BTAC to define and articulate values, provision of ongoing feedback and cost recovery.</p> |
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|  | informed BTAC that is would financially support consultation meetings (e.g.13 Feb 2023 discussion). As outlined in the consultation summary above, sufficient information and a reasonable period have been provided to demonstrate that consultation for the purpose of Reg 11A for this activity is complete. Any further engagement with BTAC will be for the purpose of ongoing engagement. |  |
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### **Yinggarda Aboriginal Corporation (YAC)**

YAC is established under the Native Title Act 1993 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.

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with YAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

#### **Sufficient Information:**

- Woodside sought direction on YAC's preferred method of consultation. This resulted in face-to-face meetings being coordinated at the location of YAC's choosing, with YAC nominated representatives. These meetings included information that was readily accessible and appropriate.
- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Provided Consultation Information Sheets and Consultation Summary Sheets to YAC. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity in a digestible, plain English format.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.
- Confirmed the purpose of consultation and set out in detail what was being sought through consultation.
- Asked for the consultation and information sheets to be distributed to members and individuals.
- Provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing an environment plan".
- Provided response to questions asked about the activity through consultation. Through these questions, YAC has displayed an understanding of the activities under this Environment Plan.
- Advised that YAC could request the particular information provided in the consultation not be published (to align with 11A(2)(4)).

#### **Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to YAC on 22 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to YAC over a 9 month period.
- Woodside has addressed and responded to YAC over 9 months, demonstrating a "reasonable period" of consultation.

Woodside asked YAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.

Woodside has provided a reasonable opportunity for input since February 2023 and a genuine two-way dialogue has occurred via meetings and written exchanges to further understand the environment in which the activity will take place. YAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on YAC's functions, interests or activities.

#### **Summary of information provided and record of consultation:**

YMAC is the Native Title Representative Body (NTRB) for the Yamatji and Pilbara regions. NTRBs exist to provide assistance to native title claimants and holders in regards to their native title rights. No native title has been recognised over the Project Area, however YMAC is identified in the North West Marine Parks Network Management Plan as the contact for identifying cultural values in nearby Australian Marine Parks.

- On 22 February 2023, Woodside emailed YAC via YMAC advising of the proposed activity (Appendix F, reference 4.32) and provided a Consultation Information Sheet. Woodside noted it is seeking YAC's feedback as soon as possible on the proposed activity.
- On 24 February 2023, Woodside followed up with YAC/YMAC via phone call. YAC/YMAC advised it will send an email on 24 February to discuss an invitation for Woodside to meet with the YAC Board.
- On 20 March 2023, Woodside emailed YMAC to follow up the discussed invitation for a face-to-face meeting with its Board of Directors
- On 23 March 2023, YMAC responded and proposed a meeting on 3 May 2023 in Carnarvon and provided an estimated of its proposed costs. The invitation was accepted and arrangements made for a pre-meeting with YMAC to coordinate details.
- On 23 March 2023, Woodside responded by email confirming 3 May 2023 date for a meeting in Carnarvon, stating that preference is to meet face-to-face to help develop relationship.
- On 24 March 2023, the YMAC lawyer emailed to arrange a pre-meet conversation on 31 April 2023.
- On 24 March 2023, Woodside emailed to confirm the pre-meet conversation.
- On 27 March 2023 the YMAC lawyer emailed Woodside to confirm meeting details.
- On 30 March 2023, the YMAC lawyer emailed to cancel the pre-meet conversation.
- On 27 April 2023, Woodside emailed the YMAC lawyer to confirm timing and location for the face-to-face meeting on 3 May 2023 but the email bounced back requesting correspondence be forwarded to an alternate contact in YMAC.
- On 27 April 2023, Woodside forwarded the email seeking to confirm time and location for the planned meeting to the alternate contact in YMAC.
- On 27 April 2023, YMAC confirmed by email and phone call that they no longer represent Yinggarda Aboriginal Corporation and that the meeting on 3 May 2023 had been cancelled. They informed Woodside that Gumala Aboriginal Corporation is now representing YAC and YMAC is in the process of hand over, including correspondence with Woodside.

- On 27 April 2023, Woodside emailed YMAC confirming receipt of information that YMAC no longer represent YAC.
- On 28 April 2023, Woodside attempted to call Gumula Aboriginal Corporation and left a voicemail to establish connection.
- On 28 April, Woodside emailed Gumula Aboriginal Corporation to establish contact and inform them of the prior context. Woodside stated that it is still interested in meeting with the YAC board if they are interested.
- On 8 May, Woodside phoned Gumula Aboriginal Corporation to follow up the email, explaining that it is seeking to consult Yinggarda on the proposed activity and how the meeting had been cancelled. Gumula Aboriginal Corporation indicated that the email address previously contacted was correct and indicated that it would call back. No return call was received.
- On 1 June 2023, Woodside emailed and phoned Gumula Aboriginal Corporation to speak with someone about consulting YAC on EPs. Reception said they would have a member of the governance team call back.
- On 15 June 2023, Gumula Aboriginal Corporation emailed Woodside proposing attendance at a YAC Board meeting on 6 July for one hour to discuss EPs.
- On 19 June 2023, Woodside emailed Gumula Aboriginal Corporation accepting the invitation to attend the Board meeting, requesting a half day meeting with the board to allow YAC to ask questions and have time to consider information.
- On 21 June 2023, Gumula Aboriginal Corporation emailed Woodside inviting attendance at a half day Board meeting to discuss other EP matters.
- On 21 June 2023, Woodside emailed Gumula Aboriginal Corporation accepting the invite to attend the Board meeting of 5 July 2023 for a half day.
- (1) On 5 July 2023, Woodside presented to the YAC about a number of EPs including this EP. At the meeting Woodside:
  - Described the Environment Plan framework, referring to the Offshore Petroleum and Greenhouse Gas Storage Act (Environment) Regulations, NOPSEMA's role as regulator and general contents of Environment Plans.
  - Displayed a map of activities open for feedback to be discussed in the meeting and provided a list of other upcoming activities which will be open for consultation in 2023.
  - Provided an overview of other EPs and overview of activities.
  - Described the proposed activity, noting trunkline location, size, depth and length. A video was used to describe the pipelay.
  - Described the types of vessels involved.
  - Described planned and unplanned environmental risks and impacts in accordance with tables provided in the Information Sheets for the activities, emphasising that unplanned risks are not expected to occur and are unlikely.
  - Displayed and spoke to the EMBA for each proposed EP activity, and the individual worst case loss of containment scenarios identified, noting that they are all diesel fuel releases which would only be caused by vessel collisions.
  - Stated that Woodside wanted to understand how the functions, activities or interests of YAC and the people it represents may be impacted by any of those activities;
  - Specifically asked the following:
    - How could these activities impact your cultural values, interests and activities – does protecting the environment do enough to protect your cultural values?

What are your concerns about the proposed activities and what do you think we should do about them?  
Is there anything you would like included in the EPs before submission?  
Is there anyone else Woodside should consult with about the activities?

- Advised that Woodside will continue to take feedback from YAC for the life of the EP
- Provided personal contact details for further feedback. Woodside provided NOPSEMA contact details, should YAC desire to provide feedback directly to the regulator.
- **(1)** At the 5 July meeting YAC made particular mention of the following:
  - **(1)** YAC expressed sadness at the potential for environmental impact.
    - Woodside responded that the potential impact from the unplanned activities is very low. For example, Woodside has been operating in the region for over 30 years and has not had a serious unplanned environmental event in that time. Importantly, if there is an unplanned event, the entire EMBA as shown on the maps will not be impacted. The area of the EMBA will be somewhere within the mapped area depending on factors such as wind, current and tide.
  - **(1)** YAC stated plants, animals and the environment are inexorably linked to their culture and asked: whether Woodside has undertaken environmental studies and whether these studies ongoing; and asked what environmental monitoring happens after the EPs are approved.
    - Woodside responded that it has undertaken numerous environmental studies that form part of the EPs and has an ongoing commitment to environmental studies and research, some of which are set out on Woodside's website. Woodside noted that Environmental monitoring is an ongoing activity, and the nature and timing of environmental monitoring depends on the nature, possible consequences, and likelihood of the environmental risks. Importantly, Woodside commits to ongoing consultation with YAC and will be able to take feedback if any new information in relation to risks comes to light.
  - **(1)** YAC suggested that ranger programs could assist with environmental management and monitoring, and that YAC would likely write to Woodside about this suggestion and generally to discuss how YAC can be involved with / benefit from Woodside's activities.
    - Woodside responded that it looks forward to discussing these opportunities with YAC further as part of ongoing engagement, Woodside commits to ongoing consultation about the EPs and to building the relationship with YAC.
  - **(1) (2)** YAC expressed concern about potential impacts to potential impact patterns of whales, and potential collisions. Woodside responded by explaining controls which would be in place to minimise impacts and risks to whales, and no further information was requested.
- On 17 July, Woodside emailed YAC a letter summarising the 5 July meeting.
- On 19 July 2023, Woodside emailed YAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that YAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- On 19 July 2023, YAC emailed Woodside acknowledging receipt of Woodside's email of 19 July.
- On 26 July 2023, Woodside emailed YAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- On 2 August 2023, YAC lawyer (Banks-Smith & Assoc - BSA) emailed Woodside to indicate that they have been placed on a retainer by YAC to advise on NOPSEMA matters.
- On 3 August 2023, Woodside emailed YAC regarding other EPs and including the NOPSEMA guidelines again with BSA addressed in the email.
- On 4 August 2023, BSA emailed Woodside confirming instructions by YAC to formally engage with Woodside regarding future NOPSEMA consultation and requiring funds for engagement.

- On 10 August 2023, BSA emailed Woodside to provide instructions that the YAC Board requires more time to conclude its investigations and form a considered view of what feedback it is to provide Woodside on multiple proposed activities.
- On 11 August 2023, Woodside emailed YAC via BSA acknowledging the request for a draft consultation agreement, noting it would be attended to within a week or so and confirming the process for onboarding to receive payments.
- On 11 August 2023, YAC via Gumala AC emailed Woodside confirming formal resolution by the Board to retain their lawyer to engage on NOPSEMA matters and providing a copy of the Board Resolution.
- **(3)** On 14 August 2023, YAC emailed Woodside (via BSA) stating that it looked forward to receiving the consultation agreement for consideration and agreeing arrangements for provision of resourcing.
- On 13 September 2023, Woodside emailed YAC via BSA advising of the planned start date for the activity, and once again requesting if YAC is aware of any other people with whom Woodside should consult, and if there is any information YAC wish to provide on cultural values, and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. The Summary Information Sheet for this activity was attached (Appendix F, reference 3.36.1).
- On 13 September 2023, YAC responded to Woodside via BSA advising that, in the absence of a draft consultation agreement, they were unable to respond in substance to the matters raised.
- On 14 September 2023, Woodside emailed YAC via BSA with a proposed consultation framework.
- On 14 September 2023, YAC via BSA confirmed receipt of the consultation framework and advised they would seek direction from the YAC board.
- On 23 October 2023, Woodside emailed YAC to provide an activity timing update.

| Summary of Feedback, Objection or Claim  | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
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| <p><b>(1)</b> During face-to-face engagements related to this activity and others YAC requested further information on topics related to this proposed activity which was responded to during the meeting:</p> <ul style="list-style-type: none"> <li>• Whether Woodside has undertaken environmental studies and whether these studies are ongoing.</li> </ul> <p>YAC also expressed the following:</p> <ul style="list-style-type: none"> <li>• Sadness at the potential for environmental impact</li> <li>• Ranger programs could assist with environmental management and monitoring.</li> <li>• Expressed concern about potential impacts to patterns of whales, and potential collisions.</li> </ul> | <p><b>(1)</b> Woodside responded to YAC’s requests for further information during face-to-face engagements, and no further information was requested on these topics.</p> <p><b>(2)</b> Woodside noted YAC’s interest in whales.</p> <p><b>(3)</b> Separate from consultation under Reg 11A, Woodside will establish a framework agreement with YAC. The agreement would be used to frame ongoing consultation. Sufficient information to allow informed assessment has already been provided by other means, including summary sheets developed by Indigenous staff, a face-to-face meeting with appropriate material (pictures, maps, video) and project attendance allowing opportunity to ask questions and seek further understanding.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has</p> | <p><b>(1)</b> Existing controls considered sufficient, as described in <b>Section 6.6 and 6.7.</b></p> <p><b>(2)</b> Woodside updated <b>Section 4.6.1</b> to record YAC’s interests, including whales and assessed potential impact on these, including controls, in <b>Section 6.6 and 6.7.</b></p> <p><b>(3)</b> Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with YAC through ongoing engagement and continue to progress with establishing a framework agreement as part of Woodside’s Program of Ongoing Engagement with Traditional Custodians (<b>Appendix I</b>).</p> |

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| <p>(2) YAC expressed a general interest in whales. Woodside discussed controls protecting whales from an ecological perspective during meetings in which they were raised, no further feedback or comment was received on these topics.</p> <p>(3) Woodside has provided a draft Consultation Framework Agreement which includes suggested timeframes to settle the agreement and timeframes for ongoing consultation with the Board.</p> | <p>been accepted (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 <b>Section 7.7.1</b>).</p> |  |
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**Kariyarra Aboriginal Corporation**

Kariyarra is established under the Native Title Act 1993 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.

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Kariyarra Aboriginal Corporation for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

**Sufficient Information:**

- Woodside sought direction on Kariyarra’s preferred method of consultation. This has not resulted in a face-to-face meeting however emails and phone calls have been exchanged. Woodside has demonstrated reasonable effort to consult since February 2023.
- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Provided Consultation Information Sheet and Consultation Summary Sheets to Kariyarra. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity in a digestible, plain English format.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.
- Confirmed the purpose of consultation and set out in detail what is being sought through consultation.
- Asked for the consultation and information sheets to be distributed to members and individuals.
- Provided NOPSEMA’s Brochure “Consultation on offshore petroleum environment plans” and Guideline “Guideline: Consultation in the course of preparing an environment plan”.
- Provided response to questions asked about the activity through consultation. Through these questions, KAC have displayed an understanding of the activities under this Environment Plan.
- Advised that Kariyarra can request that particular information provided in the consultation not be published (to align with 11A(2)(4))

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Kariyarra Aboriginal Corporation on 24 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to Kariyarra Aboriginal Corporation over a 9 month period.
- Woodside has addressed and responded to Kariyarra over 9 months, demonstrating a “reasonable period” of consultation.
- Woodside asked Kariyarra if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.
- Woodside has provided a reasonable opportunity for input since February 2023 and a genuine two-way dialogue has occurred via written exchanges.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on Kariyarra functions, interests or activities.

**Summary of information provided and record of consultation:**

- On 24 February 2023, Woodside emailed the Kariyarra Aboriginal Corporation advising of the proposed activity (Appendix F, reference 4.36) and provided a Consultation Information Sheet.
- On 24 March 2023, Woodside emailed the Kariyarra Aboriginal Corporation following up of the proposed activity (Appendix F, reference 5.31) and to request any feedback.
- On 18 April 2023, Woodside emailed the Kariyarra Aboriginal Corporation, to seek guidance whether Kariyarra would like to arrange a meeting for Woodside to clarify any question that may have (Appendix F, reference 5.33) and requested an estimate Kariyarra’s preferred meeting date(s) at its earliest convenience. An offer of an online or in-person meeting was made.
- On 28 April 2023, Woodside emailed Kariyarra including the email chain and a copy of the Summary Information Sheet demonstrating efforts to engage and notifying that the next step is for the EP for the proposed activity to be submitted to NOPSEMA for technical assessment. It stated that the EP submission is imminent and requested any priority feedback as a priority to reflect in this submission, noting that feedback is also welcome over the life of the EP.
- **(1)** On 2 May 2023 Woodside phone KAC and left a message for a return call to discuss EP, no return call was received.
- **(1)** On 3 May 2023 Woodside phoned KAC and left a message for a return call to discuss EP, no return call was received.
- **(1)** On 9 May 2023, Woodside drove to South Hedland Office of KAC to meet with the CEO. The CEO was unavailable, Woodside left contact details and proposed meeting times.
- **(1)** On 10 May 2023, Woodside spoke to the KAC CEO and asked for a meeting whilst still in South Hedland. Woodside advised that the submission of the EP was imminent, and that Woodside wished to consult and was continuing to seek KACs feedback. The CEO advised he had a full calendar and no time to meet however would try to respond as soon as time permitted. He asked when the EPs were due for submission.
- **(1)** On 12 May 2023, Woodside emailed KAC to confirm telephone conversation of 10 May and to advise that the EPs are due for submission in the following two weeks and advised that Woodside would take feedback for the life of the EP.

- **(1)** On 20 June 2023, Woodside emailed KAC CEO notifying of a wish to engage in relation to a further EP and seeking feedback and preferred time and method of consultation.
- **(1)** On 6 July 2023, Woodside followed up on the two EPs provided to KAC on 20 June 2023 and advising Woodside would be happy to meet or consult with KAC.
- On 18 July 2023, Woodside emailed KAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that KAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- **(5)** On 26 July 2023, Woodside emailed KAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- **(1)** On 28 August 2023, Woodside emailed KAC following up on a number of EP's previously notified and past EPs, and re-iterating a request to meet with KAC to consult on activities.
- **(2)** On 31 August 2023, KAC emailed Woodside (in response to an email regarding another activity unrelated to this EP) apologising for not responding sooner and noting that KAC were seeking legal advice on matters.
- On 31 August 2023, Woodside emailed KAC acknowledging their response.
- **(5) (2)** On 31 August 2023, KAC (via legal representative) emailed Woodside requesting information about another activity unrelated to this EP, indicating they required costs to be met for KAC to be engaged in consultations with Woodside.
- On 10 September 2023, Woodside emailed KAC (via legal representation) a response advising that Woodside was still to provide clarity on funding.
- On 10 September 2023, Woodside emailed KAC (via legal representation) advising of the planned start date for the activity, and once again requesting if KAC is aware of any other people with whom Woodside should consult, and if there is any information KAC wish to provide on cultural values, and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. The Summary Information Sheet for this activity was attached (Appendix F, reference 3.37.1).
- **(2) & (3)** On 13 September 2023, KAC emailed Woodside requesting confirmation that consultation costs would be covered by Woodside. KAC also advised that the Kariyarra have sea rights referenced in their native title evidence. The KAC lawyer affirmed that further consultation will be required now that KAC has a legal advisor.
- On 13 September 2023, Woodside emailed KAC (via legal representative) with information on another EP as requested. Woodside also noted that a response to funding had not yet been received but would be followed up and confirming that Woodside are looking for positive engagement with KAC.
- **(4)** On 13 September 2023, Woodside emailed KAC (via legal representative) noting in principle agreement to covering costs and requesting reasonable quotes for all areas requested by KAC in the email of 31 August 2023 regarding another activity unrelated to this EP.
- On 23 October 2023, Woodside emailed KAC to provide an activity timing update.

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
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| <p><b>(1)</b> Woodside and Kariyarra Aboriginal Corporation have engaged in a two-way dialogue but KAC has not provided feedback, objections to date or claims in response to the information provided since consultation began in February 2023.</p> | <p><b>(1)</b> Woodside responded to Kariyarra's requests and questions in correspondence.</p> <p><b>(2)</b> Woodside demonstrated reasonable effort to consult since February 2023 and engage in genuine two-way dialogue since August 2023. Kariyarra Aboriginal Corporation has had sufficient time and sufficient information to participate in consultation. Woodside has</p> | <p><b>(1) &amp; (3)</b> Existing controls considered sufficient as described in Section 6.6 and 6.7 of the EP. Woodside recognises that KAC holds Sea Country rights and interests that need to be protected (Section 4.6.1).</p> <p><b>(2) (4) &amp; (5)</b> Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with KAC through ongoing engagement and continue</p> |

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| <p>(2) KAC have notified Woodside that they have sought legal advice on matters. Woodside have been communicating through their legal representative. KAC lawyer affirmed that further consultation will be required since KAC have sought legal representative.</p> <p>(3) KAC has asserted that they have sea rights under Native Title.</p> <p>(4) KAC has indicated they require costs to be met for KAC to be engaged in consultations with Woodside.</p> <p>(5) KAC have noted that they want to engage on matters with Woodside and would like to develop an Engagement Protocol.</p>  | <p>continued to consult with Kariyarra (via legal representation) since 31 August 2023. The details of these engagements are described in the consultation summary above.</p> <p>(3) Woodside accepts that Kariyarra Aboriginal Corporation may have sea country values within the EMBA for this EP. Since 24 February 2023, Kariyarra Aboriginal Corporation has not raised any claims or objections in relation to this activity.</p> <p>(4) (5) Woodside have agreed in principle to funding KAC and are awaiting finalisations of costings and approvals. Woodside will continue to progress towards an Engagement Protocol as requested by Kariyarra. As outlined in the consultation summary above, sufficient information and a reasonable period have been provided to demonstrate that consultation for the purpose of Reg 11A is complete. Any further engagement with and support offered to KAC will be for the purpose of ongoing engagement.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> | <p>to progress towards an Engagement Protocol as requested by Kariyarra (Appendix I).</p> |
| <p><b>Wirrawandi Aboriginal Corporation (WAC)</b></p> <p>WAC is established under the Native Title Act 1993 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.</p>  |  |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with WAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <p><b>Sufficient Information:</b></p> <ul style="list-style-type: none"> <li>• Woodside sought direction on WAC’s preferred method of consultation. This resulted in a face-to-face meeting being coordinated at a location of WAC’s choosing. This meeting included information that was readily accessible and appropriate.</li> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> </ul> |  |   |

- Provided Consultation Information Sheets and Consultation Summary Sheets to WAC. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity in a digestible, plain English format.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.
- Confirmed the purpose of consultation and set out in detail what was being sought through consultation.
- Asked for the consultation and information sheets to be distributed to members and individuals.
- Provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing an environment plan".
- Provided response to questions asked about the activity through consultation. Through these questions, WAC have displayed an understanding of the activities under this Environment Plan.
- Advised that WAC could request the particular information provided in the consultation not be published (to align with 11A(2)(4))

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to WAC on 24 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to WAC over a 9 month period.
- Woodside has addressed and responded to WAC over 9 months, demonstrating a "reasonable period" of consultation.
- Woodside asked WAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.
- Woodside has provided a reasonable opportunity for input since January 2023 and a genuine two-way dialogue has occurred via meetings and written exchanges to further understand the environment in which the activity will take place. WAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on WAC's functions, interests or activities.

**Summary of information provided and record of consultation:**

- On 21 February 2023, Woodside spoke with WAC to discuss a consultation meeting.
- On 24 February 2023, Woodside emailed WAC advising of the proposed activity (Appendix F, reference 4.34) and provided a Consultation Information Sheet. Woodside noted it is seeking WAC's feedback as soon as possible on the proposed activity
  - Woodside also requested confirmation of the opportunity to meet with the WAC Board when they are next due to meet in Perth in March
- On 24 February 2023, WAC responded acknowledging Woodside's email and advised that a meeting is still yet to be finalised and that further details and associated costs will be discussed once the meeting has been confirmed.
- On 7 March 2023, WAC provided a formal quote, draft agenda and a meeting date of 23 March 2023.

- On 7 March 2023, Woodside responded thanking WAC for sending through the quote.
- On 9 March 2023, RRRKAC copied WAC into an email to Woodside to advise the environment impacts of this EP and other unrelated EPs have been discussed with the Robe River Kuruma Heritage Council and they have recommended that the interests of Robe River Kuruma people are best served through the joint Heritage Advisory Committee that is required under Yaburara Mardudhunera and Kuruma Marthudunera Indigenous Land Use Agreement. The email advised Wirrawandi is required to facilitate this committee.
- On 15 March 2023, Woodside sent a follow up email to confirm details of the meeting on 23 March 2023.
- On 15 March 2023, WAC responded providing details of the date, time, venue, intent and agenda of the meeting on 23 March 2023.
- **(1) (2)** On 17 March 2023, Woodside responded and confirmed the relevant representation would provide the suite of EP information overviews and cover the broader community activity for awareness.
- On 17 March 2023, WAC responded and requested a dedicated meeting to address Cultural Capture, WAC Commercial and Fuel supply opportunity. WAC requested to meet week of the 29 March 2023.
- On 20 March 2023, Woodside responded and set up a meeting for 29 March 2023.
- On 23 March 2023, WAC confirmed its attendance at the meeting on 29 March 2023.
- **(1)** On 23 March 2023, Woodside presented to a meeting of the WAC Board and Elders in Perth. Woodside:
  - Described the Environment Plan framework, referring to the Offshore Petroleum and Greenhouse Gas Storage Act (Environment) Regulations, NOPSEMA's role as regulator and general contents of Environment Plans.
  - Displayed a map of activities open for feedback to be discussed in the meeting and provided a list of other upcoming activities which will be open for consultation in 2023.
  - Provided an overview of another EP and overview of activities.
  - Described the proposed activity, noting trunkline location, size, depth and length. A video was used to describe the pipelay.
  - Described the types of vessels involved.
  - Described planned and unplanned environmental risks and impacts in accordance with tables provided in the Information Sheets for the activities, emphasising that unplanned risks are not expected to occur and are unlikely.
  - Displayed and spoke to the EMBA for each proposed EP activity, and the individual worst case loss of containment scenarios identified, noting that they are all diesel fuel releases which would only be caused by vessel collisions.
  - Stated that Woodside wanted to understand how the functions, activities or interests of WAC and the people it represents may be impacted by any of those activities;
  - Specifically asked the following:
    - How could these activities impact your cultural values, interests and activities - does protecting the environment do enough to protect your cultural values?
    - What are your concerns about the proposed activities and what do you think we should do about them?
    - Is there anything you would like included in the EPs before submission?
    - Is there anyone else Woodside should consult with about the activities?

- Advised that Woodside will continue to take feedback from WAC for the life of the EP
- Provided personal contact details for further feedback. Woodside provided NOPSEMA contact details, should WAC desire to provide feedback directly to the regulator.
- **(1)** At the 23 March meeting WAC asked:
  - WAC asked how long the wells would be in operation for (covering TPA03 and other wells considered during the consultation)
    - Woodside responded that it varies but that generally it is expected to be 20-30 years
  - WAC stated that this kind of information sharing is important, and that Woodside's time was appreciated and whether this type of information is broadly available to the community,
    - Woodside responded that there are a number of open community sessions available in the region where it could be discussed.
- WAC indicated that since they are engaging with a number of energy industry operators, they will consider the information provided and discuss internally before any further
- On 24 March, Woodside emailed WAC thanking them for the meeting and proposed a venue and time for the next meeting.
- On 24 March 2023, WAC responded thanking Woodside for the meeting and accepted the invite for the next meeting.
- On 24 March 2023, Woodside responded thanking WAC for its email.
- **(1)** On 31 March 2023, Woodside met with the Robe River Kuruma and Wirrawandi Joint Heritage Advisory Committee (HAC) in Karratha:
  - Woodside described the Environment Plan framework, referring to the Offshore Petroleum and Greenhouse Gas Storage Act (Environment) Regulations, NOPSEMA's role as regulator and general contents of Environment Plans.
  - Woodside encouraged HAC to raise anything which they feel is missing in the information provided during the meeting, or any issues or concerns.
  - Woodside displayed a map and described the proposed TPA03 drilling activity as well as 2 other activities.
  - In relation to this TPA03 activity and other Woodside activities, HAC asked where the gas goes to.
    - Woodside explained that 15% of Woodside's gas goes to the state. LNG is shipped offshore, mainly Japan and SE Asia.
  - HAC asked how much gas is taken from the field.
    - Woodside responded that it varies between fields
  - HAC asked if they could have more meetings.
    - Woodside explained that this is part of the objectives of the discussion is to understand how you want to be engaged. If invited we would attend further meetings.
  - HAC described that it's a concern that this much gas is taken out. If we take out the gas and replace by water will the Earth be out of balance?
    - Woodside took this question on the action board for future response.
  - Woodside explained that the planned and unplanned risk for this activity is similar to Scarborough except that the well blowout risk is different as it has an oil risk. This results in a larger EMBA because of its persistency in the environment.

- HAC asked about if there is a big gas leak.
  - Woodside explained that most of the gas is dispersed in the water. The gas will not burn in deep water due to the dispersion over a large area. In shallow water it could burn on the surface.
- **(1)** On 3 May 2023, Woodside emailed a letter to WAC regarding the meeting with the joint Robe River Kuruma and Wirrawandi Joint Heritage Advisory Committee (HAC) on 31 March:
  - Woodside thanked the HAC for the meeting, their careful consideration of the matters and feedback provided
  - Woodside acknowledged that both WAC and RRKAC (represented together as HAC) have interests in the EMBA and noted that we want to ensure impacts are as minimal as reasonably practicable.
  - A high level overview of presented topics was provided.
  - Woodside provided responses to questions noted from the meeting that were not related to the proposed activity.
  - Woodside notified that the feedback and the letter will be included in EPs that will be submitted to NOPSEMA.
- On 3 May 2023, Woodside emailed a letter to WAC regarding the meeting with WAC Directors and Elders on 23 March 2023:
  - Woodside thanked WAC for the meeting and their careful consideration of the matters.
  - Woodside acknowledged that WAC has interests in the EMBA and noted that we want to ensure impacts are as minimal as reasonably practicable.
  - A high-level overview of presented topics was provided.
  - Woodside provided responses to questions noted from the meeting, none of which were related to the proposed activity. Woodside notified that the feedback and the letter will be included in EPs that will be submitted to NOPSEMA.
- On 18 July 2023, Woodside emailed WAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that WAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- **(3)** On 26 July 2023, Woodside emailed WAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- On 3 August 2023, WAC emailed Woodside requesting a map of relevant Commonwealth and State EMBAs.
- On 10 August 2023, Woodside responded to the 3 August 2023 request and emailed WAC a list of current and pending EPs.
- On 10 August 2023, WAC emailed Woodside with thanks for the information and with a query about EMBAs.
- On 15 August 2023, Woodside emailed WAC providing an explanation of the query in relation to EMBAs and EMBA development.
- On 15 August 2023, WAC emailed Woodside with thanks for the clarification and noting they would provide a formal response shortly.
- On 31 August 2023, WAC emailed a letter to Woodside proposing a framework agreement to provide a streamlined, formalised approach to consultation between WAC and Woodside. This included a list of activities that WAC is to be consulted on including this one.
- On 11 September 2023, Woodside emailed WAC acknowledging the previous email, advising of the planned start date for the activity, and once again requesting if WAC is aware of any other people with whom Woodside should consult, and if there is any information WAC wish to provide on cultural values, and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. The Summary Information Sheet for this activity was attached (Appendix F, reference 3.38.1).

- **(3)** On 11 September 2023, WAC emailed Woodside with a copy of the letter of 31 August, advising that WAC does not object to Woodside progressing environment plans for the activities outlined on the proviso that Woodside and WAC enter into a framework agreement to provide for ongoing meaningful consultation with WAC and YM members in relation to activities the subject of EPs, as outlined in the attached letter on terms suitable to both parties within a reasonable period (nominally within the next 2-3 months).
- **(3)** On 12 September 2023, Woodside emailed WAC confirming receipt of the email of 11 September.
- On 28 September 2023, Woodside emailed WAC informing them who their focal point is.
- **(3)** On 3 October 2023, WAC emailed Woodside requesting a catch up.
- On 3 October 2023, Woodside emailed WAC suggesting dates during October to meet up.
- On 3 October 2023, WAC emailed Woodside confirming availability on suggested dates.
- On 3 October 2023, Woodside emailed WAC confirming dates and meeting location.
- On 20 October 2023, Woodside and WAC met in Perth. Meeting was held with the new CEO and Chairperson to discuss current EPs and how parties intend to support each other through the process. Confirm WAC's preferred EP consultation process and discuss recent correspondence between previous CEO and Woodside. WAC confirmed they are going to address all open EPs as a matter of priority. Noted the WAC AGM is taking place in approx. 10 days.
- On 23 October 2023, Woodside emailed WAC to provide an activity timing update.

Quarterly Heritage Meetings:

- Woodside convenes a quarterly meeting of Traditional Custodian representatives from the Representative Aboriginal Corporations involved in historical native title claims over the Burrup Peninsula, including WAC. Individual attendees are nominated by their representative Aboriginal Corporations. These meetings are summarised separately in this table.

Copies of slides are made available to representative Aboriginal Corporations for the general awareness of members who were not able to attend individual meetings.

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan  |
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| <p><b>(1)</b> During face-to-face engagements related to this activity and others, the WAC requested further information on topics related to this proposed activity which was responded to during the meeting, or subsequent to the meeting:</p> <ul style="list-style-type: none"> <li>• Length of operation</li> <li>• Sharing of information with the wider public</li> <li>• Where the gas goes to</li> <li>• How much gas is taken out</li> <li>• Affect on global balance stability due to gas extraction</li> <li>• Further engagement on Woodside activities</li> </ul> | <p><b>(1)</b> Woodside responded to WAC's requests for further information during face-to-face engagements, and no further information was requested on these topics.</p> <p><b>(2)</b> Woodside assessed WAC's interest in whales to represent potential cultural values.</p> <p><b>(3)</b> Woodside has confirmed and accepts that WAC is seeking to establish a framework agreement for the purposes of ongoing consultation with Woodside.</p> <p>Separate from consultation under Reg 11A, Woodside will establish a framework agreement with WAC. The agreement would be used to frame ongoing consultation. Sufficient information to allow informed</p> | <p><b>(1)</b> Existing controls considered sufficient, as described in Section 6.6 and 6.7.</p> <p><b>(2)</b> Woodside updated Section 4.6.1 to record WAC's interests and potential cultural values, including whales and assessed potential impact on these, including controls, in Section 6.6 and 6.7, specifically 6.6.3 which assesses and adopts controls to minimise impacts to whale communication from noise.</p> <p><b>(3)</b> Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with WAC through ongoing engagement and continue to progress with establishing a framework agreement as part of</p> |

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| <p>(2) WAC expressed a general interest in whales. Woodside discussed controls protecting whales from an ecological perspective during meetings in which they were raised, no further feedback or comment was received on these topics.</p> <p>(3) WAC expressed that it does not object to Woodside progressing the proposed activity on the provision that Woodside and WAC enter into a framework agreement to provide for ongoing meaningful consultation a desire for ongoing engagement and partnership through a Framework Agreement.</p> | <p>assessment has already been provided by other means, including summary sheets developed by Indigenous staff, a face-to-face meeting with appropriate material (pictures, maps, video) and project attendance allowing opportunity to ask questions and seek further understanding.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> | <p>Woodside's Program of Ongoing Engagement with Traditional Custodians (Appendix I).</p> |
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**Robe River Kuruma Aboriginal Corporation (RRKAC)**

RRKAC is established under the Native Title Act 1993 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.

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with RRKAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

**Sufficient Information:**

- Woodside sought direction on RRKAC's preferred method of consultation. This resulted in a face-to-face meeting being coordinated at the location of RRKAC's choosing, with RRKAC nominated representatives. This meeting included information that was readily accessible and appropriate.
- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Provided Consultation Information Sheets and Consultation Summary Sheets developed by Indigenous staff to RRKAC. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity with controls in a digestible, plain English format.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.
- Confirmed the purpose of consultation and set out in detail what was being sought through consultation.
- Asked for the consultation and information sheets to be distributed to members and individuals.
- Provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing an environment plan".
- Provided response to questions asked about the activity through consultation. Through these questions, RRKAC has displayed an understanding of the activities under this Environment Plan
- Advised that RRKAC could request the particular information provided in the consultation not be published (to align with 11A(2)(4)).

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to RRKAC on 24 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to RRKAC over a 9 month period.
- Woodside has addressed and responded to RRKAC over 9 months, demonstrating a “reasonable period” of consultation.
- Woodside asked RRKAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.
- Woodside has provided a reasonable opportunity for input since February 2023 and a genuine two-way dialogue has occurred via meetings and written exchanges to further understand the environment in which the activity will take place. RRKAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on RRKAC’s functions, interests or activities.

**Summary of information provided and record of consultation:**

- On 20 February 2023, Woodside emailed RRKAC advising of the proposed activity (Appendix F, reference 4.26) and provided a Summary Information Sheet.
- On 24 February 2023, Woodside emailed RRKAC providing further information of the proposed activity (Appendix F, reference 4.39) and provided a Consultation Information Sheet.
- On 9 March 2023, RRKAC emailed Woodside (and copied in CEO of Wirrawandi Aboriginal Corporation (WAC) and advised it had discussed the proposed activity with the Robe River Kuruma Heritage Advisory Committee and they recommended that the interests of Robe River Kuruma people are best served through the joint Heritage Advisory Committee that is required under Yaburara Mardudhunera and Kuruma Marthudunera Indigenous Land Use Agreement.
- Between 15-17 March 2023, Woodside exchanged email correspondence with RRKAC (and WAC) in relation to establishing a meeting with the joint Heritage Advisory Committee. The meeting was confirmed for 31 March 2023.
- **(1)** On 31 March 2023, Woodside met with the Robe River Kuruma and Wirrawandi Joint Heritage Advisory Committee (HAC) in Karratha to discuss various Environment Plans, including this one:
  - Woodside described the Environment Plan framework, referring to the Offshore Petroleum and Greenhouse Gas Storage Act (Environment) Regulations, NOPSEMA’s role as regulator and general contents of Environment Plans.
  - Woodside encouraged HAC to raise anything which they feel is missing in the information provided during the meeting, or any issues or concerns.
  - Woodside displayed a map of activities open for feedback to be discussed in the meeting and provided a list of other upcoming activities which will be open for consultation in 2023.
  - Woodside described the proposed activity

- HAC asked where Woodside's gas goes to, Woodside responded that some goes to the state supply and most of the remainder goes to SE Asia as LNG
- HAC asked whether the removal of hydrocarbons could cause global gravitational instability, Woodside responded that it is not considered credible and that Woodside would provide a technical response separately.
- HAC asked what will happen if there is a gas leak, Woodside responded that dry gas would be released, and a portion would be dissolved into the water before reaching surface depending on water depth, and gas reaching the surface could be a safety risk or contribute to greenhouse gas in the atmosphere.
- Woodside described planned and unplanned environmental risks and impacts in accordance with tables provided in the Information Sheets for the activities, emphasising that unplanned risks are not expected to occur and are unlikely.
- WAC asked what response Woodside would implement for a diesel spill. Woodside responded that response arrangements are checked by NOPSEMA and since diesel rapidly evaporates and disperses response is mainly monitoring.
- Woodside provided personal contact details for further feedback.
- Woodside provided NOPSEMA contact details, should WAC desire to provide feedback directly to the regulator.
- **(1)** On 3 May 2023, Woodside emailed a letter to WAC regarding the meeting with the joint Robe River Kuruma and Wirrawandi Joint Heritage Advisory Committee (HAC) on 31 March:
  - Woodside thanked the HAC for the meeting, their careful consideration of the matters and feedback provided.
  - Woodside acknowledged that RRKAC and WAC (represented together as HAC) have interests in the EMBA and noted that we want to ensure impacts are as minimal as reasonably practicable.
  - A high level overview of presented topics was provided.
  - Woodside provided responses to questions noted from the meeting that were not related to the proposed activity.
  - Woodside notified that the feedback and the letter will be included in EPs that will be submitted to NOPSEMA.
- On 3 May 2023, Woodside emailed a letter to WAC regarding the meeting with WAC Directors and Elders on 23 March 2023:
  - Woodside thanked WAC for the meeting and their careful consideration of the matters.
  - Woodside acknowledged that WAC has interests in the EMBA and noted that we want to ensure impacts are as minimal as reasonably practicable.
  - A high-level overview of presented topics was provided.
  - Woodside provided responses to questions noted from the meeting that were not related to the proposed activity. Woodside notified that the feedback and the letter will be included in EPs that will be submitted to NOPSEMA.
- On 18 July 2023, Woodside emailed RRKAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that RRKAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- On 26 July 2023, Woodside emailed RRKAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- **(3)** On 11 August 2023, RRKAC emailed Woodside in response to another matter and in addition requesting ongoing consultation and training opportunities for Jajiwurra Rangers to prepare rangers for caring for sea and coastal country. RRKAC noted that "the KM claim extends almost 10km out to sea and along the Jajiwurra estuary."
- On 14 August 2023, Woodside emailed RRKAC thanking them for their response and requesting to meet to discuss training opportunities for Jajiwurra Rangers.

- On 14 August RRKAC emailed Woodside agreeing to a meeting and indicating they would arrange a suitable time for a discussion.
- On 11 September 2023, Woodside emailed RRKAC acknowledging the previous email, advising of the planned start date for the activity, and once again requesting if RRKAC is aware of any other people with whom Woodside should consult, and if there is any information RRKAC wish to provide on cultural values, and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. Woodside confirmed an internal meeting taking place in October 2023 to discuss Jajiwurra Rangers. The Summary Information Sheet for this activity was attached (Appendix F, reference 3.43.1).
- **(2)** On 15 September 2023, RRKAC emailed Woodside advising they have noted Woodside's plans, and that they aren't resourced to adequately respond, and would require Woodside to fund additional resources.
- **(2)** On 18 September 2023, Woodside sent two emails to RRKAC clarifying that Woodside can provide funding to support consultation activities and requested RRKAC provide quotes and attached a Proposed Program of Ongoing Engagement with Traditional Custodians. An email was also sent from our SAP system a vendor onboarding process. No response has been received.
- On 23 October 2023, Woodside emailed RRKAC to provide an activity timing update.

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan   |
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| <p><b>(1)</b> During a face-to-face engagement related to this activity and others, the RRKAC/HAC requested further information on topics related to this proposed activity which was responded to during the meeting:</p> <ul style="list-style-type: none"> <li>• Emergency preparedness.</li> <li>• What happens with a small diesel spill.</li> </ul> <p><b>(2)</b> RRKAC noted that they are insufficiently resourced to fully engage and respond regarding EPs.</p> <p><b>(3)</b> The RRKAC/HAC expressed a desire for ongoing engagement and partnership.</p> | <p><b>(1)</b> Woodside responded to RRKAC/HAC's requests for further information during face-to-face engagements, and no further information was requested on these topics.</p> <p><b>(2)</b> Woodside supports ongoing engagement and have responded to RRKACs advice about the limitations on their resources. Woodside has offered to support RRKAC in correspondence sent on May 3 2023 and September 2023, however these offers have not been taken up. As outlined in the consultation summary above, sufficient information and a reasonable period have been provided to demonstrate that consultation for the purpose of Reg 11A is complete. Any further engagement with and support offered to RRKAC will be for the purpose of ongoing engagement.</p> <p><b>(3)</b> Woodside has assessed the Program of Ongoing Engagement with Traditional Custodians will support ongoing consultation with RRKAC and address appropriate support for resourcing, separate from consultation under Reg 11A, Sufficient information to allow informed assessment has already been provided, including Consultation Information Sheets and a Summary Information Sheet developed by Indigenous staff members, and a face to face</p> | <p><b>(1)</b> Existing controls considered sufficient, as described in Section 6.6 and 6.7.</p> <p><b>(2) (3)</b> Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with RRKAC through ongoing engagement and continue to progress with establishing a Framework Agreement as part of Woodside's Program of Ongoing Engagement with Traditional Custodians (Appendix I). This includes addressing RRKAC's resourcing issue for ongoing consultation via a Framework Agreement.</p> |

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|   | <p>meeting on 31 March 2023 for which Woodside met RRKAC's costs, with appropriate material (pictures, maps, videos) and project attendance allowing opportunity to ask questions and seek further understanding.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> |  |
| <p><b>Ngarluma Aboriginal Corporation (NAC)</b></p> <p>NAC is established under the Native Title Act 1993 by the Ngarluma people to represent the Ngarlma 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.</p>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with NAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <p><b>Sufficient Information:</b></p> <ul style="list-style-type: none"> <li>• Woodside sought direction on NAC's preferred method of consultation. This resulted in a face-to-face meeting being coordinated at the location of NAC's choosing, with NAC nominated representatives. This meeting included information that was readily accessible and appropriate.</li> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Provided Consultation Information Sheets and Consultation Summary Sheets to NAC. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity in a digestible, plain English format.</li> <li>• Articulated planned and unplanned environmental risks and impacts, with proposed controls.</li> <li>• Confirmed the purpose of consultation and set out in detail what was being sought through consultation.</li> <li>• Asked for the consultation and information sheets to be distributed to members and individuals.</li> <li>• Woodside has provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing an environment plan".</li> <li>• Provided response to questions asked about the activity through consultation. Through these questions, NAC have displayed an understanding of the activities under this Environment Plan.</li> <li>• Advised that NAC can request that particular information provided in the consultation not be published (to align with 11A(2)(4)).</li> </ul> <p><b>Reasonable Period:</b></p> <ul style="list-style-type: none"> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> </ul> |   |  |

- Consultation information provided to NAC on 24 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to NAC over a 9 month period.
- Woodside has addressed and responded to NAC over 9 months, demonstrating a “reasonable period” of consultation.
- Woodside asked NAC if it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.
- Woodside has provided a reasonable opportunity for input since February 2023 and a genuine two-way dialogue has occurred via a meeting and written exchanges to further understand the environment in which the activity will take place. NAC has engaged with the detail of the activity asking related questions. The details of these engagements are described in the consultation summary below.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on NAC’s functions, interests or activities.

**Summary of information provided and record of consultation:**

- On 24 February 2023, Woodside emailed NAC advising of the proposed activity (Appendix F, reference 4.40) and provided a Consultation Information Sheet.
- On 24 February 2023, NAC emailed Woodside and acknowledged receipt of Woodside’s emails and that it was yet to attend to the emails and would do so following the w/c 27 February 2023.
- On 9 March 2023, Woodside emailed NAC and left a phone message to follow up on the email received 24 February 2023:
  - Woodside advised it was seeking opportunity for Woodside to present to the NAC board with an EP overview and if there has been any progress in terms of securing a preferred day and timeslot.
- On 9 March 2023, NAC emailed Woodside to advise that the contact at NAC was unavailable to meet on 30 March 2023.
- On 9 March 2023, Woodside emailed NAC:
  - Woodside noted that during a previous meeting, NAC had advised its next board meeting would be held on 29 and 30 March and that Woodside would be potentially assigned time on the agenda to present to the NAC Board on either one of those days.
  - Woodside advised that this is an important opportunity to ensure that NAC board have the opportunity to provide feedback on the Environmental Plans and if they have interests in the environment that may be affected (EMBA).
  - Woodside welcomed the suggestion of alternative days/times or ways that it can provide an overview to NAC the board.
- On 10 March 2023, NAC emailed Woodside to advise that its March Board Meeting is full with overspills from January and February and at this stage will need to leave the environmental plan consultation until the April meeting.
- On 14 March 2023, Woodside emailed NAC to request the dates for the April board meeting and to confirm what time Woodside might be allocated to present at NAC’s earliest convenience.
- On 14 March 2023, NAC emailed Woodside to advise that the Board meeting is tentatively set for 29th April at this stage. NAC advised this needs to be confirmed with its Board before it can commit to a time or date.

- Between 12-17 April, NAC and Woodside exchanged emails with Woodside seeking confirmation of the April board date and whether Woodside would have time on the agenda.
- On 17 April, Woodside emailed NAC noting there had been no confirmation of an April meeting and seeking advice on whether NAC had feedback in relation to the proposed activities. The email explained Woodside's plan to submit the EP and was seeking pre-submission feedback, noting that feedback could be provided for the life of the EP. Woodside sought an email supporting the approach and also looked forward to meeting in future.
- On 20 April 2023, NAC emailed Woodside noting that the next board meeting would be 26 April 2023 and asking if Woodside still would like to attend.
- On 20 April 2023, NAC emailed Woodside requesting any documentation for the board meeting packs.
- On 20 April 2023, NAC emailed Woodside acknowledging receipt of the materials and asked questions of an unrelated EP.
- On 21 April 2023, Woodside emailed NAC confirming that Woodside would appreciate time to present at the board meeting.
- On 21 April 2023, NAC advised that there was no time for Woodside on the April agenda but time would be set aside for May, with a tentative date of 17 May 2023.
- On 21 April 2023, Woodside thanked NAC for their response.
- On 26 April 2023, Woodside emailed NAC additional information unrelated to this EP.
- On 28 April 2023, Woodside emailed NAC advising that the next step was for the EP to be submitted but no feedback had been received to date. The email stated that before Woodside submits, Woodside sought to understand whether there were any issues or concerns with the proposed activities that needed to be reflected in the EP.
- **(1)** On 10 May 2023, NAC replied to Woodside stating that they were supportive of the submission of the EP and looked forward to ongoing consultation.
- On 12 May 2023, NAC emailed Woodside to notify that Woodside had been allocated a one hour window in the NAC Board Meeting on 17 May 2023.
- On 17 May 2023, Woodside presented to the NAC Board of Directors in Karratha:
  - Described the Environment Plan framework, referring to the *Offshore Petroleum and Greenhouse Gas Storage Act* (Environment) Regulations, NOPSEMA's role as Regulator and general contents of Environment Plans.
  - Displayed a map of activities open for feedback to be discussed in the meeting and provided a list of other upcoming activities which will be open for consultation in 2023.
  - Provided an overview of the broader EP activities.
  - Woodside described the proposed TPA03 well intervention activity and how it is required to maintain the well so production can continue. It will likely be undertaken by a vessel rather than a drill rig
  - Described planned and unplanned environmental risks and impacts in accordance with tables provided in the Information Sheets for the activities, emphasising that unplanned risks are not expected to occur and are unlikely.
  - Displayed and spoke to the EMBA for each proposed activity, and the individual worst-case loss of containment scenarios identified.
  - Stated that Woodside wanted to understand how the functions, activities or interests of NAC and the people it represents may be impacted by any of those activities.
  - Specifically asked the following:

- How could these activities impact your cultural values, interests, and activities - does protecting the environment do enough to protect your cultural values?
  - What are your concerns about the proposed activities and what do you think we should do about them?
  - Is there anything you would like included in the EPs before submission?
  - Is there anyone else Woodside should consult with about the activities?
- Advised that Woodside will continue to take feedback from NAC for the life of the EP.
- Provided personal contact details for further feedback. Woodside provided NOPSEMA contact details, should NAC desire to provide feedback directly to the Regulator.
- On 18 July 2023, Woodside emailed NAC NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that NAC advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult. No response was received to this email.
- On 26 July 2023, Woodside emailed NAC Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- **(2)** On 11 August 2023, Woodside held a Teams meeting with a NAC energy adviser and the following was noted:
  - Identify EPs for prioritisation.
  - NAC will put together a working group.
  - Bi-monthly consultations.
  - NAC has capacity issues and requires time to deal with matters.
- On 16 August 2023, Woodside emailed NAC requesting to re-establish regular meetings monthly with the Karratha based Woodside contact.
- On 13 September 2023, Woodside emailed NAC acknowledging the previous email, advising of the planned start date for the activity, and once again requesting if NAC is aware of any other people with whom Woodside should consult, and if there is any information NAC wish to provide on cultural values, and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. The Summary Information Sheet for this activity was attached (Appendix F, reference 3.39.1).
- **(2)** On 18 September 2023, NAC emailed Woodside proposing:
  - establishment of Joint Working Group.
  - Woodside to provide draft agreement.
  - Working group meeting commence in October with monthly meetings.
  - Noting arrangements would cover future scope of consultations with NAC.
- On 28 September 2023, NAC representative emailed Woodside requesting a phone discussion about consultations with NAC.
- **(2)** On 28 September 2023, Woodside had a phone discussion with NAC representative, they were following up on Woodside consultation requests and wished to progress a consultation meeting with NAC Working Group in October. They requested Woodside:
  - Propose date/s to meet.
  - Confirm they would cover cost.
  - Provide any relevant information prior to the meeting.
  - Advise which EPs Woodside would like to consult with NAC on.
  - Woodside agreed to follow up on the above and looked forward to meeting with the Working Group in October.

- On 10 October 2023, Woodside emailed NAC in response to their email of 18 September 2023, in principle supporting NAC's proposal for ongoing consultation through a Working Group. Woodside requested meeting dates and confirmed that Woodside would provide a first draft of the agreement.
- On 23 October 2023, Woodside emailed NAC to provide an update on activity timing.
- On 23 October 2023, NAC emailed Woodside enquiring if Woodside had met with the NAC board or if the documentation was presented for feedback.
- On 25 October 2023, Woodside emailed NAC to confirm:
  - Woodside had attended the NAC Board meeting held on 17 May 2023 in Karratha.
  - Woodside presented on TPA03 and other EP activities during the NAC Board meeting.

Quarterly Heritage Meetings:

Woodside convenes a quarterly meeting of Traditional Custodian representatives from the Representative Aboriginal Corporations involved in historical native title claims over the Burrup Peninsula, including NAC. Individual attendees are nominated by their representative Aboriginal Corporations. These meetings are summarised separately in this table.

NAC did not nominate attendees to quarterly meetings in 2021 or the first half of 2022 but were provided with copies of the slides used.

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan  |
|--|---|--|
| <p>(1) NAC emailed Woodside on 10 May 2023, supporting submission of this EP and looking forward to ongoing consultation.</p> <p>(2) NAC proposed establishing a Joint Working Group to engage in meetings with Woodside for ongoing consultation. NAC noted they have capacity issues and require resourcing to cover costs of meeting.</p> | <p>(1) NAC is supportive of this EP submission.</p> <p>(2) Separate from consultation under Reg 11A, Woodside will establish an agreement with NAC to work with the NAC Working Group. The agreement and Working Group would be used to frame ongoing consultation. Sufficient information to allow informed assessment has already been provided by other means, including summary sheets developed by Indigenous staff, a face-to-face meeting with appropriate material (pictures, maps, video) and project attendance allowing opportunity to ask questions and seek further understanding.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> | <p>(1) &amp; (2) Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with NAC through ongoing engagement and continue to progress with establishing a framework agreement as part of Woodside's Program of Ongoing Engagement with Traditional Custodians (Appendix I).</p> |
| <p><b>Yindjibarndi Aboriginal Corporation</b></p>  |   |  |

YAC is established under the *Native Title Act 1993* 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.

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Yindjibarndi Aboriginal Corporation for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

**Sufficient Information:**

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Provided Consultation Information Sheet and Consultation Summary Sheets to Yindjibarndi. These set out details of the proposed activity, the location of the activity, the timing of the activity as well as the potential risks and impacts of the activity in a digestible, plain English format.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.
- Confirmed the purpose of consultation and set out in detail what was being sought through consultation.
- Woodside has provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing an environment plan".

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Yindjibarndi Ngurra Aboriginal Corporation on 24 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to Yindjibarndi Ngurra Aboriginal Corporation over a 9 month period.
- Woodside has addressed and responded to Yindjibarndi over 9 months, demonstrating a "reasonable period" of consultation.

Woodside asked YAC it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on Yindjibarndi functions, interests, or activities.

**Summary of information provided and record of consultation:**

- On 24 February 2023, Woodside emailed the Yindjibarndi Ngurra Aboriginal Corporation advising of the proposed activity (Appendix F, reference 4.38) and provided a Consultation Information Sheet.
- **(1) (2)** On 26 February 2023, Yindjibarndi emailed Woodside. Yindjibarndi advised that it will not be providing any comment on the proposed activity and noted it respected the traditional owners whose land and sea lies adjacent to, and within the precinct of, the projects, and will leave any comment and advice to be provided by them.
- On 28 February 2023, Woodside emailed Yindjibarndi to thank them and noted the response.

- On 7 July 2023, Woodside called Yindjibarndi who reiterated that it would prefer that comments come from coastal Aboriginal Corporations and not themselves.
- On 18 July 2023, Woodside emailed Yindjibarndi NOPSEMA's Consultation Guidelines, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also reiterated Woodside's request that Yindjibarndi advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult. No response was received to this email.
- On 26 July 2023, Woodside emailed Yindjibarndi Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- **(3)** On 1 August 2023, YAC emailed Woodside acknowledging 26 July 2023 email, and confirming that NYFL will manage Oil and Gas matters on behalf of YAC.

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan  |
|---|---|--|
| <p><b>(1)</b> Yindjibarndi has provided a response and advised that it will not be providing any comment on the proposed activity.</p> <p><b>(2)</b> Yindjibarndi expressed that they would prefer that traditional owner groups with land and sea adjacent to and within the precinct of the projects provide comment.</p> <p><b>(3)</b> Yindjibarndi has instructed Woodside that it will be represented by NYFL in ongoing discussion about EPs.</p> | <p><b>(1)</b> Woodside accepts Yindjibarndi's response.</p> <p><b>(2)</b> Woodside agrees and respects Yindjibarndi's position that Traditional Owners whose land and sea are adjacent to or within the precinct of the projects should be able to provide comment.</p> <p><b>(3)</b> Woodside will engage with NYFL on behalf of Yindjibarndi for ongoing consultation related to this activity, separate from consultation under Reg 11A.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>).</p> | <p><b>(1)</b> Not required.</p> <p><b>(2)</b> Not required.</p> <p><b>(3)</b> Future correspondence will be sent through NYFL.</p> |

#### **Native Title Representative Bodies**

##### **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 but exist to assist native title claimants and holders.

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with YMAC for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

##### **Sufficient Information:**

- Woodside sought direction on YMAC's preferred method of consultation. This resulted in meetings being coordinated at locations of YMAC's choosing, with YMAC nominated representatives. These meetings included Woodside presenting information in a format and style that was readily accessible and appropriate.
- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to YMAC on 24 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to YMAC over a 9 month period.
- Woodside considers that the "reasonable period" of consultation for this EP has closed.

**Summary of information provided and record of consultation:**

- On 13 March 2023, Woodside emailed YMAC as to whether YMAC considers itself a 'relevant person' under subregulation 11 A (1) of the Environment Regulations for the purposes of consultation on EPs and, if so, whether that relevance is limited to a facilitation function in its capacity as a representative of Traditional Owner groups/corporations that overlap or adjacent to the environment that may be affected (EMBA) of a particular activity.
- On 15 March 2023, Woodside emailed YMAC requesting a position on whether YMAC considers itself a 'relevant person' under the Environment Regulations for the purposes of consultation in EPs.
- On 15 March 2023, **(1)** YMAC replied to confirm that in its view it is a 'relevant person' under subregulation 11 A (1) of the Environment Regulations for the purposes of consultation on EPs only in relation to its facilitation and coordination function as a Native Title Representative Body under applicable federal legislation. YMAC does not intend to provide substantive comment on the content of EPs.
- On 20 March 2023, Woodside emailed YMAC to thank it for its reply and to advise that that this assessment would be included in Woodside's EPs.
- On 20 March 2023, YMAC emailed Woodside confirming that they agree to their advice being included in reporting. YMAC is the representative for NTGAC and was the representative for Yinggarda Aboriginal Corporation until April 2023.
- On 12 June 2023, YMAC emailed Woodside on behalf of itself and its clients. The email attached:
  - **(2)** A proposal to fund in-house expertise to support consultations and administration of the consultation framework;
  - A draft consultation framework.
- On 12 June 2023, Woodside responded to YMAC by email, thanking them for the documents and that Woodside would respond shortly.
- On 25 July 2023, Woodside emailed YMAC:
  - Agreeing in principle to the draft consultation framework and funding proposal but seeking further discussion on details;
  - Stating that Woodside is open to considering an industry funded position at YMAC to support the work they are facilitating.
  - Attaching Woodside's Program for Ongoing Engagement with Traditional Custodians.

- o Seeking a meeting with YMAC in relation to the draft consultation framework at YMAC's earliest convenience.

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan   |
|--|---|---|
| <p>YMAC has advised the most appropriate stakeholders for this EP.</p> <p><b>(1)</b> YMAC has provided feedback that in its view it is a 'relevant person' under subregulation 11 A (1) of the Environment Regulations for the purposes of consultation on EPs only in relation to its facilitation and coordination function as a Native Title Representative Body under applicable federal legislation, and does not intend to provide substantive comment on the content of EPs.</p> <p><b>(2)</b> YMAC has provided feedback that it seeking an industry funded position to support consultations for this and other activities.</p> <p>YMAC has provided a draft consultation framework to assist the consultation process.</p> | <p><b>(1)</b> 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.</p> <p>Woodside has consulted with YMAC in relation to its facilitation and coordination function as a Native Title Representative Body under applicable federal legislation, and it has responded that it does not intend to provide substantive comment on the content of EPs</p> <p><b>(2)</b> Woodside engages in ongoing consultation throughout the life of an EP. 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 (refer to <b>Section 7.7.1</b>).</p> <p>Woodside is engaging with YMAC in relation to its request for an industry funded position and a draft consultation framework.</p> | <p><b>(1)</b> Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on YMAC's functions, interests or activities.</p> <p><b>(2)</b> Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with YMAC through ongoing engagement and continue engaging with YMAC in relation to its request for an industry funded position and a draft consultation framework (Appendix I).</p> |

**Self-identified First Nations Groups and Individuals**

**Ngarluma Yindjibarndi Foundation Ltd (NYFL)**

NYFL was created to act as Trustee for the Trust under the Northwest Shelf Agreement 1998 struck between the Ngarluma and Yindjibarndi registered native title claimants, the NWS JVs and Woodside, prior to the resolution of the Ngarluma and Yindjibarndi native title claim. Its purpose is to carry on the business of enterprise development, investment and social welfare.

In 1999 the Ngarluma and Yindjibarndi native title claim was settled with the Federal Court appointing, at the request of the common law native title holders, the Ngarluma Aboriginal Corporation (NAC) as PBC to represent the communal interests of the Ngarluma people and the Yindjibarndi Aboriginal Corporation (YAC) as PBC to represent the communal interests of the Yindjibarndi people. Woodside consulted both NAC and YAC as relevant persons in the course of preparing this EP.

NYFL self-identified and has advised it is relevant for this EP.

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with NYFL for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

**Sufficient Information:**

- Direction sought on NYFL's preferred method of consultation. NYFL requested consultation material suitable for Traditional Custodian audience, which was developed and provided. NYFL and Woodside initially agreed to hold a face-to-face consultation meeting at location of NYFL's choosing with NYFL nominated representatives, however NYFL chose to postpone the engagement for an undefined time.
- Consultation Information Sheet publicly available on the Woodside website since June 2022, and provided to NYFL on 17 February 2023 via the Karratha Community Liaison Group.
- Articulated planned and unplanned environmental risks and impacts, with proposed controls.
- Confirmed purpose of consultation and set out in detail what is being sought through consultation.
- Asked for the consultation and information sheets to be distributed to members and individuals.
- Provided NOPSEMA's Brochure "Consultation on offshore petroleum environment plans" and Guideline "Guideline: Consultation in the course of preparing and environment plan on consultation.

**Reasonable Period:**

- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided NYFL (via the KCLG) 17 February 2023 based on their function, interest and activities.
- Woodside addressed and responded to NYFL over a 9 month period.
- Woodside has addressed and responded to NYFL over 9 months, demonstrating a "reasonable period" of consultation.

Woodside asked NYFL it was aware of any other Traditional Custodian groups or individuals with whom Woodside should consult. None were identified.

Woodside engages in ongoing consultation, beyond that required by Regulation 11A, throughout the life of an EP. Should feedback be received after the EP has been accepted (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 7.7.1 of the EP).

Woodside considers the measures and controls described in this EP address the potential impact from the proposed activity on NYFL functions, interests, or activities.

**Summary of information provided and record of consultation:**

- On 4 October 2022, in response to Woodside correspondence on an unrelated EP, NYFL emailed Woodside:
  - NYFL thanked Woodside for taking the time to talk through ways in which complex information such as that which relates to EPs can be appropriately communicated to NYFL and its TO board and members.
  - **(2)** NYFL advised that as discussed, at present the language and communication approach in EPs, such as that sent to NYFL on 23 September 2022 about an unrelated EP to this activity, is not appropriate for NYFL.
  - **(1)** NYFL also thanked Woodside for communicating to the business that NYFL is a 'relevant person' for activity.

- Between October 2022 and March 2023, while Woodside and NYFL have weekly communications on other matters, there was a hiatus on communication due to changes to activity scheduling and description of EMBAAs.
- On 30 November 2022, Woodside and NYFL held the Woodside NYFL NWS quarterly relationship meeting which is resourced by Woodside to enable meaningful participation by Traditional Custodians. There was a separate discussion about holding a separate meeting for EPs generally.
- **(2)** On 14 February 2023, NYFL emailed Woodside to see if the accessible information for Traditional Custodians had been prepared.
- On 17 February 2023, Woodside emailed NYFL (via the Karratha Community Liaison Group) advising of the proposed activity (Appendix F, reference 4.22) and provided a Consultation Information Sheet.
- On 1 March 2023, Woodside and NYFL held the Woodside NYFL NWS quarterly relationship meeting which is resourced by Woodside to enable meaningful participation by Traditional Custodians. The meeting discussed Woodside and NYFL reviewing the NWS 1998 Agreement for renegotiation. There was a separate discussion about holding a separate meeting for EPs generally.
- On 8 March 2023, Woodside emailed NYFL (via the Karratha Community Liaison Group) following up on the proposed activity (Appendix F, reference 5.22) and seeking feedback on the activity.
- On 22 May 2023, the NYFL CEO emailed Woodside about another activity unrelated to this EP, requesting information in an appropriate format for Traditional Custodians and stated that the language and approach was not appropriate for NYFL's members.
- **(2)** On 24 May 2023, Woodside spoke to NYFL by phone, explained that the information sheets were developed with a Ngarluma Traditional Custodian but that the best way to understand the materials was to take Woodside up on our offer to present to NYFL. These presentations include images and the subject matter experts are on hand to answer questions. Presentations had been well received by other groups. Woodside had budget for consultation meetings and could provide support for the meetings to occur.
- **(2)** On 8 June 2023, NYFL emailed Woodside about a number of matters including a request for "further information/culturally appropriate comms" activity unrelated to this EP and requested an EP look ahead for 2023 and beyond. NYFL also asked what timing would work to hold consultation in Roebourne which Woodside advised on 28 June 2023.
- **(2)** On 8 June 2023, Woodside reconfirmed previous offers to meet with NYFL in relation to activities unrelated to this EP. Woodside:
  - Explained that these presentations have been well received from groups.
  - Explained that the summary information sheets on activities provided were developed by Indigenous representatives for a Traditional Owner audience.
  - Requested that if face to face consultation was not preferred by NYFL, whether they could provide some direction as to alternatives.
  - Reiterated Woodside can cover consultation costs and can meet in Roebourne, assuming that is preferred.
  - Responded to the request for an EP look ahead as being currently unavailable due to resourcing logistics but it is Woodside's intent to provide similar summary EP information in the future, if and when possible.
- On 22 June 2023, Woodside called into the NYFL office to advise of the community information session to be held in Roebourne (Appendix F, reference 5.39).
- On 28 June 2023, Woodside emailed NYFL confirming a possible consultation date of 20 July and requesting NYFL send through a quote for costs to undertake the meeting to seek their feedback on proposed activities.

- On 28 June 2023, NYFL responded saying they would hold off on committing to a date while they had a chance to digest the outcomes of the NOPSEMA Summit held on 22 June 2023.
- **(3)** On 29 June 2023, NYFL emailed Woodside stating that they were waiting to agree to national framework for consultation between industry and First Nations to be resolved before they consult on Environment Plans. This email was referring to the NOPSEMA Summit.
- On 10 July 2023, Woodside emailed NYFL seeking clarity in relation to their request. Woodside stated they understood the outcomes of the NOPSEMA Summit that were recorded by the facilitator, were communicated to all participants as. It was agreed that:
  - There is a need for a National Summit of Indigenous Groups and Traditional Owners to consult together and agree what they require and what their collective and individual concerns may be;
    - a. Government (DISR) will assist by mapping and compiling a list of all traditional owner groups that should be invited to this Summit,
    - b. Kimberley Land Council and other PBCs will form a Steering Committee to draft the agenda for this Summit,
    - c. APPEA will seek membership approval to facilitate by funding this Summit, and
    - d. The Summit will be independently facilitated.
  - APPEA to further consult with their members in order to get some agreement on priorities and next steps for Industry.
  - After the National Summit of Indigenous Groups, the first of a number of meetings will be held between a smaller representative Traditional Owners group and a smaller representative Industry group, the latter to be coordinated through APPEA; and
  - There will be ongoing parallel consultations in relation to current EPs, which will continue in accordance with what is required by Reg 11(A)(1)(d) of the OPGGSA Environment Regulations.
  - Woodside stated it is committed to supporting the National Summit of Traditional Owners and is committed to industry and Traditional Owners working together to agree consultation frameworks. Woodside noted, however, this will take time and necessarily must occur in parallel to ongoing consultation, with operators obliged to consult pursuant to Reg 11(A). Woodside also stated they were committing to a program of ongoing consultation for the life of the EP that would be happy to discuss that with NYFL.
- **(3)** On 10 July 2023, NYFL stated that they did not agree with the facilitators record of the NOPSEMA Summit, particularly that there will be parallel ongoing consultation in relation to current EPs prior to the proposed National Summit of Indigenous Groups and Traditional Owners
- On 18 July 2023, Woodside emailed NYFL NOPSEMA's Consultation Guideline, Consultation Brochure, and Draft Policy for Managing Gender-Restricted Information. This email also requested that NYFL advise Woodside of any other Traditional Custodian groups or individuals with whom Woodside should consult.
- On 26 July 2023, Woodside emailed NYFL Woodside's planned Program of Ongoing Engagement with Traditional Custodians.
- **(4)** On 26 July 2023, NYFL emailed Woodside in response to Woodside's planned Program of Ongoing Engagement with Traditional Custodians NYFL stated that the program, if implemented well, would really help NYFL in ongoing consultation processes and capacity building in the community. This response also suggested resourcing a role/s to support consultation and further capacity-building in relation to governance and engagement.
- On 11 August 2023, NYFL emailed Woodside in response to another activity attaching a letter that applied to all EP's, their email noted that:
  - NYFL looks forward to progressing discussion with Woodside on the proposed program of consultation.
  - **(5)** NYFL is participating with other First Nations organisations and representative bodies to develop a framework for consultation.

- (6) There may be people, who in accordance with Indigenous tradition, may have spiritual and cultural connections to an EMBA unrelated to this EP and that have not yet been afforded the opportunity to provide information
  - (7) There may be additional cultural or environmental values that relate to the area that have not been identified or communicated to Woodside
  - On 15 August 2023, Woodside emailed NYFL thanking them for their correspondence and requesting availability to meet.
  - On 18 August 2023, NYFL emailed Woodside proposing a date of 30 August to meet to discuss next steps.
  - On 18 August Woodside emailed Yindjibarndi accepting the proposed date to meet to discuss engagement processes.
  - On 28 August 2023, Woodside emailed NYFL requesting a video link for a consultant to Woodside who could be involved in consultation and engagement going forward.
  - On 28 August 2023, NYFL emailed through an agenda for the proposed meeting .and stated that a video link will be sent out for Woodside's external consultant so that he may be able to join online.
  - On 30 August 2023, Woodside met with NYFL to discuss a consultation process and engagement with NYFL and YAC. NYFL put forward the following:
    - **(4)** NYFL requested Woodside employ 3 traditional Owners who would engage/consult with NYFL members.
    - **(9)** NYFL stated that time frames must be longer than one month for consultation.
    - Woodside took the requests on notice.
  - On 12 September 2023, Woodside emailed NYFL advising of the planned start date for the activity, and once again requesting if NYFL is aware of any other people with whom Woodside should consult, and if there is any information NYFL wish to provide on cultural values and reiterating that Woodside will take feedback after the commencement of the activity as part of ongoing consultation. The Activity Update Consultation Summary Information Sheet for this activity was attached (Appendix F, Section 4.2).
  - On 12 September 2023, NYFL emailed Woodside, summarising the meeting between Woodside and NYFL regarding consultation approaches on 30 August, providing a letter regarding consultation, and advising that there may be other people with whom Woodside should consult, and there may be other cultural values relating to the EMBA area. NYFL acknowledged that Woodside is developing culturally appropriate material. NYFL also stated their short- and long-term needs to support ongoing consultation including greater resourcing for consultation and capacity building. No further detail on this matter has been received beyond the specific request for 3 Traditional Owners consultant trainees which were raised in the meeting and taken on notice by Woodside.
- NYFL is also consulted through its membership on the Karratha Community Liaison Group (KCLG) and the Quarterly Heritage Group

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan   |
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| <p><b>(1)</b> NYFL self-identified and advised Woodside that they are a relevant person for this activity.</p> <p><b>(2)</b> NYFL requested information sheets appropriate for a Traditional Custodian audience. NYFL requested further information and culturally appropriate comms for this activity.</p> | <p><b>(1)</b> Woodside has responded to NYFL's self-identification and consulted with them as a relevant person. NYFL was created to act as Trustee for the Northwest Shelf Agreement 1998. NYFL's membership is made up of Ngarluma people and Yindjibarndi people, membership is not open to any person who is not accepted as Ngarluma or Yindjibarndi. Woodside has also consulted with Ngarluma and Yindjibarndi Aboriginal Corporations individually. Ngarluma and Yindjibarndi Aboriginal Corporations were appointed</p> | <p><b>(1)</b> NYFL has been consulted with in accordance with the methodology described in <b>Section 5</b> of the EP.</p> <p><b>(2)</b> Not required</p> <p><b>(3)</b> Not required</p> <p><b>(4)</b> Although consultation for the purpose of Reg 11A is complete, the proposed Framework Agreement (see point 4) will address appropriate NYFL resourcing. This is described further in the Program of Ongoing Engagement with Traditional Custodians, Appendix I.</p> |

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| <p>(3) NYFL wishes to pause consultation until after the First Nations national summit is held and a framework for consultation developed. Woodside understands that the First Nations national summit was tentatively scheduled for the end of August 2023, but has now taken place in November 2023.</p> <p>(4) NYFL has requested resourcing to support participation in consultation. NYFL requested Woodside employ 3 Traditional Owners who would engage/consult with NYFL members.</p> <p>(5) NYFL is working with other First Nations organisations and representative bodies to develop a framework for consultation. This has not yet been proposed to Woodside.</p> <p>(6) NYFL expressed that there may be people who, in accordance with Indigenous tradition, may have spiritual and cultural connections to the environment that may be affected who have not yet been provided the opportunity to provide information.</p> <p>(7) NYFL expressed that there may be additional cultural and environmental values that relate to the area that have not been communicated to Woodside.</p> <p>(8) NYFL stated that time frames must be longer than one month for consultation.</p> | <p>by the Federal Court, at the request of the Ngarluma and Yindjibarndi common law native title holders as PBCs to represent the communal interests of the Ngarluma and Yindjibarndi people respectively. Ngarluma and Yindjibarndi Aboriginal Corporations are representative of all Ngarluma and Yindjibarndi people regardless of membership.</p> <p>(2) Woodside recognises that sufficient information must be provided in a form that is accessible and appropriate to the audience. Woodside has regularly asked NYFL for their preferred processes of consultation including on the 24 May 2023, 8 June 2023 and 30 August 2023 to inform Woodside's consultation processes with NYFL. In response to NYFL's requests for changes, Woodside developed and provided a Summary information sheet developed with a Ngarluma Traditional Custodian for a Traditional Custodian audience. Woodside offered face to face consultation meetings resourced by Woodside to enable meaningful Traditional Custodian consultation, which include visual aids and videos. Woodside accepts NYFL's support in consultation animation videos which are being finalised by Woodside to further support culturally appropriate consultation with groups. Woodside accepts NYFL's 12 September 2023 email that recognises Woodside adapting consultation processes to suit group needs. As outlined in the consultation summary above, sufficient information and a reasonable period have been provided to demonstrate that consultation for the purpose of Reg 11A for this activity is complete. Any further engagement with NYFL will be for the purpose of ongoing engagement.</p> <p>(3) Woodside does not consider that the proposal that consultation be paused until after the proposed First Nations National Summit is reasonable. Sufficient information and a reasonable period has already been provided prior to the Summit.</p> <p>(4) Woodside does not consider NYFL's request that Woodside employ three Ngarluma/Yindjibarndi Traditional Owners to consult with NYFL members a reasonable proposal. Woodside's consultation efforts are informed and undertaken by Woodside personnel</p> | <p>(5) Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with NYFL through ongoing engagement and continue to progress with establishing a framework agreement as part of Woodside's Program of Ongoing Engagement with Traditional Custodians (Appendix I). Although consultation for the purpose of Reg 11A is complete, Woodside will continue to engage with NYFL through ongoing engagement and continue to progress a consultation framework as outlined in Appendix I.</p> <p>(6) Methodology described in <b>Section 5</b> adequately addresses this claim.</p> <p>(7) Description of cultural values and heritage features is included in <b>Section 4.6.1</b> of the EP.</p> <p>(8) Not required.</p> |
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|  | <p>with significant experience in First Nations relations, including Indigenous employees. Woodside assesses that the proposed Framework Agreement would be an effective mechanism to address resourcing for ongoing consultation. Woodside accepts NYFL's 12 September 2023 email that states their short- and long-term needs to support ongoing consultation. As outlined in the consultation summary above, sufficient information and a reasonable period have been provided to demonstrate that consultation for the purpose of Reg 11A for this activity is complete. Any further engagement including support with NYFL will be for the purpose of ongoing engagement.</p> <p>(5) Separate from consultation under Reg 11A, Woodside is open to engaging with a joint First Nations framework for consultation, however, notes that this is not required to undertake and/or complete consultation in the course of preparing this EP. The framework would be used to frame ongoing consultation. Sufficient information to allow informed assessment has already been provided by other means, including summary sheets developed by Indigenous staff. Woodside has an existing engagement framework in place with NYFL which enables regular (quarterly) communication about Woodside activities.</p> <p>(6) As described in <b>Section 5.8.2</b> of the EP, Woodside's consultation methodology provided Traditional Custodians with the opportunity to be aware of the proposed activity and to participate in consultation. Woodside considers this methodology has afforded all people whose spiritual connection to the environment that may be affected a reasonable opportunity to consult. Consultation with NYFL has not identified any other groups or individuals relevant to communally held functions, activities or interests. NYFL have been provided with reasonable time to respond with this information since the emails from Woodside of 18 July and 12 September specifically requesting this information, but no response to this request has been received.</p> <p>Woodside has also consulted with Ngarluma and Yindjibarndi Aboriginal Corporations who are the Representative Aboriginal Corporations nominated by</p> |  |
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|  | <p>the Ngarluma and Yindjibarndi people respectively to represent the communally held interests of the Ngarluma and Yindjibarndi people.</p> <p>(7) Woodside has a robust understanding of the environment, cultural values and heritage features based on publicly available information and consultation with relevant persons. This is described in <b>Section 4.6.1</b> of the EP</p> <p>(8) Woodside has already provided NYFL with reasonable time to participate in consultation and has been engaging since February 2023.</p> <p>Woodside engages in ongoing consultation throughout the life of an EP. Should feedback be received after the EP has been accepted (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 <b>Section 7.7.1</b>)</p> |  |
| <p><b>Historical cultural heritage groups or organisations</b></p>   |   |  |
| <p><b>Western Australian Museum</b></p>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Western Australian Museum for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to WA Museum 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded to WA Museum over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed WA Museum advising of the proposed activity (Appendix F, reference 4.18) and provided a Consultation Information Sheet.</li> <li>• On 24 February 2023, WA Museum responded, thanking Woodside for their email and confirmed it had no feedback for the proposed EP.</li> <li>• On 9 March 2023, Woodside responded, thanking WA Museum for their response.</li> <li>• On 12 October 2023, Woodside emailed WA Museum to provide an update on activity timing (Appendix F, reference 6.17).</li> </ul> |   |  |

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
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| <p>The Western Australian Museum advised it had no feedback with respect to the proposed activities.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>  | <p>The Western Australian Museum confirmed it has no feedback for the proposed activity.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>The Environment Plan demonstrates that there are no known underwater heritage sites or shipwrecks within the Petroleum Activities Area and identifies that there are no credible impacts to the values of any underwater heritage or shipwrecks as a result of planned activities (<b>Section 4.6.1.8</b>). While impacts to underwater heritage sites or shipwrecks are possible in the event of an unplanned hydrocarbon spill, Woodside considers it adopts appropriate controls to prevent a hydrocarbon spill and controls to respond in the highly unlikely event of a hydrocarbon spill, as demonstrated in <b>Section 6.7.2</b> and <b>Section 6.7.3</b>.</p> <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on the Western Australian Museum's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |
| <p><b>Local government and community representative groups or organisations</b></p>   |  |  |
| <p><b>Shire of Exmouth</b></p>  |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Shire of Exmouth for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Shire of Exmouth 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided the Shire of Exmouth with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed the Shire of Exmouth advising of the proposed activity (Appendix F, reference 4.19) and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed the Shire of Exmouth following up on the proposed activity (Appendix F, reference 5.16) and to request any feedback.</li> </ul> |  |  |

- On 12 October 2023, Woodside emailed Shire of Exmouth to provide an update on activity timing (Appendix F, reference 6.18).

| Summary of Feedback, Objection or Claim                       | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

#### Shire of Ashburton

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Shire of Ashburton for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Shire of Ashburton 18 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided the Shire of Ashburton with the opportunity to provide feedback over a 9 month period.

#### Summary of information provided and record of consultation:

- On 18 February 2023, Woodside emailed Shire of Ashburton advising of the proposed activity (Appendix F, reference 4.25) and provided a Consultation Information Sheet.
- On 8 March 2023, Woodside emailed Shire of Ashburton following up on the proposed activity (Appendix F, reference 5.24) and to request any feedback.
- On 12 October 2023, Woodside emailed Shire of Ashburton to provide an update on activity timing (Appendix F, reference 6.19).
- On 13 October 2023, the Shire of Ashburton emailed Woodside and confirmed that the Shire raises no objection to the proposed activities. The Shire asked for consideration of the following comments:
  - The Shire expects that Woodside will identify, manage and mitigate all possible impacts and risks in line with relevant regulatory frameworks.
  - The Aboriginal Cultural Heritage Inquiry System (ACHIS) should be consulted to ensure site of significance are not impacted without consents.
  - The Shire requires Woodside to brief the Shire's Local and District Emergency Management Committee's on its planned responses to such events before any activities commence.

- Asks that Woodside has communicated with appropriate emergency management agencies at either/or National, State, District and Local levels on potential hazards and risks around the activity; collaboration and/or cooperation on risk mitigation; considered impacted areas response capacity and capability and sustainability of response activities and escalation triggers.
  - The Shire anticipates that Woodside has undertaken their own emergency management planning to mitigate risk and recover from a risk related incident, has engaged with external emergency management agencies to ensure emergency management plans are aligned with outcomes to respond and/or recovery from the incident.
  - The Shire anticipates that Woodside has engaged with the community regarding what may happen in areas that are affected by the proposed activities.
  - Part of the proposed activities are associated with future decommissioning works and that Woodside may consider the Shire operated Pilbara Regional Waste Management Facility (PRWMF) for its decommissioning, recycling and waste disposal purposes.
  - The Shire appreciates the opportunity to comment on the proposed activities and requests that Woodside provide the Shire with further updates as the proposal progresses.
- On 23 October 2023, Woodside responded thanking Shire of Ashburton for its feedback and noted:
    - That Woodside is required to manage environmental impacts and risks to the environment that may be affected (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 2009 (Environment Regulations), through the implementation of the EP. Woodside's proposed EPs will be submitted to the National Offshore Petroleum Safety Environmental Management Authority (NOPSEMA) for assessment and acceptance.
    - 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.
    - Woodside is looking forward to presenting to the Shire at its Local and District Emergency Management Committee on 21 November 2023 on its approach to managing a hydrocarbon release in the highly unlikely event this occurs. Woodside confirmed it would welcome questions regarding this EP during the presentation. Woodside also sought to clarify the Shire's request to provide a briefing prior to activities commencing as this would potentially mean Woodside is providing frequent briefings on the same issue.
    - Woodside has an Oil Pollution First Strike Plan in place for all EPs which details potential impacts, notifications and response mitigations that may be executed to manage an emergency event.

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                           |
|---|---|---|
| <p>Shire of Ashburton confirmed they raise no objection to the proposed activities.</p> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>Woodside has addressed the Shire of Ashburton's feedback including, amongst other responses, welcomes the opportunity to brief the Shire on its approach to managing a hydrocarbon release in the highly unlikely event this occurs.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>No additional measures or controls are required.</p> |

**City of Karratha**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with City of Karratha for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to City of Karratha 17 February 2023 based on their function, interest and activities.
- Woodside has addressed and responded to City of Karratha over a 9 month period.

**Summary of information provided and record of consultation:**

- On 17 February 2023, Woodside emailed City of Karratha advising of the proposed activity (Appendix F, reference 4.23) and provided a Consultation Information Sheet.
- On 8 March 2023, Woodside emailed City of Karratha following up on the proposed activity (Appendix F, reference 5.23) and provided a Consultation Information Sheet.
- On 3 April 2023, City of Karratha responded to Woodside, the City of Karratha has reviewed the referral for comment relating to the Environmental Plan and advised at this stage the City doesn't raise any significant concerns in relation to the aforementioned EP.
- On 24 April 2023, Woodside responded thanking the City of Karratha for its feedback on the proposed activity, and in particular its advice that the City doesn't have any significant concerns in relation to the proposed EP.
- On 12 October 2023, Woodside emailed City of Karratha to provide an update on activity timing (Appendix F, reference 6.20).

**Summary of Feedback, Objection or Claim**

**Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response**

**Inclusion in Environment Plan**

City of Karratha reviewed the referral for comment and advised it has no significant concerns at this stage.  
  
Whilst feedback has been received, there were no objections or claims.

The City of Karratha confirmed it has no significant concerns relating to the proposed activity at this stage.  
  
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 7.7.1**).

Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on the City of Karratha's functions, interests or activities.  
  
No additional measures or controls are required.

**Exmouth Community Liaison Group (CLG)**

- Base Marine
- Bhagwan Marine

- Cape Conservation Group Inc.
- DBCA
- Department of Defence
- Department of Transport
- Exmouth Bus Charter
- Exmouth Chamber of Commerce and Industry
- Exmouth District High School
- 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 Lodge
- Offshore Unlimited
- Shire of Exmouth
- BHP Petroleum
- Santos
- Community Member

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Exmouth CLG for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Exmouth Community Liaison Group on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.

- Woodside has provided Exmouth Community Liaison Group with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed Exmouth Community Liaison Group advising of the proposed activity (Appendix F, reference 4.17) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed Exmouth Community Liaison Group following up on the proposed activity (Appendix F, reference 5.15) and to request any feedback.
- On 12 October 2023, Woodside emailed Exmouth Community Liaison Group to provide an update on activity timing (Appendix F, reference 6.21).

**Summary of Feedback, Objection or Claim**

**Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its 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 7.7.1**).

No additional measures or controls are required.

**Karratha Community Liaison Group**

- 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)\*
- Department of Local Government, Sport and Cultural Industries

*\*MAC was consulted directly as described above.*

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Karratha CLG for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Karratha Community Liaison Group on 17 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Karratha Community Liaison Group with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 17 February 2023, Woodside emailed Karratha Community Liaison Group advising of the proposed activity (Appendix F, reference 4.22) and provided a Consultation Information Sheet.
- On 8 March 2023, Woodside emailed Karratha Community Liaison Group following up on the proposed activity (Appendix F, reference 5.22) and to request any feedback.
- On 12 October 2023, Woodside emailed Karratha Community Liaison Group to provide an update on activity timing (Appendix F, reference 6.31).
- On 13 October 2023, a member of the Karratha Community Liaison Group emailed Woodside to advise they are no longer a relevant person for this EP.
- On 17 October 2023, Woodside replied and confirmed that the member of Karratha CLG has been removed from the mailing list.

| <b>Summary of Feedback, Objection or Claim</b>                | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
|---|---|--|
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Onslow Chamber of Commerce and Industry**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Onslow Chamber of Commerce and Industry for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.

- Consultation information provided to Onslow Chamber of Commerce and Industry on 18 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Onslow Chamber of Commerce and Industry with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 18 February 2023, Woodside emailed Onslow Chamber of Commerce and Industry advising of the proposed activity (Appendix F, reference 4.24) and provided a Consultation Information Sheet.
- On 8 March 2023, Woodside emailed Onslow Chamber of Commerce and Industry following up on the proposed activity (Appendix F, reference 5.25) and to request any feedback.
- On 12 October 2023, Woodside emailed Onslow Chamber of Commerce and Industry to provide an update on activity timing (Appendix F, reference 6.22).

| Summary of Feedback, Objection or Claim                       | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Research institutes and local conservation groups or organisations**

**Cape Conservation Group (CCG)**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Cape Conservation Group for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to CCG on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided CCG with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed CCG advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed CCG following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.
- On 12 October 2023, Woodside emailed CCG to provide an update on activity timing (Appendix F, reference 6.23).

| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Protect Ningaloo</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Protect Ningaloo for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Protect Ningaloo on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided Protect Ningaloo with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 16 February 2023, Woodside emailed Protect Ningaloo advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed Protect Ningaloo following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed Protect Ningaloo to provide an update on activity timing (Appendix F, reference 6.23).</li> </ul> |   |  |
| Summary of Feedback, Objection or Claim   | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.6</b> ).   | No additional measures or controls are required. |

**Table 2: Engagement Report with Persons or Organisations Assessed as Not Relevant**

| <b>Commonwealth Commercial fisheries and representative bodies</b>  |  |  |
|---|--|--|
| <b>Australian Southern Bluefin Tuna Industry Association (ASBTIA)</b>   |  |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with ASBTIA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to ASBTIA on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided ASBTIA with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed ASBTIA, advising of the proposed activity (Appendix F, reference 1.12) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 12 July 2022, Woodside emailed ASBTIA following up on the proposed activity (Appendix F, reference 2.11) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 15 September 2022, Woodside provided an activity update to ASBTIA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.13).</li> <li>• On 27 April 2023, Woodside emailed ASBTIA providing additional information on the proposed activity (Appendix F, reference 5.34), and provided an updated Consultation Information Sheet.</li> <li>• On 12 May 2023, Woodside emailed ASBTIA following up on the proposed activity (Appendix F, reference 5.34.1) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed ASBTIA to provide an update on activity timing (Appendix F, reference 6.24).</li> </ul> |  |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b>   | <b>Inclusion in Environment Plan</b>   |
| No feedback, objections or claims received despite follow up.   | <p>Woodside has consulted AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational</p> |

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|  |  | <p>Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> |
| <b>Tuna Australia</b>  |  |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Tuna Australia for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to Tuna Australia on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded to Tuna Australia over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed Tuna Australia, advising of the proposed activity (Appendix F, reference 1.12) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 12 July 2022, Woodside emailed Tuna Australia, following up on the proposed activity (Appendix F, reference 2.11), and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 22 July 2022, Tuna Australia responded advising that the proposed activity is in the same general vicinity as those proposed for other EPs Tuna Australia had recently comments on for Woodside, and points raised also apply to this EP. This includes: <ul style="list-style-type: none"> <li>○ Tuna Australia provided an overview of the fishery, including potential future activity, and requested: <ul style="list-style-type: none"> <li>○ More information regarding downstream effects from the activity, such as discharges.</li> <li>○ Further understanding of potential interactions during activities in the Operational Area and exclusion zones, particularly as the fishery uses longline fishing.</li> <li>○ Advice regarding acoustic interferences from the proposed activity.</li> <li>○ Tuna Australia also commented on marine spatial congestion and requested reassurance that the activities would be completed in an expeditious timeframe.</li> </ul> </li> </ul> </li> </ul> |  |   |

- On 29 July 2022, Woodside responded thanking Tuna Australia for the information provided on the fishery and its members as well as feedback on the proposed EP.

Woodside:

- Confirmed that it plans to undertake activities in accordance with the EP and as expeditiously as possible.
- Provided additional information on the proposed activity.
- Noted Tuna Australia's comments that while there is an overlap with the Western Tuna and Billfish Fishery management area and the Operational Area, no recent fishing effort has occurred within or nearby to the Operational Area, and that no fishing effort has occurred for at least the last ten years.
- Noted Tuna Australia's comments that there is potential for future fishing effort in the region, potentially in 2023.

Woodside advised of EP controls, including limiting the temporary safety exclusion zone to 500 m and permitting commercial fishers and other marine users to enter the Operational Area. Woodside noted:

- Routine marine discharges would be managed according to legislative and regulatory requirements.
  - Any localised impacts to water quality, sediment quality and marine fish are not expected to impact any commercial fisheries in the area and there will be no toxicological effects.
  - Seabed disturbance will be minimal given the wellhead is already in place on the seabed.
  - Given the short nature of the activity and the small footprint of the equipment, any impacts to water and sediment quality are likely to be intermittent, highly localised and temporary in nature.
  - Noise generated in the air and underwater would be due to the operation of project vessels.
- On 15 September 2022, Woodside provided an activity update to Tuna Australia regarding changes to activity timing and vessel requirements (Appendix F, reference 3.14).
  - On 13 March 2023, Woodside emailed Tuna Australia providing additional information on the proposed activity (Appendix F, reference 5.30), and provided an updated Consultation Information Sheet
  - On 15 March 2023, Tuna Australia responded, providing Woodside their position statement for engaging with energy companies seeking consultation advice from stakeholders on environmental plans and project proposals.
- An overview of Tuna Australia's functions, interests and activities as well as the organisation's company objectives.
  - The geographic areas that Tuna Australia represents by membership Statutory Fishing Rights
  - A recommendation that project proponents also engage with the Australian Southern Bluefin Tuna Industry Association for any proposals in the Southern Bluefin Tuna fishing area.
  - The position that Tuna Australia considers itself a 'relevant person' consistent with NOPSEMA guidelines.
  - A request that Tuna Australia be contacted when any proposed activity has the potential to impact vessel navigation, fishing activities, and/or the conservation of fish resources consistent with the Offshore Petroleum and Greenhouse Gas Storage Act 2006.
  - A request for a map from proponents of the proposed activity to determine if its member interests may be affected on a case-by-case basis.
  - A request that where potential effects exist, there is a need for a service agreement. Tuna Australia advised it can no longer coordinate consultation with offshore energy activities on behalf of our members without a service agreement in place. Tuna Australia requests proponents execute our services agreement and provide information in a written succinct manner including estimated boundaries for extent of planned activity impacts (i.e. artificial light, noise, discharges etc) as well as activities within the operational area. This advice will be distributed to members and non-members holding SFRs in the Eastern (114 concession holders) and Western (61 concession holders) Tuna and Billfish Fisheries for comment. Information provided would be relevant to tuna and billfish fisheries in the area that may affect vessel navigation, fishing activities, and/or the conservation of fish resources based on the planned aspects of the activity, and proposed control measures to manage impacts.

- Tuna Australia noted that it wishes to engage constructively with project proponents for all situations where there is potential for conflict with vessel navigation, access to fishing area and/or gear, and the biology of target fish and baitfish. Advice provided can change annually due to the dynamic nature of our fisheries.
- Tuna Australia encouraged companies requiring advice from our sector to enter into a consultation services agreement with Tuna Australia to support their applications. Noting that Tuna Australia may be able to provide information on vessel navigation, fishing activities and/or the conservation of fish resources that may be affected that is not publicly available and will be an important input to environmental impact and risk assessment processes.
- On 26 May 2023, Woodside had a phone call with the Tuna Australia CEO and:
  - Explained that Woodside would like to discuss a path forward following receipt of Tuna Australia's Position Statement across its EP activities, including the activities proposed under this EP.
    - Noted Tuna Australia's correspondence to NOPSEMA and copied to Woodside dated 17 May 2023, with respect to unrelated EPs.
    - Noted Tuna Australia's previous EP consultation feedback that Woodside had responded to with respect to unrelated EPs.
    - Reiterated that Woodside does not expect Tuna Australia to provide a consultation report for each of its EPs and are concerned about this potential misalignment on expectations.
  - Tuna Australia advised it would like to discuss a way forward as woodside suggested and requested Woodside call Tuna on 30 May 2023, which Woodside committed to.
- On 2 June 2023, Woodside made a follow up phone call to Tuna Australia and left a voicemail covering the following:
  - Woodside called Tuna Australia on 2 June 2023 to follow up on phone call on 26 May 2023.
  - Woodside left a message requesting a call back and the opportunity to meet with Tuna Australia to discuss Woodside's portfolio of environment plan activities.
  - Woodside requested the opportunity to discuss options to consult with Tuna Australia and potentially lessen the burden on Tuna Australia for providing feedback on Woodside's EPs.
  - Woodside offered the opportunity to take Tuna Australia through the entire EP portfolio, inclusive of decommissioning, so Tuna Australia could better assess the volume of activities.
  - Woodside reiterated that there was no expectation for Tuna Australia to provide a consultation report on each individual EP, and potentially there is an opportunity for Woodside and Tuna Australia to work together on a more strategic approach.
- On 6 June 2023, Tuna Australia returned Woodside's call re: opportunity to meet to discuss a more strategic approach to consultation.
- On 8 June 2023, Tuna Australia returned Woodside's call and asked Woodside to call back on 14 June 2023.
- On 14 June 2023, Woodside returned Tuna Australia's phone call and left a message for Tuna Australia to call back.
- On 20 June 2023, Woodside and Tuna Australia held a meeting to discuss Tuna Australia's Industry Position Statement.
  - Woodside provided an overview of its activities and explained how recent case law and NOPSEMA guidance had resulted in Woodside undertaking consultation on the widest potential 'EMBA'
  - Tuna Australia agreed to share with Woodside the name of any of the Offshore Sectors' titleholders that have entered into Tuna Australia's service agreement to date.
  - TA also agreed to provide more detail on how TA will distribute consultation materials to its membership/licence holders and the format of any report arising from the data collected.
  - Woodside committed to review TA's Service Agreement.
- On 26 June 2023, Woodside emailed Tuna Australia following the meeting held on 22 June 2023 and recapped what was discussed.
  - Woodside thanked Tuna Australia for its time and stated it looked forward to continuing to work with Tuna Australia.
  - Woodside directed Tuna Australia to contact the Woodside Feedback inbox for any further information.
- On 30 June 2023, Tuna Australia's CEO responded to Woodside's email of 26 June 2023. Tuna Australia:

- Noted outcomes of the recent case law focussed on stakeholder engagement and ensuring energy companies meet regulatory requirements and NOPSEMA guidelines.
- Requested Woodside send the recent case law.
- Reached out to energy companies who have executed a services agreement with TA and asked whether TA could inform Woodside about their working relationship. Beach Energy confirmed it was happy for TA to share its details.
- Advised how it contacts concession holders and what it provides to them.
- Provided a TA contact who manages engagement with energy companies to progress a service agreement with TA.
- On 17 July 2023, Woodside emailed Tuna Australia and confirmed:
  - Woodside’s legal team had reviewed the Tuna Australia document and requested some minor changes to be made.
  - Woodside asked Tuna Australia if a marked up version of the Service Agreement would be the simplest way for Tuna Australia to review.
  - Woodside attached a Supplier Questionnaire as part of its due diligence process and asked Tuna Australia to complete the form.
- On 18 July 2023, Tuna Australia emailed Woodside and confirmed:
  - Woodside should send a marked up version of the Service Agreement for TA to review.
  - TA would fill out the Supplier Questionnaire and return in the next couple of days.
- On 18 July 2023, Woodside emailed Tuna Australia and sent a marked up version of the Service Agreement for TA to review.
- On 19 July 2023, Tuna Australia emailed Woodside and commented:
  - TA does not want any changes made to Schedule 2 of their Service Agreement and if Woodside has requirements outside of what TA provides, then this will need to be discussed, agreed, and costed accordingly.
  - TA would like further details on the Annual service for the Woodside Master Existing document including the rationale for the payment proposed.
  - TA does not agree to a fixed price for the above bodies of work. TA wants clarification on what the Annual service entails, and how the fixed priced value was arrived at.
  - Re the fixed fee for delivery of a specific consultation service, TA need to remain flexible to clients needs and discuss additional works should they be required. TA says it specified in the schedule that it would never proceed with more work or charge more money without approval and this should suffice for Woodside.
  - TA does not agree on the current terms which have been changed in Item 2 of Schedule 1 and says it seeks a two year agreement as per the agreement template.
- On 12 October 2023, Woodside emailed Tuna Australia to provide an update on activity timing (Appendix F, reference 6.53).
- On 13 October 2023, Tuna Australia emailed Woodside and commented:
  - TA is a relevant person for this EP.
  - TA has an internal database of relevant fisheries and tuna concession owners have advised they wish for all EP consultation to be directed through TA.
  - TA offered sending a copy of their Industry position statement and service agreement.
- On 30 October, Woodside emailed Tuna Australia and confirmed:
  - Woodside obtains contact of relevant fisheries from AFMA.
  - In addition to consulting individual licence holders, Woodside consults relevant fishing industry associations and representative bodies.
  - Woodside chose to consult licence holders in the fishery overlapping the operational area, despite no recent fishing effort occurring in the last ten years.
  - Woodside confirmed that consultation regulations do not require entry into service agreements in order to engage in consultation or for an EP to be complete.

| Summary of Feedback, Objection or Claim | Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response | Inclusion in Environment Plan |
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| <p>Tuna Australia responded advising that the proposed activity is in the same general vicinity as those proposed for other EPs Tuna Australia had recently comments on for Woodside, and points raised also apply to this EP. This includes:</p> <ul style="list-style-type: none"> <li>• Tuna Australia provided an overview of the fishery, including potential future activity, and requested:</li> <li>• More information regarding downstream effects from the activity, such as discharges.</li> <li>• Further understanding of potential interactions during activities in the Operational Area and exclusion zones, particularly as the fishery uses longline fishing.</li> <li>• Advice regarding acoustic interferences from the proposed activity.</li> <li>• Tuna Australia also commented on marine spatial congestion and requested reassurance that the activities would be completed in an</li> </ul> | <p>Woodside has addressed Tuna Australia’s feedback, including:</p> <ul style="list-style-type: none"> <li>• Confirming that it plans to undertake activities in accordance with the EP and as expeditiously as possible.</li> <li>• Provided additional information on the proposed activity.</li> <li>• Noted Tuna Australia’s comments that while there is an overlap with the Western Tuna and Billfish Fishery management area and the Operational Area, no recent fishing effort has occurred within or nearby to the Operational Area, and that no fishing effort has occurred for at least the last ten years.</li> <li>• Noted Tuna Australia’s comments that there is potential for future fishing effort in the region, potentially in 2023.</li> </ul> <p>Woodside advised of EP controls, including limiting the temporary safety exclusion zone to 500 m and permitting commercial fishers and other marine users to enter the Operational Area. Woodside noted:</p> <ul style="list-style-type: none"> <li>• Routine marine discharges would be managed according to legislative and regulatory requirements.</li> <li>• Any localised impacts to water quality, sediment quality and marine fish are not expected to impact any commercial fisheries in the area and there will be no toxicological effects.</li> <li>• Seabed disturbance will be minimal given the wellhead is already in place on the seabed.</li> <li>• Given the short nature of the activity and the small footprint of the equipment, any impacts to water and sediment quality are likely to be intermittent, highly localised and temporary in nature.</li> <li>• Noise generated in the air and underwater would be due to the operation of project vessels.</li> </ul> <p>The fishery management area for the Western Tuna and Billfish Fishery, which Tuna Australia represents, overlaps both the Operational Area and EMBA. However, there is considered to be no potential for interaction within these areas as:</p> <ul style="list-style-type: none"> <li>• No recent fishing effort has occurred within or nearby to the Operational Area.</li> <li>• Fishery Status Report 2022 indicates current fishing effort is concentrated between Carnarvon and Albany and occurred within the EMBA in the last five years (2016 - 2021) (Patterson et al., 2022).</li> </ul> <p>Woodside acknowledges previous feedback received from Tuna Australia with respect to separate EPs. Woodside confirms that it conducts impact and risk assessments for its activities in order to identify and manage environmental</p> | <p>Woodside has assessed the relevancy of Commonwealth fisheries issues in <b>Section 4.6.2</b> of this EP.</p> <p>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.</p> <p>No additional measures or controls are required.</p> <p>.</p> |
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| <p>expeditious timeframe.</p> <p>Tuna Australia also provided Woodside their position statement for engaging with energy companies seeking consultation advice from stakeholders on environmental plans and project proposals.</p> <p>The position statement requests that where there is the potential for the proposed activity to impact Tuna Australia's functions, interests or activities or that of its members, there is a need for a service agreement to be executed.</p> <p>Tuna Australia advised the name of another energy company where a service agreement had been executed.</p> <p>Tuna Australia committed to provide more information on how it would manage consultation distribution and a report under its service agreement.</p> <p>Tuna Australia and Woodside are working towards completing a service agreement.</p> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>impacts and risks, which includes potential interaction with recreational and commercial fishers.</p> <p>To manage potential interactions, Woodside has the following controls in place with regard to the Petroleum Activities Program (PAP) of the TPA03 EP:</p> <ul style="list-style-type: none"> <li>• Vessels adhere to regulatory requirements for navigational safety.</li> <li>• Notification to AHO of activities and movements to allow generation of navigation warnings (Maritime Safety Information Notifications (MSIN) and Notice to Mariners (NTM) (including AUSCOAST warnings where relevant)).</li> <li>• Establishment of temporary exclusion zones by relevant vessels which are communicated to marine users.</li> <li>• Vessels comply with regulatory requirements for the prevention of vessel collisions and safety and emergency arrangements.</li> <li>• Woodside also notes the following in relation to the points raised in Tuna Australia's feedback on other Woodside EPs:</li> <li>• Routine marine vessel discharges will be managed in accordance with legislative and regulatory requirements (e.g. marine orders).</li> <li>• Given the short duration of the activity and small footprint, any potential impacts to water quality, sediment quality and marine fish are likely to be highly localised and not expected to impact any commercial fisheries in the area.</li> <li>• Acoustic emissions from vessels in field will be managed complying with regulatory requirements (e.g. EPBC Regulations 2000 – Part 8 Division 8.1).</li> </ul> <p>Woodside has consulted AFMA, DAFF - Fisheries, CFA, ASBTIA, Tuna Australia and individual relevant licence holders.</p> <p>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 <b>Section 7.7.1</b>).</p> |  |
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| <b>Pearl Producers Association (PPA)</b>  |   |  |
|---|---|--|
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with PPA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to PPA on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided PPA with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 22 June 2022, Woodside emailed the PPA advising of the proposed activity (Appendix F, reference 1.13 and 1.16) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 12 July 2022, Woodside emailed PPA following up on the proposed activity (Appendix F, reference 2.12) and provided a Consultation Information Sheet and fisheries map.</li> <li>• On 15 September 2022, Woodside provided an activity update to PPA regarding changes to activity timing and vessel requirements (Appendix F, reference 3.15).</li> <li>• On 15 February 2023, Woodside emailed PPA providing additional information on the proposed activity (Appendix F, reference 4.10), and provided an updated Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed PPA following up on the proposed activity (Appendix F, reference 5.8) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed PPA to provide an update on activity timing (Appendix F, reference 6.26).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>State Commercial fisheries and representative bodies</b>   |   |  |
| <b>Land Hermit Crab Managed Fishery</b>   |   |  |

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with Land hermit Crab Managed Fishery for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to Land Hermit Crab Managed Fishery on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided Land Hermit Crab Managed Fishery with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 17 February 2023, Woodside sent a letter to the Land Hermit Crab Managed Fishery advising of the proposed activity (Appendix F, reference 4.21), and provided a Consultation Information Sheet
- On 9 March 2023, Woodside sent a letter to the Land Hermit Crab Managed Fishery following up on the proposed activity (Appendix F, reference 5.27) and to request any feedback.
- Woodside has applied WAFIC’s consultation guidance and is consulting fisheries assessed as having a potential for interaction from unplanned impacts (EMBA) via WAFIC. On 12 October 2023, Woodside emailed WAFIC to provide an update on activity timing (Appendix F, reference 6.33).

| <b>Summary of Feedback, Objection or Claim</b>                | <b>Woodside Energy’s Assessment of Merits of Feedback, Objection or Claim and its Response</b>   | <b>Inclusion in Environment Plan</b>  |
|---|--|---|
| No feedback, objections or claims received despite follow up. | Woodside has provided consultation information to DPIRD, WAFIC and individual relevant licence holders.<br><br>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 <b>Section 7.7.1</b> ). | Woodside has assessed the relevancy of State fisheries issues in <b>Section 4.6.2</b> of this EP.<br><br>Woodside will provide notifications to AFMA, DAFF – Fisheries, DPIRD, and relevant Fishery Licence Holders and representative bodies that have the potential to be directly impacted by planned activities in the Operational Area (Pilbara Line Fishery and Pilbara Trap Fishery) prior to the commencement and at the end of the activity, as referenced as <b>Control 1.4</b> in this EP.<br><br>No additional measures or controls are required. |

**Other non-government groups or organisations**

**350 Australia (350A)**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with 350A for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to 350A on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided 350A with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed 350A advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed 350A following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.
- On 12 October 2023, Woodside emailed 350A to provide an update on activity timing (Appendix F, reference 6.23).

| Summary of Feedback, Objection or Claim                       | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Australian Conservation Foundation (ACF)**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with ACF for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to ACF on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided ACF with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed ACF advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.

| <ul style="list-style-type: none"> <li>On 7 March 2023, Woodside emailed ACF following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed ACF to provide an update on activity timing (Appendix F, reference 6.23).</li> </ul>   |   |  |
|---|---|--|
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Australian Marine Conservation Society (AMCS)</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with AMCS for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to AMCS on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside has provided AMCS with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 16 February 2023, Woodside emailed AMCS advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed AMCS following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed AMCS to provide an update on activity timing (Appendix F, reference 6.23).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Conservation Council of Western Australia (CCWA)</b>   |   |  |

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with CCWA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to CCWA on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided CCWA with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed CCWA advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.
- On 7 March 2023, Woodside emailed CCWA following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.
- On 12 October 2023, Woodside emailed CCWA to provide an update on activity timing (Appendix F, reference 6.23).

| Summary of Feedback, Objection or Claim                       | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

**Greenpeace Australia Pacific (GAP)**

Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with GAP for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:

- Consultation Information Sheet publicly available on the Woodside website since June 2022.
- Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.
- Consultation information provided to GAP on 16 February 2023 based on their function, interest and activities.
- Woodside has sent a follow up email seeking feedback on the proposed activities.
- Woodside has provided GAP with the opportunity to provide feedback over a 9 month period.

**Summary of information provided and record of consultation:**

- On 16 February 2023, Woodside emailed GAP advising of the proposed activity (Appendix F, reference 4.16) and provided a Consultation Information Sheet.

| <ul style="list-style-type: none"> <li>On 7 March 2023, Woodside emailed GAP following up on the proposed activity (Appendix F, reference 5.13) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed GAP to provide an update on activity timing (Appendix F, reference 6.23).</li> </ul>   |   |  |
|---|---|--|
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Research institutes and local conservation groups or organisations</b>   |   |  |
| <b>University of Western Australia (UWA)</b>  |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with UWA for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to UWA on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>Woodside has provided UWA with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 21 February 2023, Woodside emailed UWA advising of the proposed activity (Appendix F, reference 4.30) and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed UWA following up on the proposed activity (Appendix F, reference 5.20) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed UWA to provide an update on activity timing (Appendix F, reference 6.30).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |

| <b>Western Australian Marine Science Institution (WAMSI)</b>  |   |  |
|---|---|--|
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with WAMSI for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to WAMSI on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has sent a follow up email seeking feedback on the proposed activities.</li> <li>• Woodside has provided WAMSI with the opportunity to provide feedback over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 21 February 2023, Woodside emailed WAMSI advising of the proposed activity (Appendix F, reference 4.27) and provided a Consultation Information Sheet.</li> <li>• On 7 March 2023, Woodside emailed WAMSI following up on the proposed activity (Appendix F, reference 5.17) and to request any feedback.</li> <li>• On 12 October 2023, Woodside emailed WAMSI to provide an update on activity timing (Appendix F, reference 6.29).</li> </ul> |   |  |
| <b>Summary of Feedback, Objection or Claim</b>  | <b>Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response</b>  | <b>Inclusion in Environment Plan</b>             |
| 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 <b>Section 7.7.1</b> ). | No additional measures or controls are required. |
| <b>Commonwealth Scientific and Industrial Research Organisation (CSIRO)</b>   |   |  |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with CSIRO for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>• Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>• Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>• Consultation information provided to CSIRO on 16 February 2023 based on their function, interest and activities.</li> <li>• Woodside has addressed and responded to CSIRO over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>• On 21 February 2023, Woodside emailed CSIRO advising of the proposed activity (Appendix F, reference 4.29) and provided a Consultation Information Sheet.</li> </ul>   |   |  |

| <ul style="list-style-type: none"> <li>On 21 February 2023, CSIRO responded thanking Woodside for their email and confirmed that CSIRO will respond.</li> <li>On 22 February 2023, CSIRO confirmed that Woodside's email request had been forwarded.</li> <li>On 7 March 2023, Woodside emailed CSIRO following up on the proposed activity (Appendix F, reference 5.19) and to request any feedback.</li> <li>On 12 October 2023, Woodside emailed CSIRO to provide an update on activity timing (Appendix F, reference 6.28).</li> </ul>   |   |   |
|--|---|---|
| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response   | Inclusion in Environment Plan                           |
| <p>CSIRO responded and confirmed that Woodside's email request had been forwarded.</p> <p>Whilst feedback has been received, there were no objections or claims.</p>   | <p>CSIRO responded and acknowledged receipt of Woodside's consultation email.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>No additional measures or controls are required.</p> |
| Australian Institute of Marine Science (AIMS)  |   |   |
| <p>Woodside has discharged its obligations for consultation under Regulation 11A(1) and consultation with AIMS for the purpose of 11A(1) is complete. Sufficient information and a reasonable period have been provided, as described in Section 5.5 of the EP. Specifically:</p> <ul style="list-style-type: none"> <li>Consultation Information Sheet publicly available on the Woodside website since June 2022.</li> <li>Woodside published advertisements in a national, state and relevant local newspapers on 26 October 2022 advising of the proposed activities and requesting comments or feedback.</li> <li>Consultation information provided to AIMS on 16 February 2023 based on their function, interest and activities.</li> <li>Woodside has addressed and responded to AIMS over a 9 month period.</li> </ul> <p><b>Summary of information provided and record of consultation:</b></p> <ul style="list-style-type: none"> <li>On 21 February 2023, Woodside emailed AIMS advising of the proposed activity (Appendix F, reference 4.28) and provided a Consultation Information Sheet.</li> <li>On 7 March 2023, Woodside emailed AIMS following up of the proposed activity (Appendix F, reference 5.18) and to request any feedback.</li> <li>On 14 March 2023, AIMS responded thanking Woodside for their email and confirmed that there are no overlaps with planned AIMS science activities in the area.</li> <li>On 15 March 2023, Woodside responded, thanking AIMS for their feedback.</li> <li>On 12 October 2023, Woodside emailed AIMS to provide an update on activity timing (Appendix F, reference 6.27).</li> <li>On 20 October 2023, AIMS emailed Woodside and confirmed the activity does not impact AIMS operations.</li> <li>On 24 October 2023, Woodside responded, thanking AIMS for their feedback.</li> </ul> |   |   |

| Summary of Feedback, Objection or Claim  | Woodside Energy's Assessment of Merits of Feedback, Objection or Claim and its Response  | Inclusion in Environment Plan  |
|--|--|--|
| <p>AIMS responded and confirmed that there are no overlaps with planned AIMS science activities in the area.</p> <p>Whilst feedback has been received, there were no objections or claims.</p> | <p>AIMS responded and confirmed that there are no overlaps with planned AIMS science activities in the area.</p> <p>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 <b>Section 7.7.1</b>).</p> | <p>Woodside considers the measures and controls described within this EP address the potential impact from the proposed activities on AIMS's functions, interests or activities.</p> <p>No additional measures or controls are required.</p> |

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## 1. Consultation

### 1.1 Email sent to ABF, DISR (formerly DISER) DISER, DBCA, DMIRS, DoT and APPEA (22 June 2022)

Dear Stakeholder

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

A Consultation Information Sheet is attached, which provides background on the proposed activity, including a summary of potential key risks and associated management measures. The Information Sheet is also available on our [website](#).

Please provide your views by **22 July 2022**.

#### **Activity:**

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

**Feedback:**

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

**1.2 Email sent to Australian Fisheries Management Authority (AFMA) (22 June 2022)**

Dear AFMA

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

**Activity:**

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Relevant Fisheries:</b>         | <b>Commonwealth:</b> None<br><b>State:</b> Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

**Commercial fishing implications:**

Woodside has assessed potential impacts for commercial fisheries based on Fishcube, ABARES/AFMA data, fishing methods and water depth. We note there are three overlapping Commonwealth managed fisheries, listed below, none of which have been active in the Operational Area in recent years.

- Southern Bluefin Tuna Fishery
- Western Tuna and Billfish Fishery
- Western Skipjack Fishery

Woodside has provided information to the fishery’s representative organisation on AFMA advice that it expects all Commonwealth fishers who have entitlements to fish within the proposed area to be consulted, which can be through the relevant fishing industry associations.

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description   | Mitigation And / Or Management Measures   |
|--|--|---|
| <b>Planned</b>                             |  |   |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement | Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for |

|                           |   |   |
|---------------------------|---|---|
|                           |   | <p>the proposed activity and development of the EP</p> <p>Notification to relevant stakeholders prior to the commencement of activities</p> <p>TPA03 well to continue to be marked on navigational charts</p>   |
| <i>Marine discharges</i>  | <p>Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column</p> | <p>All routine marine discharges will be managed according to legislative and regulatory requirements</p>   |
| <i>Seabed disturbance</i> | <p>Disturbance to the seabed from removal activities</p>  | <p>No anchoring of vessels</p> <p>Attempted retrieval of dropped objects</p>  |
| <i>Vessel interaction</i> | <p>The presence of vessels may preclude other marine users from access to the area</p>  | <p>Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users</p> <p>Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity</p> <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements</p> <p>Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area</p> |

### Unplanned Risks

|                            |   |  |
|----------------------------|---|--|
| <i>Hydrocarbon release</i> | <p>Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture</p> | <p>Appropriate spill response plans, equipment and materials will be in place and maintained</p> <p>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment</p> |
|----------------------------|---|--|

## TPA03 Well Intervention Environment Plan

|                                |  |  |
|--------------------------------|--|--|
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br><br>Compliance with Australian biosecurity requirements and guidance |
|--------------------------------|--|--|

### **Feedback:**

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009 (Cth)*.

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

### **1.3 Email sent to Australian Hydrographic Office (AHO) and Australian Maritime Safety Authority (AMSA) – Maritime Safety (22 June 2022)**

Dear AHO / AMSA

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)), and shipping lane map is attached.

Please provide your views by **22 July 2022**.

### **Activity:**

## TPA03 Well Intervention Environment Plan

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

### Feedback:

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

### 1.4 Email sent to Department of Transport (DoT) (30 June 2022)

Dear [REDACTED]

As part of Woodside's ongoing consultation for its current and planned activities, I would like to advise WA Department of Transport (DoT) that Woodside is preparing the TPA03 Well Intervention Environment Plan. The planned well intervention activities will be undertaken on the TPA03 production well (within Production Licence WA-5-L) to remediate a down-hole valve and continue production from the lower reservoir.

Woodside would like to offer DoT the opportunity to review or provide comment on the activity.

Information is presented as follows:

TPA03 Well Intervention Environment Plan

- A Consultation Information Sheet is available on our website [here](#), providing information on the proposed activities.
- The *TPA03 Well Intervention First Strike Plan* is attached. This will form part of the approval submission in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth).
- In the table below, as requested in the *Offshore Petroleum Industry Guidance Note* (July 2020) and from recent engagement activities between DoT and Woodside, responses to the information requirements in a succinct summary and source of information.

Woodside proposes to submit an EP on 29 July 2022 to support these activities. Whilst we appreciate that this is earlier than DoT's required six-week review period, the TPA03 oil spill assessment uses the same loss of well containment and diesel scenarios that were previously assessed by DoT in 2021 for the Goodwyn Alpha Operations EP five-year revision. Should you require additional information or have a comment to make about the proposed activity, please contact me by close of business 22 July 2022 to allow incorporation of any amendments prior to the assessment period closing.

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Many thanks,



| <b>Information Requested in the Offshore Petroleum Industry Guidance Note (July 2020)</b>   | <b>Information Provided &amp; Reference</b>                      |
|---|--|
| Description of activity, including the intended schedule, location (including coordinates), distance to nearest landfall and map. | Included in the consultation information sheet                   |
| Worst case spill volumes.   | Included in Appendix A of the First Strike Plan                  |
| Known or indicative oil type/properties.  | Included in Appendix A of the First Strike Plan                  |
| Amenability of oil to dispersants and window of opportunity for dispersant efficacy.  | Dispersant is not deemed to be suitable for marine diesel spill. |

TPA03 Well Intervention Environment Plan

|   |   |  |   |  |  |  |
|---|---|--|---|--|--|--|
| Description of existing environment and protection priorities.  | Included in Section 3 of the First Strike Plan  |  |   |  |  |  |
| Details of the environmental risk assessment related to marine oil pollution - describe the process and key outcomes around risk identification, risk analysis, risk evaluation and risk treatment. For further information see the Oil Pollution Risk Management Information Paper (NOPSEMA 2021). | <p>Unplanned loss of containment events from the Petroleum Activities Program have been identified during the risk assessment process (presented in Section 6 of the EP). Further descriptions of risk, impacts and mitigation measures (which are not related to hydrocarbon preparedness and response) are provided in Section 6 of the EP. Two unplanned events or credible spill scenario for the Petroleum Activities Program have been selected as representative across types, sources and incident/response levels, up to and including the WCCS.</p> <p>Table 2-1 of the OSPRMA presents the credible scenarios for the Petroleum Activities Program. Two worst-case credible scenarios (CS-01 and CS-02) have been used for response planning purposes for the activity as all other scenarios are of a lesser scale and extent. By demonstrating capability to meet and manage an event of this size and timescale, Woodside assumes relevant scenarios that are smaller in nature and scale can also be managed by the same capability.</p> <p>Response performance outcomes have been defined based on a response to the WCCS.</p> |  |   |  |  |  |
| Outcomes of oil spill trajectory modelling, including predicted times to enter State waters and contact shorelines.   | <table border="1"> <tr> <td> <p><b>Credible Scenario-01 – Unplanned hydrocarbon release of condensate – loss of well containment during well intervention</b></p> <p>108,843 m<sup>3</sup> release of condensate over 71 days. 0.8% residual component of 870.7 m<sup>3</sup> or 12.2 m<sup>3</sup> per day</p> <p>Minimum time to shoreline contact (above 100 g/m<sup>2</sup>) in days</p> </td> <td> <p><b>Credible Scenario-02 – Surface release of Marine Diesel Oil after a vessel fuel tank rupture near the well</b></p> <p>Instantaneous release of 1000 m<sup>3</sup>. 5% residue of 50 m<sup>3</sup></p> <p>Minimum time to shoreline contact (above 100 g/m<sup>2</sup>) in days</p> </td> </tr> <tr> <td><i>No contact at response thresholds</i></td> <td><i>No contact at response thresholds</i></td> </tr> </table>  |  | <p><b>Credible Scenario-01 – Unplanned hydrocarbon release of condensate – loss of well containment during well intervention</b></p> <p>108,843 m<sup>3</sup> release of condensate over 71 days. 0.8% residual component of 870.7 m<sup>3</sup> or 12.2 m<sup>3</sup> per day</p> <p>Minimum time to shoreline contact (above 100 g/m<sup>2</sup>) in days</p> | <p><b>Credible Scenario-02 – Surface release of Marine Diesel Oil after a vessel fuel tank rupture near the well</b></p> <p>Instantaneous release of 1000 m<sup>3</sup>. 5% residue of 50 m<sup>3</sup></p> <p>Minimum time to shoreline contact (above 100 g/m<sup>2</sup>) in days</p> | <i>No contact at response thresholds</i> | <i>No contact at response thresholds</i> |
|   | <p><b>Credible Scenario-01 – Unplanned hydrocarbon release of condensate – loss of well containment during well intervention</b></p> <p>108,843 m<sup>3</sup> release of condensate over 71 days. 0.8% residual component of 870.7 m<sup>3</sup> or 12.2 m<sup>3</sup> per day</p> <p>Minimum time to shoreline contact (above 100 g/m<sup>2</sup>) in days</p>   | <p><b>Credible Scenario-02 – Surface release of Marine Diesel Oil after a vessel fuel tank rupture near the well</b></p> <p>Instantaneous release of 1000 m<sup>3</sup>. 5% residue of 50 m<sup>3</sup></p> <p>Minimum time to shoreline contact (above 100 g/m<sup>2</sup>) in days</p> |   |  |  |  |
|   | <i>No contact at response thresholds</i>  | <i>No contact at response thresholds</i>   |   |  |  |  |
| <i>No contact at response thresholds</i>  | <i>No contact at response thresholds</i>  |  |   |  |  |  |
| Details on initial response actions and key activation timeframes.  | Included in Section 2 of the First Strike Plan  |  |   |  |  |  |
| Potential Incident Control Centre arrangements.   | Included in Appendix D and E of the First Strike Plan   |  |   |  |  |  |
| Potential staging areas / Forward Operating Base.   | A Forward Operating Base can be established at Exmouth and/ or Dampier.   |  |   |  |  |  |
| Details on response strategies.   | Included in Section of the First Strike Plan  |  |   |  |  |  |
| Use of DoT equipment resources  | Woodside has access to its own and contracted stockpiles of response equipment and acknowledges   |  |   |  |  |  |

|  |  |
|--|--|
|  | <p>that potential use of DoT resources cannot be assumed and is at the discretion of DoT.</p>  |
| <p>Details and diagrams on proposed IMT structure including integration of DoT arrangements as per this IGN.</p> | <p>Included in Appendix D and E of the First Strike Plan</p>   |
| <p>Details on testing of arrangements of OPEP/OSCP.</p>  | <ul style="list-style-type: none"> <li>• Level 1 Response – one Level 1 First Strike drill must be conducted during the 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.</li> <li>• Level 2 Response – Level 2 Emergency Management exercises are relevant to activities with an operational duration of one month or greater. At least one Emergency Management exercise per MODU/vessel per campaign must be conducted within the first month of commencing the activity and then at every 6 month hire period thereafter, where applicable based on duration.</li> <li>• Level 3 Response – 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.</li> </ul> <p><b>Testing of Oil Spill Response Arrangements</b></p> <p>Woodside’s arrangements for spill response are common across its Australian operating assets and activities to ensure the 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:</p> <ul style="list-style-type: none"> <li>• Ensure relevant responders, contractors and key personnel understand and practise their assigned roles and responsibilities.</li> <li>• Test response arrangements and actions to validate response plans.</li> <li>• Ensure lessons learned are incorporated into Woodside’s processes and procedures and improvements are made where required.</li> </ul> <p>Woodside’s Testing of Arrangements Schedule aligns with international good practice for spill preparedness and response management; the testing is compatible with the IPIECA Good Practice Guide and the Australian Institute for Disaster Resilience (AIDR) 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.</p> |

|                     |  |
|---------------------|--|
|                     | <p>The hydrocarbon spill arrangements included within 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.</p> <p>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.</p> <p>In addition to the testing of response capability within the schedule, up to eight formal exercises are planned annually, across Woodside, to specifically test arrangements for responding to a hydrocarbon spill to the marine environment.</p> <p>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).</p> |
| Additional comments | Please note some of the links in the document are still being finalised, and as such may show a reference error in the attached version.   |

**1.5 Email sent to Australian Maritime Safety Authority (AMSA) – Marine Pollution (30 June 2022)**

Dear [REDACTED]

As part of Woodside’s ongoing consultation for its current and planned activities, I would like to advise the Australian Maritime Safety Authority (AMSA) that Woodside is preparing the TPA03 Well Intervention Environment Plan. The planned well intervention activities will be undertaken on the TPA03 production well (within Production Licence WA-5-L) to remediate a down-hole valve and continue production from the lower reservoir.

Woodside would like to offer AMSA the opportunity to review or provide comment on the activity.

Information is presented as follows:

- A Consultation Information Sheet is available on our website [here](#), providing information on the proposed activities.

## TPA03 Well Intervention Environment Plan

- The *TPA03 Well Intervention First Strike Plan* is attached. This will form part of the approval submission in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth)*.

Please note that the TPA03 oil spill assessment uses the same loss of well containment and diesel scenarios that were previously assessed in 2021 for the Goodwyn Alpha Operations EP five-year revision.

Woodside proposes to submit an EP on 29 July 2022 to support these activities. Should you require additional information or have a comment to make about the proposed activity, please contact me by close of business 22 July 2022 to allow incorporation of any amendments prior to the assessment period closing.

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009 (Cth)*.

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Many thanks,

### **1.6 Email sent to Department of Climate Change, Energy, the Environment and Water Agriculture (DCCEE) / Department of Agriculture, Fisheries and Forestry (DAFF) – Fisheries and Biosecurity (formerly the Department of Agriculture, Water and the Environment (DAWE)) (22 June 2022)**

Dear DAWE

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

## TPA03 Well Intervention Environment Plan

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

### Activity:

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Relevant Fisheries:</b>         | <b>Commonwealth:</b> None<br><b>State:</b> Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

### Commercial fishing implications:

Woodside has assessed potential impacts for commercial fisheries based on Fishcube, ABARES/AFMA data, fishing methods and water depth. We note there are three overlapping Commonwealth managed fisheries, listed below, none of which have been active in the Operational Area in recent years.

- Southern Bluefin Tuna Fishery
- Western Tuna and Billfish Fishery
- Western Skipjack Fishery

Woodside has provided information to the fishery's representative organisation on AFMA advice that it expects all Commonwealth fishers who have entitlements to fish within the

proposed area to be consulted, which can be through the relevant fishing industry associations.

**Biosecurity:**

With respect to the biosecurity matters, please note the following information below:

**Environment description:**

The Operational Area is located in water depths of approximately 115 m and traverses the Northwest Shelf Province. The Operational Area lies on the outer continental shelf and the seabed is relatively flat with a gentle slope seaward. The seabed is comprised of soft sediment and is relatively featureless.

**Potential IMS risk      IMS mitigation management**

Accidental introduction and establishment of invasive marine species      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. Woodside's Invasive Marine Species Management Plan includes a risk assessment process that is applied to vessels undertaking Activities. Based on the outcomes of each IMS risk assessment, Management measures commensurate with the risk (such as the treatment of internal systems, IMS inspections or cleaning) will be implemented to minimise the likelihood of IMS being introduced.

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description  | Mitigation And / Or Management Measures   |
|--|---|---|
| <b>Planned</b>                             |   |   |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement                    | <p>Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP</p> <p>Notification to relevant stakeholders prior to the commencement of activities</p> <p>TPA03 well to continue to be marked on navigational charts</p> |
| <i>Marine discharges</i>                   | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, | All routine marine discharges will be managed according to legislative and regulatory requirements  |

cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column

|                           |   |  |
|---------------------------|---|--|
| <i>Seabed disturbance</i> | Disturbance to the seabed from removal activities                               | No anchoring of vessels<br>Attempted retrieval of dropped objects  |
| <i>Vessel interaction</i> | The presence of vessels may preclude other marine users from access to the area | Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users<br><br>Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity<br>A 1 km radius Operational Area will be applied around the TPA03 drill centre<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements<br><br>Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area |

**Unplanned Risks**

|                                |  |   |
|--------------------------------|--|---|
| <i>Hydrocarbon release</i>     | Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture                     | Appropriate spill response plans, equipment and materials will be in place and maintained<br><br>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment |
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br><br>Compliance with Australian biosecurity requirements and guidance                    |

**Feedback:**

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan which will be submitted to the National Offshore Petroleum Safety and Environmental Management

## *TPA03 Well Intervention Environment Plan*

Authority (NOPSEMA) for acceptance in accordance with the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

### **1.7 Email sent to Director of National Parks (DNP) (22 June 2022)**

Dear Director of National Parks

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

We note Australian Government Guidance on consultation activities and confirm that:

- The proposed activities are outside the boundaries of a proclaimed Australian Marine Parks, with the Operational Area located approximately 33 km north of the Montebello Marine Park Multiple Use Zone (Cwlth)
- We have assessed potential risks to Australian Marine Parks (AMPs) in the development of the proposed Environment Plan and believe that there are no credible risks as part of planned activities that have potential to impact the values of the Marine Parks.
- In the unlikely event of a loss of hydrocarbons, the worst case credible spill scenario assessed for this activity a loss of well integrity. For this consequence to occur, there must be a failure of multiple physical and procedural barriers within the well relevant to the activity. Given the controls in place to prevent and control loss of well control events and mitigate their consequences, it is considered that the risk associated with a loss of well integrity is managed to as low as reasonably practical. In the unlikely event of a loss of well integrity, there is a risk of condensate entering the:
  - Abrolhos Marine Park
  - Argo-Rowley Terrace Marine Park
  - Carnarvon Canyon Marine Park
  - Gascoyne Marine Park
  - Montebello Marine Park
  - Ningaloo Marine Park
  - Shark Bay Marine Park

## TPA03 Well Intervention Environment Plan

- A Commonwealth Government-approved oil spill response plan will be in place for the duration of the activities, which will include notification to relevant agencies and organisations as to the nature and scale of the event, as soon as practicable following an occurrence. The Director of National Parks will be advised if an environmental incident occurs that may impact on the values of the Marine Park.

A Consultation Information Sheet is attached, which provides background on the proposed activity, including a summary of potential key risks and associated management measures. The Information Sheet is also available on our [website](#).

Please provide your views by **22 July 2022**.

### Activity:

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

### Feedback:

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

## 1.8 Email sent to Department of Primary Industries and Regional Development (DPIRD) (22 June 2022)

Dear [REDACTED]

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

### *Activity:*

|                                 |   |
|---------------------------------|---|
| <b>Summary:</b>                 | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  |
| <b>Schedule:</b>                | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |

TPA03 Well Intervention Environment Plan

**Duration:** Well intervention activities are expected to take approximately 2 weeks to complete.

**Relevant Fisheries:** **Commonwealth:** None  
**State:** Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery

**Exclusionary/Cautious Zone:** A 1 km radius Operational Area will be applied around the TPA03 drill centre.  
 A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.

**Vessels:** Heavy Well Intervention Vessel (HWIV)  
 General supply/support vessels

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description   | Mitigation And / Or Management Measures   |
|--|--|---|
| <b>Planned</b>                             |  |   |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement   | <p>Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP</p> <p>Notification to relevant stakeholders prior to the commencement of activities</p> <p>TPA03 well to continue to be marked on navigational charts</p> |
| <i>Marine discharges</i>                   | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column | All routine marine discharges will be managed according to legislative and regulatory requirements  |
| <i>Seabed disturbance</i>                  | Disturbance to the seabed from removal activities  | <p>No anchoring of vessels</p> <p>Attempted retrieval of dropped objects</p>  |
| <i>Vessel interaction</i>                  | The presence of vessels may preclude other marine users from access to the area  | Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users   |

Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity

A 1 km radius Operational Area will be applied around the TPA03 drill centre

A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements

Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area

### Unplanned Risks

|                                |  |   |
|--------------------------------|--|---|
| <i>Hydrocarbon release</i>     | Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture                     | Appropriate spill response plans, equipment and materials will be in place and maintained<br><br>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment |
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br><br>Compliance with Australian biosecurity requirements and guidance                    |

**Feedback:**

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

## 1.9 Letter sent to Mackerel Managed Fishery (Area 2) (23 Licence Holders) (22 June 2022)

Please direct all responses/queries to:  
**Woodside Feedback**  
T: 1800 442 977  
E: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au)

22 June 2022

Dear Mackerel Managed Fishery

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre.  
A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

### *Activity:*

**Summary:** Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

**Location:** ~138 km north west of Dampier

**Approx. Water Depth (m):** ~113 m



Woodside Energy Ltd.

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## TPA03 Well Intervention Environment Plan

|                                      |   |
|--------------------------------------|---|
| <b>Schedule:</b>                     | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                     | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Relevant Fisheries:</b>           | <b>Commonwealth:</b> None<br><b>State:</b> Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery  |
| <b>Exclusionary/Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                      | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

### *Potential risks to commercial fishing and proposed mitigation measures:*

| Potential Risk                             | Risk Description   | Mitigation And / Or Management Measures  |
|--|--|--|
| <b>Planned</b>                             |  |  |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement   | Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP<br>Notification to relevant stakeholders prior to the commencement of activities<br>TPA03 well to continue to be marked on navigational charts |
| <i>Marine discharges</i>                   | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column | All routine marine discharges will be managed according to legislative and regulatory requirements   |
| <i>Seabed disturbance</i>                  | Disturbance to the seabed from removal activities  | No anchoring of vessels<br>Attempted retrieval of dropped objects  |
| <i>Vessel interaction</i>                  | The presence of vessels may preclude other marine users from access to the area  | Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users  |

Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity

A 1 km radius Operational Area will be applied around the TPA03 drill centre

A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements

Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area

### Unplanned Risks

|                                |  |   |
|--------------------------------|--|---|
| <i>Hydrocarbon release</i>     | Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture                     | Appropriate spill response plans, equipment and materials will be in place and maintained<br>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment |
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br>Compliance with Australian biosecurity requirements and guidance                    |

#### Feedback:

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

#### Woodside Feedback



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f t in v @

Attached: Consultation Information Sheet and fisheries map

### 1.10 Email sent to Pilbara Line Fishery (9 Licence Holders), Pilbara Trap Fishery (6 Licence Holders) (22 June 2022)

Dear Fisheries Stakeholder

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

#### **Activity:**

|                                 |   |
|---------------------------------|---|
| <b>Summary:</b>                 | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  |
| <b>Schedule:</b>                | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |

TPA03 Well Intervention Environment Plan

**Duration:** Well intervention activities are expected to take approximately 2 weeks to complete.

**Relevant Fisheries:** **Commonwealth:** None  
**State:** Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery

**Exclusionary/Cautious Zone:** A 1 km radius Operational Area will be applied around the TPA03 drill centre.  
 A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.

**Vessels:** Heavy Well Intervention Vessel (HWIV)  
 General supply/support vessels

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description   | Mitigation And / Or Management Measures  |
|--|--|--|
| <b>Planned</b>                             |  |  |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement   | Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP<br><br>Notification to relevant stakeholders prior to the commencement of activities<br><br>TPA03 well to continue to be marked on navigational charts |
| <i>Marine discharges</i>                   | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column | All routine marine discharges will be managed according to legislative and regulatory requirements   |
| <i>Seabed disturbance</i>                  | Disturbance to the seabed from removal activities  | No anchoring of vessels<br>Attempted retrieval of dropped objects  |
| <i>Vessel interaction</i>                  | The presence of vessels may preclude other marine users from access to the area  | Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users  |

Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity

A 1 km radius Operational Area will be applied around the TPA03 drill centre

A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements

Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area

### Unplanned Risks

|                                |  |   |
|--------------------------------|--|---|
| <i>Hydrocarbon release</i>     | Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture                     | Appropriate spill response plans, equipment and materials will be in place and maintained<br><br>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment |
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br><br>Compliance with Australian biosecurity requirements and guidance                    |

**Feedback:**

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

**1.11 Email sent to BP Developments Australia (23-22 June 2022)**

Dear [REDACTED]

## TPA03 Well Intervention Environment Plan

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and titleholder map is attached.

Please provide your views by **22 July 2022**.

### Activity:

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

### Feedback:

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

### **1.12 Email sent to Commonwealth Fisheries Association (CFA), Australian Southern Bluefin Tuna Industry Association (ASBTIA) and Tuna Australia (22 June 2022)**

Dear Fisheries Stakeholder

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

#### **Activity:**

**Summary:** Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

**Location:** ~138 km north west of Dampier

**Approx. Water Depth (m):** ~113 m

**Schedule:** Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**Duration:** Well intervention activities are expected to take approximately 2 weeks to complete.

**Relevant Fisheries:** **Commonwealth:** None  
**State:** Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery

**Exclusionary/Cautious Zone:** A 1 km radius Operational Area will be applied around the TPA03 drill centre.  
A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.

**Vessels:** Heavy Well Intervention Vessel (HWIV)  
General supply/support vessels

**Commercial fishing implications:**

Woodside has assessed potential impacts for commercial fisheries based on Fishcube, ABARES/AFMA data, fishing methods and water depth. We note there are three overlapping Commonwealth managed fisheries, listed below, none of which have been active in the Operational Area in recent years.

- Southern Bluefin Tuna Fishery
- Western Tuna and Billfish Fishery
- Western Skipjack Fishery

Woodside has provided information to the fishery’s representative organisation on AFMA advice that it expects all Commonwealth fishers who have entitlements to fish within the proposed area to be consulted, which can be through the relevant fishing industry associations.

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description   | Mitigation And / Or Management Measures   |
|--|--|---|
| <b>Planned</b>                             |  |   |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement | <p>Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP</p> <p>Notification to relevant stakeholders prior to the commencement of activities</p> <p>TPA03 well to continue to be marked on navigational charts</p> |

## TPA03 Well Intervention Environment Plan

|                           |  |  |
|---------------------------|--|--|
| <i>Marine discharges</i>  | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column | All routine marine discharges will be managed according to legislative and regulatory requirements   |
| <i>Seabed disturbance</i> | Disturbance to the seabed from removal activities  | No anchoring of vessels<br>Attempted retrieval of dropped objects  |
| <i>Vessel interaction</i> | The presence of vessels may preclude other marine users from access to the area  | Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users<br><br>Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity<br><br>A 1 km radius Operational Area will be applied around the TPA03 drill centre<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements<br><br>Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area |

### Unplanned Risks

|                                |  |   |
|--------------------------------|--|---|
| <i>Hydrocarbon release</i>     | Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture                     | Appropriate spill response plans, equipment and materials will be in place and maintained<br><br>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment |
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br><br>Compliance with Australian biosecurity requirements and guidance                    |

### Feedback:

If you have any feedback on these activities, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

### 1.13 Email sent to Pearl Producers Australia (PPA) (22 June 2022)

Dear [REDACTED]

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.**

We have identified potential impacts to active commercial fishers and the environment, which are summarised below. We have endeavoured to reduce these risks to an as low as reasonably practicable level.

An information sheet (also on our [website](#)), and a map of relevant fisheries is attached.

Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

**Activity:**

TPA03 Well Intervention Environment Plan

|                                    |   |
|------------------------------------|---|
| <b>Summary:</b>                    | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.  |
| <b>Location:</b>                   | ~138 km north west of Dampier   |
| <b>Approx. Water Depth (m):</b>    | ~113 m  |
| <b>Schedule:</b>                   | Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                   | Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Relevant Fisheries:</b>         | <b>Commonwealth:</b> None<br><b>State:</b> Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery  |
| <b>Exclusionary/Cautious Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.             |
| <b>Vessels:</b>                    | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels   |

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description  | Mitigation And / Or Management Measures   |
|--|---|---|
| <b>Planned</b>                             |   |   |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement  | <p>Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP</p> <p>Notification to relevant stakeholders prior to the commencement of activities</p> <p>TPA03 well to continue to be marked on navigational charts</p> |
| <i>Marine discharges</i>                   | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality | All routine marine discharges will be managed according to legislative and regulatory requirements  |

TPA03 Well Intervention Environment Plan

however they will be rapidly diluted and dispersed in the water column

*Seabed disturbance*

Disturbance to the seabed from removal activities

No anchoring of vessels  
Attempted retrieval of dropped objects

*Vessel interaction*

The presence of vessels may preclude other marine users from access to the area

Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users  
Notification to relevant fishery stakeholders and Government maritime safety agencies of specific start and end dates, specific vessel-on-location and any exclusion zones prior to commencement of the activity  
A 1 km radius Operational Area will be applied around the TPA03 drill centre  
A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements  
Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area

**Unplanned Risks**

*Hydrocarbon release*

Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture

Appropriate spill response plans, equipment and materials will be in place and maintained  
Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment

*Invasive Marine Species*

Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling

All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species  
Compliance with Australian biosecurity requirements and guidance

**Feedback:**

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## TPA03 Well Intervention Environment Plan

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

### 1.14 Email sent to Western Australian Fishing Industry Association (WAFIC) (22 June 2022)

Dear [REDACTED]

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

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Fisheries have been identified as being relevant based on fishing licence overlap with the activity area, assessment of government fishing effort data (including Fishcube and AFMA) from recent years, fishing methods and water depth.

Please provide your views by **22 July 2022**.

#### **Activity:**

#### **Summary:**

Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

#### **Location:**

~138 km north west of Dampier

**Approx. Water Depth (m):** ~113 m

**Schedule:** Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

**Duration:** Well intervention activities are expected to take approximately 2 weeks to complete.

**Relevant Fisheries:** **Commonwealth:** None  
**State:** Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery, Pilbara Line Fishery

**Exclusionary/Cautious Zone:** A 1 km radius Operational Area will be applied around the TPA03 drill centre.  
A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.

**Vessels:** Heavy Well Intervention Vessel (HWIV)  
General supply/support vessels

**Commercial fishing implications:**

Woodside has assessed potential impacts for commercial fisheries based on Fishcube, ABARES/AFMA data, fishing methods and water depth. We note there are three overlapping Commonwealth managed fisheries, listed below, none of which have been active in the Operational Area in recent years.

- Southern Bluefin Tuna Fishery
- Western Tuna and Billfish Fishery
- Western Skipjack Fishery

Woodside has provided information to the fishery’s representative organisation on AFMA advice that it expects all Commonwealth fishers who have entitlements to fish within the proposed area to be consulted, which can be through the relevant fishing industry associations.

**Potential risks to commercial fishing and proposed mitigation measures:**

| Potential Risk                             | Risk Description   | Mitigation And / Or Management Measures   |
|--|--|---|
| <b>Planned</b>                             |  |   |
| <i>Physical presence of infrastructure</i> | Physical presence of infrastructure on seafloor causing interference or displacement | <p>Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and, government departments and agencies to inform decision making for the proposed activity and development of the EP</p> <p>Notification to relevant stakeholders prior to the commencement of activities</p> <p>TPA03 well to continue to be marked on navigational charts</p> |

## TPA03 Well Intervention Environment Plan

|                           |  |  |
|---------------------------|--|--|
| <i>Marine discharges</i>  | Discharges from the operation of project vessels may include sewage, grey water, drain and bilge water, cooling water and brine. These discharges may result in a localised short-term reduction in water quality however they will be rapidly diluted and dispersed in the water column | All routine marine discharges will be managed according to legislative and regulatory requirements   |
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### Unplanned Risks

|                                |  |   |
|--------------------------------|--|---|
| <i>Hydrocarbon release</i>     | Loss of hydrocarbons to the marine environment from a well or vessel collision resulting in a tank rupture                     | Appropriate spill response plans, equipment and materials will be in place and maintained<br><br>Appropriate refuelling procedures and equipment will be used to prevent spills to the marine environment |
| <i>Invasive Marine Species</i> | Introduction or translocation and establishment of invasive marine species to the area via vessels ballast water or biofouling | All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species<br><br>Compliance with Australian biosecurity requirements and guidance                    |

### Feedback:

*TPA03 Well Intervention Environment Plan*

If you have any feedback on these activities, please respond to Woodside at:  
[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plan 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 2009* (Cth).

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

Please provide your views by **22 July 2022**.

## 1.15 Woodside Consultation Information Sheet (sent to all relevant persons)



# TPA03 WELL INTERVENTION ENVIRONMENT PLAN

## CARNARVON BASIN, NORTH-WEST AUSTRALIA

### Proposed activity

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

### Project Vessels

The proposed TPA03 well intervention activities will be performed by a Heavy Well Intervention Vessel (HWIV). The project may be supported by general support vessels. The project vessels will operate on dynamic positioning (DP) and will not anchor/moor on the seabed.

Well intervention activities for the TPA03 well are currently expected to take approximately 2 weeks to complete. It is anticipated that vessels will operate 24 hours per day for the duration of the activities.

### Communications with mariners

A 1 km radius Operational Area will be applied around the TPA03 drill centre.

A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.

Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area and remain clear

of the Exclusion zone. The TPA03 well will continue to be marked on navigational charts.

### Background

During routine testing of the TPA03 production well, the valve controlling production from the lower reservoir zone, was closed to test the reservoirs. The well intervention activities will enable access to the well's lower reservoir to be restored so as to continue production (the purpose of this Environment Plan (EP)). All other petroleum activities within the scope of the accepted GWA Facility Operations EP, have been or will be, completed in accordance with that EP, and are not included in the scope of this EP.

### Assessment

Woodside has undertaken an assessment to identify potential risks to the marine environment and relevant persons, considering timing, duration, location and potential impacts arising from the planned activities. A number of mitigation and management measures will be implemented and are summarised in **Table 2**. Further details will be provided in the EP.

In preparing the Environment Plan, our intent is to minimise environmental and social impacts associated with the proposed activities, and we are seeking any interest or comments you may have to inform our decision making.

### Joint Venture

Woodside Energy Ltd is operator on behalf of the North West Shelf joint venture, consisting of BHP Petroleum (North West Shelf) Pty Ltd\*, BP Developments Australia Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, Shell Developments (Australia) Pty Ltd and Woodside Energy Ltd.

*\* BHP Petroleum (North West Shelf) Pty Ltd became a member of the Woodside group of companies on the completion of the merger between Woodside Energy Group Ltd and the petroleum business of BHP Group Limited on 1 June 2022 and plans to change its name in July 2022.*

**We welcome your feedback by 22 July 2022.**

## TPA03 Well Intervention Environment Plan

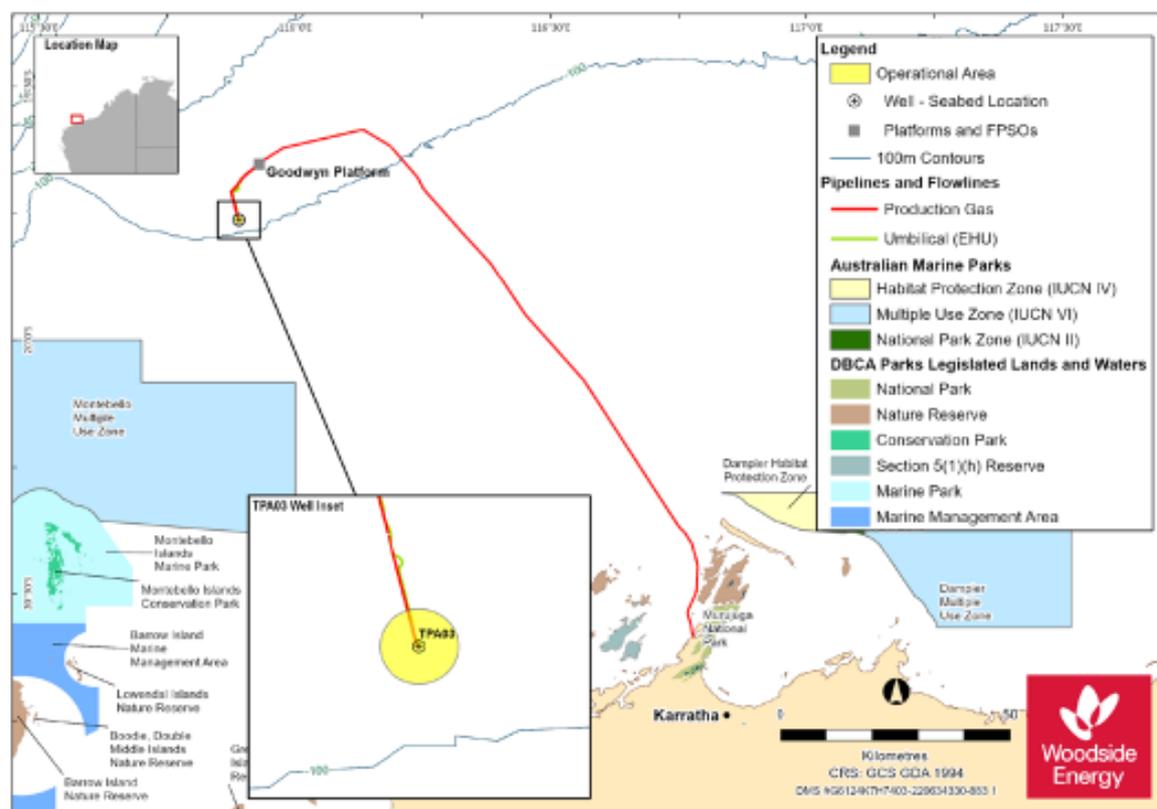


Figure 1. Petroleum Activity Program Operational Areas

Table 1. Activity summary

| TPA03 Well Intervention Environment Plan              |   |
|---|---|
| <b>Permit Area</b>                                    | • WA-5-L  |
| <b>Approximate location</b>                           | • 19° 45' 43.618" S   115° 53' 23.986" E  |
| <b>Approximate water depth</b>                        | • -113 m  |
| <b>Commencement date</b>                              | • Planned well intervention activities will commence around Q4 2022 – Q1 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Approximate estimated duration</b>                 | • Well intervention activities are expected to take approximately 2 weeks to complete.  |
| <b>Approximate location</b>                           | • 19° 45' 43.618" S   115° 53' 23.986" E  |
| <b>Vessels</b>  | • Heavy Well Intervention Vessel (HWIV)<br>• General supply/support vessels   |
| <b>Exclusion zones</b>                                | • A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>• A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.           |
| <b>Distance to nearest town</b>                       | • -138 km north west of Dampier   |
| <b>Distance to nearest marine park/nature reserve</b> | • -70 km north west of the Montebello Islands Marine Park (WA)<br>• -33 km north of the Montebello Marine Park – Multiple Use Zone (Cwith)  |

### Mitigation and Management Measures

Woodside has undertaken an assessment to identify potential impacts and risks to the marine environment arising from the activities considering timing, duration, location.

A number of mitigation and management measures for the TPA03 well intervention activities are outlined in **Table 2**. Further details will be provided in the EP.

**Table 2. Summary of key risks and/or impacts and management measures during well intervention activities.**

| Potential Risk and/or Impact  | Mitigation and/or Management Measure  |
|---|---|
| <b>Planned</b>  |   |
| <b>Physical presence of infrastructure on seafloor causing interference or displacement</b> | <ul style="list-style-type: none"> <li>• Consultation with relevant persons. For example, commercial fishers and their representative organisations, petroleum titleholders and government departments and agencies to inform decision making for the proposed activity and development of the EP.</li> <li>• Notification to relevant persons prior to the commencement of activities.</li> </ul>  |
| <b>Chemical use</b>   | <ul style="list-style-type: none"> <li>• Chemical use will be managed in accordance with Woodside and contractor chemical selection and approval procedures.</li> </ul>   |
| <b>Marine discharges</b>  | <ul style="list-style-type: none"> <li>• All routine marine discharges will be managed according to legislative and regulatory requirements.</li> </ul>   |
| <b>Seabed disturbance</b>   | <ul style="list-style-type: none"> <li>• No anchoring of project vessels.</li> </ul>  |
| <b>Vessel Interaction</b>   | <ul style="list-style-type: none"> <li>• Attempted retrieval of dropped objects and temporary installation equipment.</li> <li>• Navigation aids and practices will be used as required by Maritime Regulations to minimise potential impact on other marine users.</li> <li>• A 1 km radius Operational Area will be applied around the TPA03 drill centre.</li> <li>• A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</li> <li>• Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area.</li> <li>• Stakeholder engagement activities will be conducted as part of the EP.</li> <li>• Waste generated on the vessels will be managed in accordance with legislative requirements and a Waste Management Plan.</li> </ul> |
| <b>Waste generation</b>   | <ul style="list-style-type: none"> <li>• Wastes will be managed and disposed of in a safe and environmentally responsible manner that prevents accidental loss to the environment.</li> <li>• Wastes transported onshore will be sent to appropriate recycling or disposal facilities by a licensed waste contractor.</li> </ul>  |
| <b>Emissions to atmosphere</b>  | <ul style="list-style-type: none"> <li>• Standard vessel operations.</li> </ul>   |
| <b>Unplanned</b>  |   |
| <b>Hydrocarbon release</b>  | <ul style="list-style-type: none"> <li>• Appropriate spill response plans, equipment and materials will be in place and maintained.</li> <li>• Appropriate procedures and equipment will be used to prevent spills to the marine environment.</li> </ul>  |
| <b>Marine fauna interactions</b>  | <ul style="list-style-type: none"> <li>• Vessel masters will implement interaction management actions in accordance with the <i>Environment Protection and Biodiversity Conservation Regulations 2000 (Cth)</i>.</li> </ul>   |
| <b>Introduction of Invasive marine species</b>  | <ul style="list-style-type: none"> <li>• All vessels will be assessed and managed as appropriate to prevent the introduction of invasive marine species.</li> <li>• Compliance with Australian biosecurity requirements and guidance.</li> </ul>  |

**Feedback**

Woodside consults relevant persons in the course of preparing Environment Plans to ensure relevant feedback informs its planning for proposed petroleum activities and builds upon Woodside's relevant person consultation for its offshore petroleum activities in the region.

If you would like to comment on the proposed activities outlined in this information sheet, or would like additional information, please contact Woodside before **22 July 2022** via:

E: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au)

Toll free: 1800 442 977

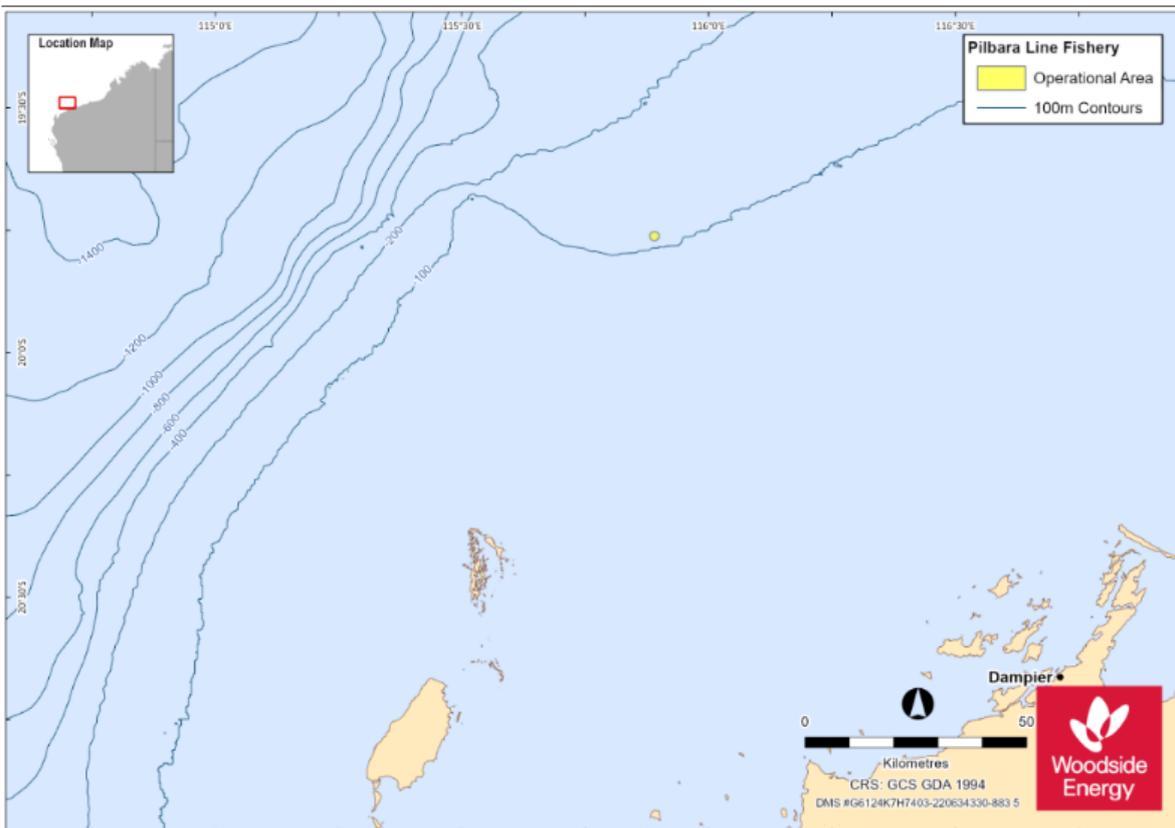
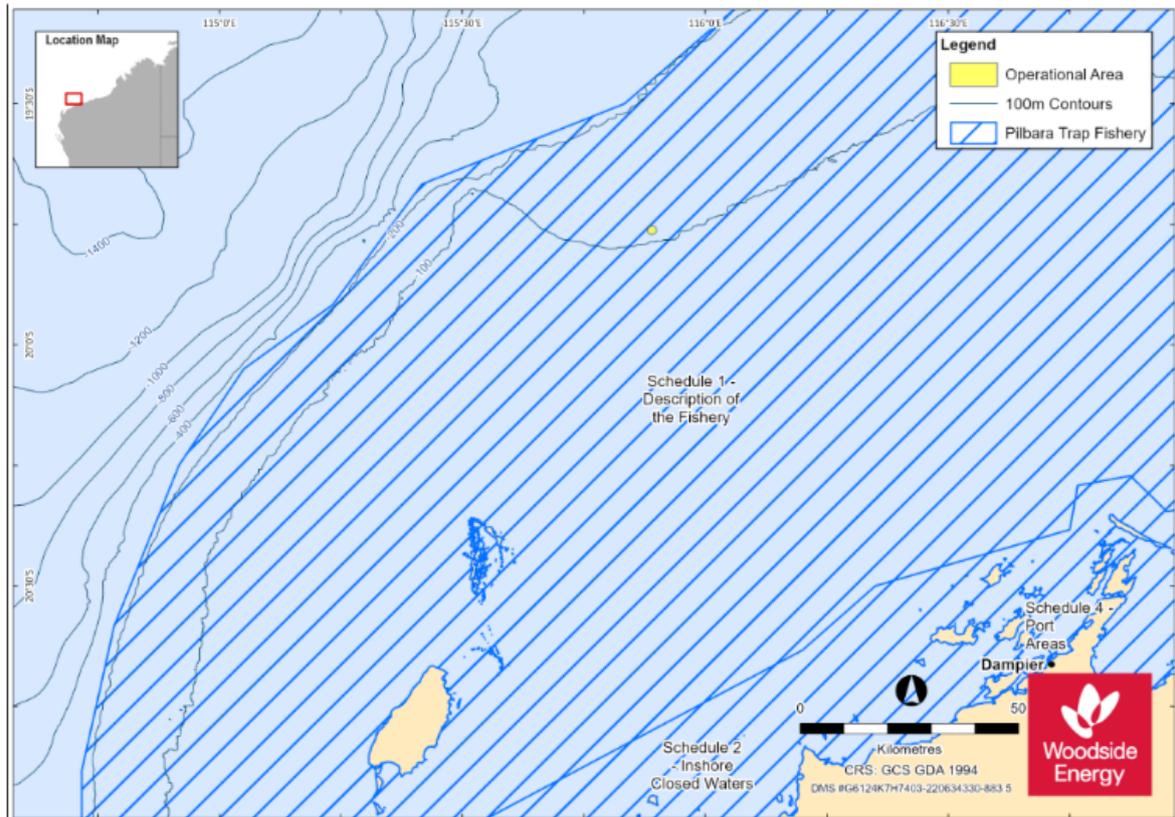
You can subscribe on our website to receive Consultation Information Sheets for proposed activities: [www.woodside.com.au](http://www.woodside.com.au).

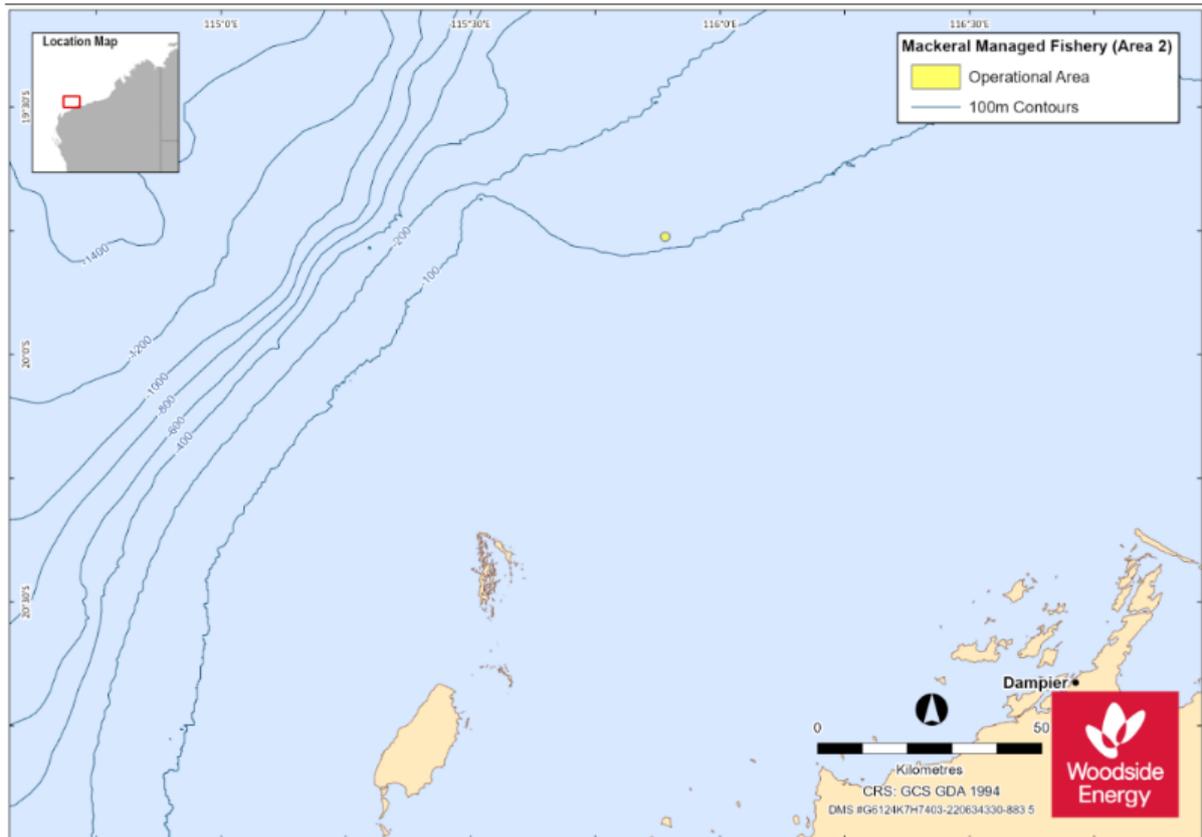
Please note that stakeholder feedback will be communicated to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) required under legislation. Woodside will communicate any material changes to the proposed activity to affected stakeholders as they arise.

Please note that your feedback and our response will be included in our Environment Plan for the proposed activity, which will be submitted to the NOPSEMA for acceptance in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (Cth).

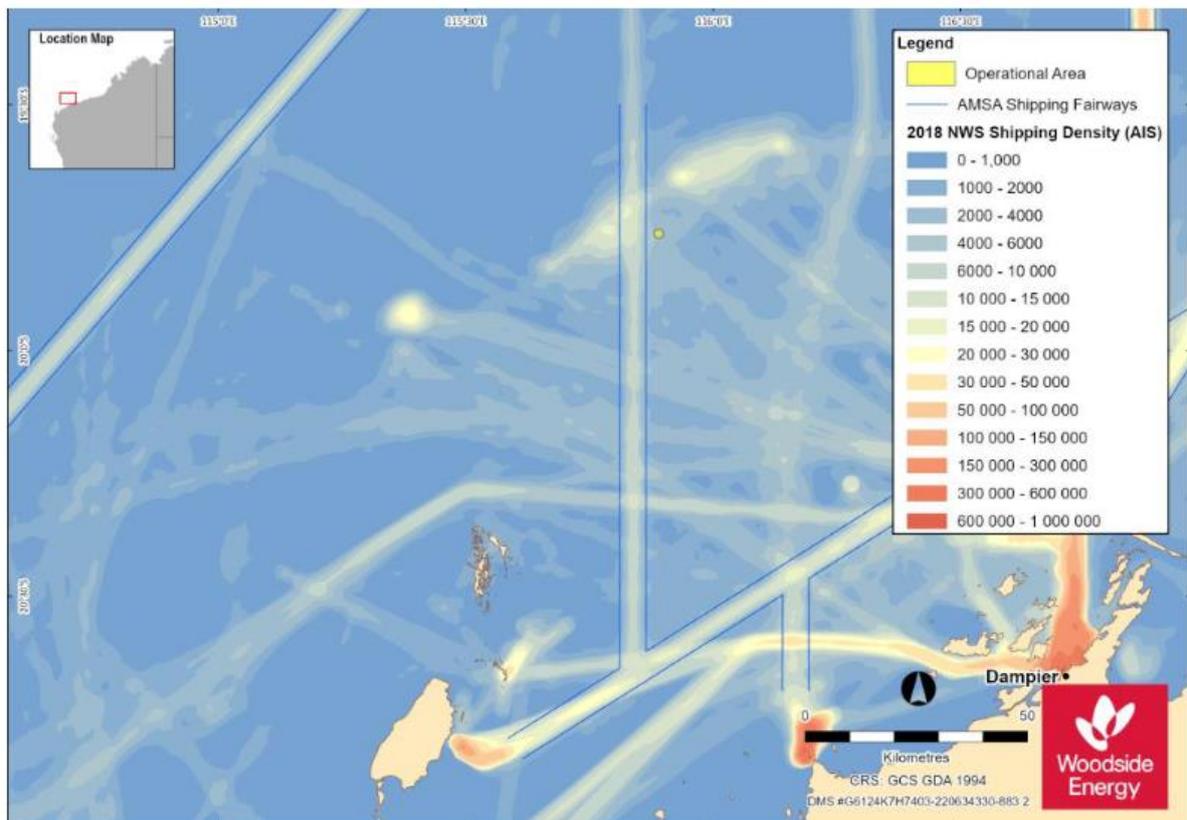
Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan in order for this information to remain confidential to NOPSEMA.

**1.16 State fisheries map sent to DPIRD, WAFIC, PPA, Mackerel Managed Fishery (Area 2), Pilbara Trap Fishery and Pilbara Line Fishery (22 June 2022)**

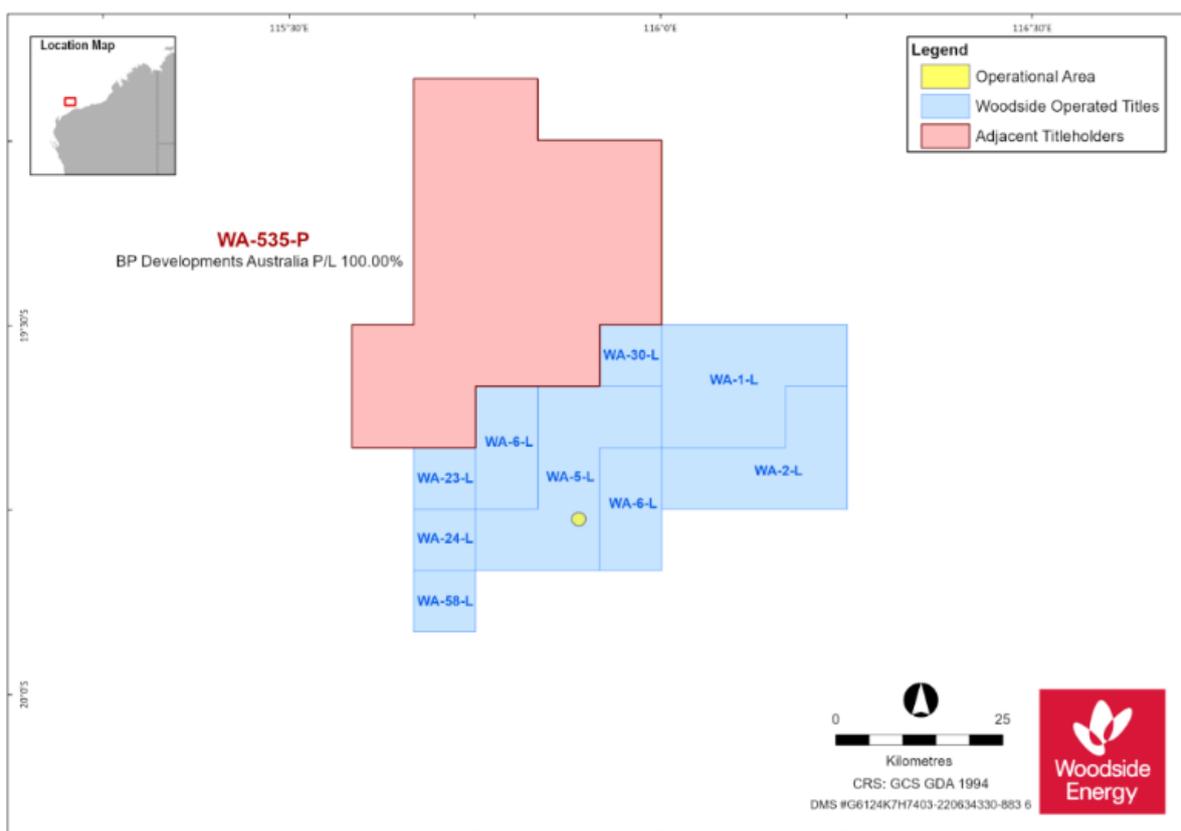




1.17 Shipping lane map sent to AHO and AMSA – Maritime Safety (22 June 2022)



### 1.18 Titleholder map sent to BP Development Australia (22 June 2022)



## 2. Additional consultation

### 2.1 Email sent to Director of National Parks (DNP) (11 July 2022)

Dear Director of National Parks

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

A Consultation Information Sheet is attached, which provides background on the proposed activity, including a summary of potential key risks and associated management measures. The Information Sheet is also available on our [website](#).

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

### 2.2 Email sent to DPIRD (11 July 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

**2.3 Letter sent to Mackerel Managed Fishery (Area 2) (23 Licence Holders)  
(11 July 2022)**

Please direct all responses/queries to:  
**Woodside Feedback**  
T: 1800 442 977  
E: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au)

11 July 2022



**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](http://www.woodside.com)

Dear Mackerel Managed Fishery

Woodside previously consulted you (letter attached) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

**Woodside Feedback**



Woodside Energy  
Mia Yellagonga  
Karlak, 11 Mount Street  
Perth WA 6000  
Australia

T: 1800 442 977  
E: [feedback@woodside.com.au](mailto:feedback@woodside.com.au)  
[www.woodside.com](http://www.woodside.com)  
f t in y i

Attached: Consultation letter (22 June 2022), Consultation Information Sheet and fisheries map

#### **2.4 Email sent to Pilbara Trap Fishery (6 Licence Holders) and Pilbara Line Fishery (9 Licence Holders) (11 July 2022)**

Dear Fishery Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

#### **2.5 Email sent to WAFIC (11 July 2022)**

Dear 

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

**2.6 Email sent to ABF, DISR (formerly DISER), DMIRS, DoT and APPEA (12 July 2022)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

A Consultation Information Sheet is attached, which provides background on the proposed activity, including a summary of potential key risks and associated management measures. The Information Sheet is also available on our [website](#).

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

**2.7 Email sent to AFMA (12 July 2022)**

Dear AFMA

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

## **2.8 Email sent to AMSA – Marine Safety (12 July 2022)**

Dear AMSA

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and shipping lane map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

## **2.9 Email sent to DCCEEW / DAFF – Fisheries and Biosecurity (formerly DAWE) (12 July 2022)**

Dear DAWE

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is

## *TPA03 Well Intervention Environment Plan*

required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

A Consultation Information Sheet is attached, which provides background on the proposed activity, including a summary of potential key risks and associated management measures. The Information Sheet is also available on our [website](#).

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

### **2.10 Email sent to BP Developments Australia (12 July 2022)**

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and Titleholder map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

### **2.11 Email sent to CFA, ASBTIA and Tuna Australia (12 July 2022)**

Dear Fisheries Stakeholder

## *TPA03 Well Intervention Environment Plan*

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

### **2.12 Email sent to PPA (12 July 2022)**

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q4 2022 – Q1 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

An information sheet (also on our [website](#)) and relevant fisheries map is attached.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **22 July 2022**.

Regards,

### 3. Activity update

#### 3.1 Email sent to ABF, DISR, DoT and APPEA (15 September 2022)

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

#### 3.2 Email sent to DBCA (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.3 Email sent to DMIRS (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

## TPA03 Well Intervention Environment Plan

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.4 Email sent to AFMA (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.5 Email sent to AHO (15 September 2022)

Dear AHO

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.6 Email sent to AMSA – Marine Safety (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |

## TPA03 Well Intervention Environment Plan

|        |   |  |
|--------|---|--|
| Vessel | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels | Well Intervention Vessel (WIV)<br>General supply/support vessels |
|--------|---|--|

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.7 Email sent to DCCEEW / DAFF – Fisheries and Biosecurity (15 September 2022)

Dear DCCEEW

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.8 Email sent to Director of National Parks (DNP) (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.9 Email sent to DPIRD (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information | Updated activity information |
|----------|-------------------------------|------------------------------|
|----------|-------------------------------|------------------------------|

TPA03 Well Intervention Environment Plan

|        |  |  |
|--------|--|--|
| Timing | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.10 Letter sent to Mackerel Managed Fishery (Area 2) (23 Licence Holders) (15 September 2022)



Please direct all responses/queries to:  
Woodside Feedback  
T: 1800 442 977  
E: [Feedback@woodside.com.au](mailto: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](http://www.woodside.com)

15 September 2022

Dear Mackerel Managed Fishery

Woodside previously consulted you (letter attached) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel - although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre, and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

#### Woodside Feedback



Woodside Energy  
Mia Yellagonga  
Karlak, 11 Mount Street  
Perth WA 6000  
Australia

T: 1800 442 977  
E: [feedback@woodside.com.au](mailto:feedback@woodside.com.au)  
[www.woodside.com](http://www.woodside.com)  
f t in v @

Attached: Consultation letter (22 June 2022), Follow up consultation letter (15 July 2022), Consultation Information Sheet and fisheries map

### 3.11 Email sent to Pilbara Line Fishery (9 Licence Holders), Pilbara Trap Fishery (6 Licence Holders) (15 September 2022)

Dear Fisheries Stakeholder

## TPA03 Well Intervention Environment Plan

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.12 Email sent to BP Developments Australia (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information   | Updated activity information   |
|----------|---|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities |

TPA03 Well Intervention Environment Plan

|        |   |  |
|--------|---|--|
|        | to take approximately 2 weeks to complete.                              | are expected to take approximately 2 weeks to complete.          |
| Vessel | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels | Well Intervention Vessel (WIV)<br>General supply/support vessels |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

**3.13 Email sent to CFA and ASBTIA (15 September 2022)**

Dear Fisheries Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.14 Email sent to Tuna Australia (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.15 Email sent to PPA (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV)

to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

### 3.16 Email sent to WAFIC (15 September 2022)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

Please be advised that following further development of the TPA03 Well Intervention Environment Plan, activity timing and vessel requirements have changed as described in the table below. Woodside is now considering a wider range of Well Intervention Vessels (WIV) to perform the intervention, which is no longer limited to a Heavy Well Intervention Vessel although this is the largest type of WIV that could be used for the activity.

| Activity | Previous activity information  | Updated activity information   |
|----------|--|--|
| Timing   | Anticipated to be completed around Q4 2022 – Q1 2023. Well intervention activities are expected to take approximately 2 weeks to complete. | Anticipated to be completed around Q1 2023 – Q3 2023. Well intervention activities are expected to take approximately 2 weeks to complete. |
| Vessel   | Heavy Well Intervention Vessel (HWIV)<br>General supply/support vessels  | Well Intervention Vessel (WIV)<br>General supply/support vessels   |

*TPA03 Well Intervention Environment Plan*

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The Operational Area remains a 1 km radius around the TPA03 drill centre and the temporary safety exclusion zone remains 500 m around the vessel to manage movements.

Should you require additional information or have a comment to make about the proposed activity, please provide your feedback by **29 September 2022**.

Regards,

## 4. Consultation activity update

### 4.1 Woodside Activity Update Consultation Information Sheet (sent to all relevant persons)



# TPA03 WELL INTERVENTION ENVIRONMENT PLAN

## CARNARVON BASIN, NORTH-WEST AUSTRALIA

Woodside consults relevant persons in the course of preparing an Environment Plan (EP) to notify them, obtain their input and to assist Woodside to confirm current measures or identify additional measures, if any, that could be taken to lessen or avoid potential adverse effects of the proposed activity on the environment. This is the intended outcome of consultation.

Woodside's aim is to ensure the activity is carried out in a manner that is consistent with the principles of ecologically sustainable development (ESD), by which the environmental impacts and risks of the activity are reduced to as low as reasonably practicable (ALARP) and of an acceptable level. We want relevant persons whose functions, interests or activities that may be affected by the proposed activity to have the opportunity to provide feedback on our proposed activity, in accordance with the intended outcome of consultation.

### Overview

Woodside is planning to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be de-isolated and available for production. The subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations Environment Plan (March 2022).

The activities will be undertaken in Commonwealth waters around 138 km north-west of Dampier in permit area WA-5-L. The TPA03 well is located in approximately 113 m water depth.

Activities are currently anticipated to be completed around Q1 2023 – Q3 2023. The timing and direction of the proposed activities is subject to change due to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.

### Project vessels

The proposed TPA03 well intervention activities will be performed by a Well Intervention Vessel (WIV). The project may be supported by general supply/support vessels. The project vessels will operate on dynamic positioning (DP) and will not anchor/moor on the seabed.

Well intervention activities for the TPA03 well are currently expected to take approximately 1-2 weeks to complete. It is anticipated that vessels will operate 24 hours per day for the duration of the activities.

### Communications with mariners

A 1 km radius Operational Area will be applied around the TPA03 drill centre.

A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.

Commercial fishers and other marine users are permitted to use but should take care when entering the Operational Area and remain clear of the exclusion zone. The TPA03 well will continue to be marked on navigational charts.

### Background

During routine testing of the TPA03 production well, the valve controlling production from the lower reservoir zone was closed to test the reservoirs. The well intervention activities will enable access to the well's lower reservoir to be restored so as to continue production (the purpose of this EP). All other petroleum activities within the scope of the accepted GWA Facility Operations EP have been or will be completed in accordance with that EP and are not included in the scope of this EP.

### Assessment

Woodside has undertaken an assessment to identify potential risks to the marine environment and relevant persons, considering timing, duration, location and potential impacts arising from the planned activities. A number of mitigation and management measures will be implemented and are summarised in **Table 2**. Further details will be provided in the EP.

In preparing the EP, our intent is to minimise environmental and social impacts associated with the proposed activities, and we are seeking any interest or comments you may have to inform our decision making.

### Joint Venture

Woodside Energy Ltd is operator on behalf of the North West Shelf joint venture, consisting of Woodside Energy (North West Shelf) Pty Ltd, BP Developments Australia Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, Shell Developments (Australia) Pty Ltd and Woodside Energy Ltd.

**We welcome your feedback by 17 March 2023.**

# TPA03 Well Intervention Environment Plan

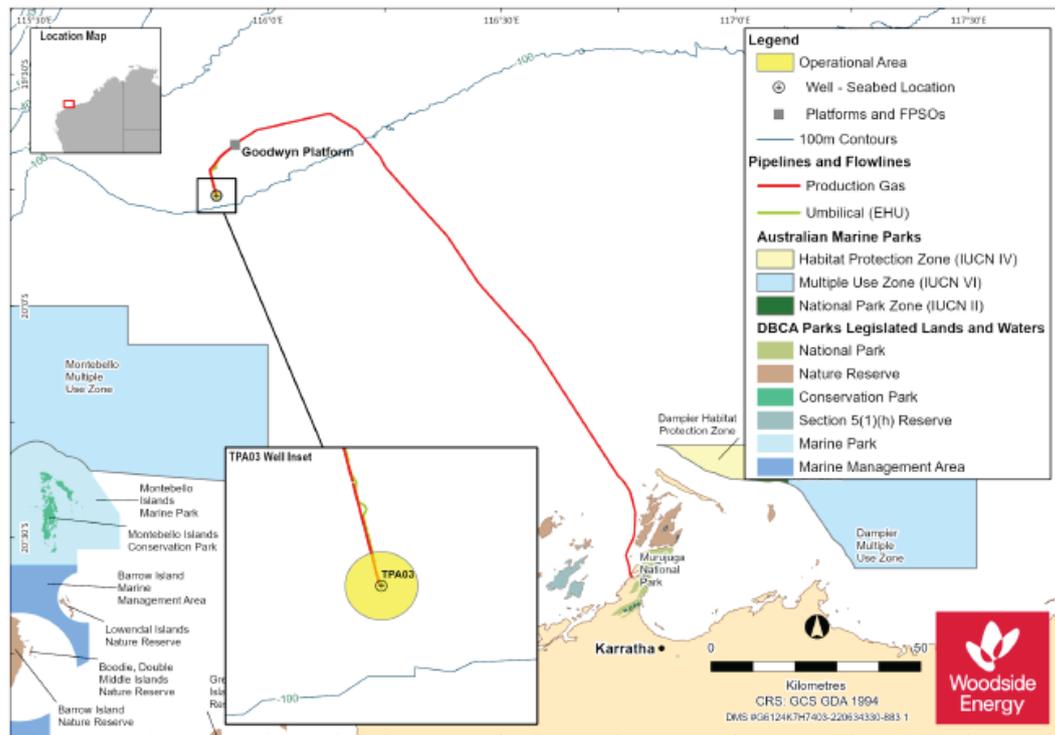


Figure 1. Petroleum Activity Program Operational Areas

Table 1. Activity summary

| TPA03 Well Intervention Environment Plan              |   |
|---|---|
| <b>Permit Area</b>                                    | <ul style="list-style-type: none"> <li>WA-5-L</li> </ul>  |
| <b>Approximate location</b>                           | <ul style="list-style-type: none"> <li>19° 45' 43.618" S   115° 53' 23.986" E</li> </ul>  |
| <b>Approximate water depth</b>                        | <ul style="list-style-type: none"> <li>-113 m</li> </ul>  |
| <b>Commencement date</b>                              | <ul style="list-style-type: none"> <li>Planned well intervention activities will commence around Q1 2023 - Q3 2023, subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</li> </ul> |
| <b>Approximate estimated duration</b>                 | <ul style="list-style-type: none"> <li>Well intervention activities are expected to take -1-2 weeks to complete.</li> </ul>   |
| <b>Approximate location</b>                           | <ul style="list-style-type: none"> <li>19° 45' 43.618" S   115° 53' 23.986" E</li> </ul>  |
| <b>Vessels</b>  | <ul style="list-style-type: none"> <li>Well Intervention Vessel (WIV)</li> <li>General supply/support vessels</li> </ul>  |
| <b>Exclusion zones</b>                                | <ul style="list-style-type: none"> <li>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</li> <li>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</li> </ul>       |
| <b>Distance to nearest town</b>                       | <ul style="list-style-type: none"> <li>-138 km north west of Dampier</li> </ul>   |
| <b>Distance to nearest marine park/nature reserve</b> | <ul style="list-style-type: none"> <li>-70 km north west of the Montebello Islands Marine Park (WA)</li> <li>-33 km north of the Montebello Marine Park - Multiple Use Zone (Cwith)</li> </ul>  |

### Environment That May Be Affected (EMBA)

The environment that may be affected (EMBA) is the largest spatial extent where the TPA03 well intervention activity could potentially have an environmental consequence (direct or indirect impact). The broadest extent of the EMBA takes into consideration planned and unplanned activities, and for this EP is determined by a highly unlikely release of hydrocarbons to the environment as a result of well loss of integrity and a vessel collision. This is depicted in **Figure 2**.

The EMBA does not represent the extent of predicted impact of the highly unlikely hydrocarbon release. Rather, the EMBA represents the merged area of many possible paths a highly unlikely hydrocarbon release could travel depending on the weather and ocean conditions at the time of the release. This means in the highly unlikely event a hydrocarbon release does occur, the entire EMBA will not be affected and the specific and minimal part of the EMBA that is affected will only be known at the time of the release.

For this EP Woodside has defined the EMBA by combining the potential spatial extent of surface and in-water (dissolved and entrained) hydrocarbons, resulting from a worst-case credible spill; loss of well integrity and a vessel collision.

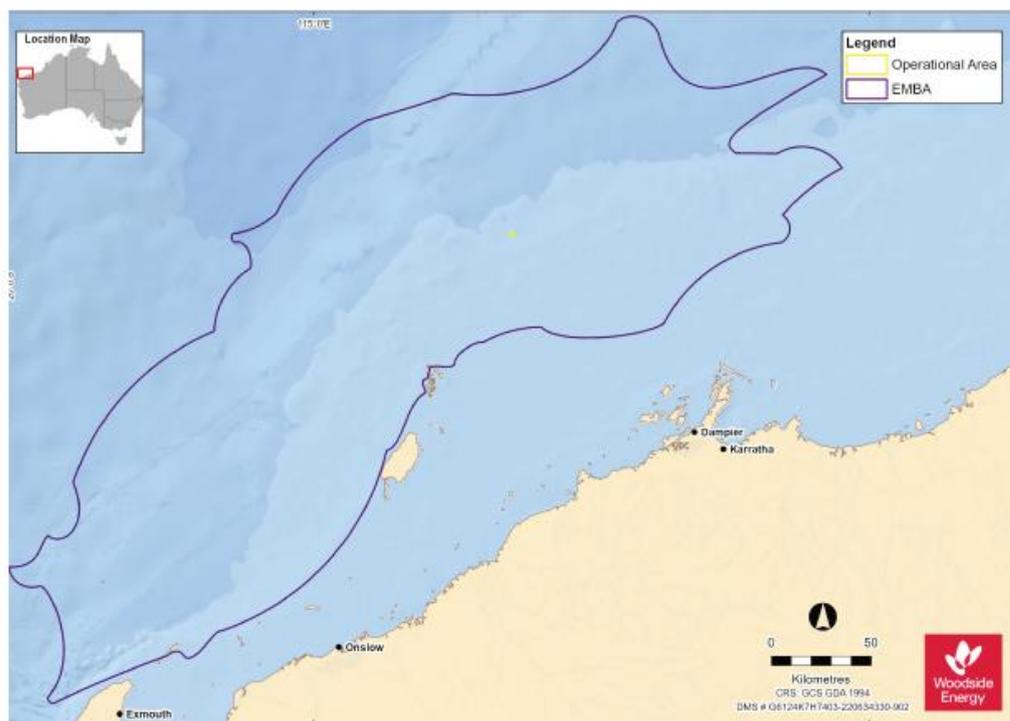


Figure 2. Environment that May Be Affected by the TPA03 Well Intervention Activity

**Mitigation and Management Measures**

Woodside has undertaken an assessment to identify potential impacts and risks to the environment arising from the TPA03 well intervention activity.

A number of mitigation and management measures for the TPA03 well intervention activity are outlined in **Table 2**. Further details will be provided in the EP.

**Table 2. Summary of key risks and/or Impacts and preliminary management measures for the TPA03 well Intervention activity**

| Potential Risk/Impact   | Description of Source of Potential Impact/Risk  | Description of Potential Impact/Risk   | Preliminary Mitigation and/or Management Measures <sup>1</sup>   |
|---|---|--|--|
| <b>Planned</b>  |   |  |  |
| <b>Physical presence - Interactions with other marine users</b>   | <ul style="list-style-type: none"> <li>Several vessel types will be required to complete the activity including a Well Intervention Vessel (WIV) (operating on Dynamic Positioning (DP)) and potentially support vessels.</li> <li>Well intervention activities are expected to take - 1-2 weeks and will occur for 24 hours, 7 days a week while the activity is underway.</li> <li>The physical presence and movement of project vessels within the Operational Area has the potential to displace other marine users.</li> </ul> | <ul style="list-style-type: none"> <li>The Operational Area overlaps three Commonwealth and twelve State managed fisheries. However, only the State-managed Pilbara Line Fishery, Pilbara Trap Managed Fishery and the Mackerel Managed Fishery (Area 2) are considered to have potential for interaction with project activities.</li> <li>Recreational fishing within the Operational Area is expected to be limited given the distance from boating facilities, lack of natural attractions (e.g. reefs or shoals) and the water depth of the Operational Area (approximately 115 m).</li> <li>Commercial shipping occurs within the region and the nearest marine fairway is approximately 0.18 km west of the Operational Area. Notably, shipping in the area is mainly related to the resources and oil and gas industries.</li> <li>The potential impacts associated with this activity may include displacement of vessels as they make slight course alterations to avoid the project vessels. Impacts to other marine users from the activity are not expected to exceed temporary, highly localised disruptions.</li> </ul> | <ul style="list-style-type: none"> <li>Vessels adhere to regulatory requirements for navigational safety.</li> <li>Establish a 500 m petroleum safety zone around the WIV which is communicated to marine users.</li> <li>Notify relevant government departments, fishing industry representative bodies and licence holders of activities prior to commencement and on completion of activities.</li> <li>Notify the Australian Hydrographic Office (AHO) prior to commencement of the activity to ensure marine users are aware of the activity.</li> <li>Establish and maintain a publicly available map which provides stakeholders with updated information on the activities being conducted.</li> <li>Consult with relevant persons so they are informed of the proposed activities.</li> </ul> |
| <b>Physical presence - disturbance to benthic habitat from Intervention and ROV operations, and subsea Infrastructure</b> | <p>Seabed disturbance may result from:</p> <ul style="list-style-type: none"> <li>Removal of marine growth on Christmas tree and wellhead.</li> <li>Placement of acoustic transponders on seabed.</li> <li>Equipment laydown or ROV operations.</li> <li>Remotely Operated Vessel (ROVs) operations.</li> </ul>   | <ul style="list-style-type: none"> <li>ROV operations, subsea cleaning and transponder or equipment laydown may result in localised and negligible physical disturbance of benthic habitat and indirect disturbance to benthic habitats from sedimentation.</li> <li>Given the short nature of each activity and the small footprint, any impacts to water and sediment quality are likely to be localised and transient in nature.</li> <li>The Operational Area overlaps the Ancient Coastline at 125 m Depth Contour KEF. Ecological functions of the KEF (submerged coastline providing areas of hard substrate and diverse biological assemblages and enhanced productivity) are not expected to be impacted based on the short nature and small footprint of the activity.</li> </ul>  | <ul style="list-style-type: none"> <li>Infrastructure wet parked (temporarily placed) on the seabed will be tracked and removed.</li> </ul>  |

<sup>1</sup> This EP is currently under assessment – these mitigation and management measures are subject to change through the consultation and assessment process and may not represent content in the publicly available EP or in the final plan once accepted.

| Potential Risk/Impact   | Description of Source of Potential Impact/Risk   | Description of Potential Impact/Risk  | Preliminary Mitigation and/or Management Measures <sup>1</sup>  |
|---|--|---|---|
| <b>Routine acoustic emissions</b>   | <ul style="list-style-type: none"> <li>WIV and support vessels will generate noise in the air and underwater due to the operation of Dynamic Positioning (DP) systems.</li> <li>Underwater noise may also be generated from by positioning equipment (subsea transponders).</li> </ul> | <ul style="list-style-type: none"> <li>Elevated underwater noise may affect marine fauna, including marine mammals, turtles and fish in three main ways:               <ol style="list-style-type: none"> <li>By causing direct physical effects, including injury or hearing impairment. Hearing impairment may be temporary or permanent.</li> <li>Through disturbance leading to behavioural changes or displacement from important areas. The occurrence and intensity of disturbance is highly variable and depends on a range of factors relating to the animal and situation.</li> <li>By masking or interfering with other biologically important sounds (including vocal communication, echolocation, signals and sounds produced by predators or prey).</li> </ol> </li> <li>Interactions between whales and vessels typically results in avoidance behaviour, with whales generally moving away from vessels. Therefore, potential impacts to cetaceans from predicted noise levels are expected to be limited to behavioural impacts within a localised area around vessels with no lasting effect.</li> <li>Marine turtle presence is expected to be infrequent due to the water depths of the Operational Area, and potential impacts from predicted noise levels from the project vessels (including WIV and support vessels) are not considered to be ecologically significant at a population level.</li> <li>It is reasonable to expect fish, sharks and rays may demonstrate avoidance or attraction behaviour to the noise generated by the activity. However, potential impacts from predicted noise levels from the project vessels and WIV are not considered to be ecologically significant at a population level.</li> </ul> | <ul style="list-style-type: none"> <li>Comply with regulatory requirements for interactions with marine fauna to prevent adverse interactions.</li> </ul>   |
| <b>Routine and non-routine discharges – WIV and support vessels</b>                                       | <ul style="list-style-type: none"> <li>Sewage, greywater and putrescible waste will be discharged from project vessels.</li> <li>Bilge water, deck drainage and brine and cooling water may also be discharged.</li> </ul>   | <ul style="list-style-type: none"> <li>The main 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 including short-term, localised impacts to water quality.</li> <li>No significant impacts to water quality are expected from planned discharges because of the minor quantities involved, the expected localised mixing zone, and the high level of dilution into the open water marine environment of the Operational Area.</li> <li>Similarly, although some marine fauna may transit the Operational Area, potential for impacts remains low due to the localised nature of discharges and rapid dilution.</li> </ul>  | <ul style="list-style-type: none"> <li>Marine discharges will be managed according to regulatory requirements.</li> <li>Chemicals will be selected with the lowest practicable environmental impacts and risks subject to technical constraints and approved through the Woodside chemical assessment process.</li> <li>Where there is potential for a loss of primary containment of oil or chemicals on the WIV, deck drainage must be collected via a closed drainage system.</li> </ul> |
| <b>Routine and non-routine discharges – subsea Intervention and Well Containment Package (WCP) fluids</b> | <ul style="list-style-type: none"> <li>Routine and non-routine discharge of subsea intervention and WCP fluids.</li> <li>Routine and non-routine discharge of chemicals used for removal of marine growth.</li> </ul>  | <ul style="list-style-type: none"> <li>Changes in water quality from subsea fluid release would be highly localised and short term given rapid dilution and low toxicity.</li> <li>Due to the very minor quantities of acid wash used (if required), the limited duration and rapid dispersion in the water column, impacts to the marine environment are expected to be negligible.</li> </ul>   | <ul style="list-style-type: none"> <li>All chemicals intended or likely to be discharged into the marine environment reduced to ALARP using the Woodside chemical assessment process.</li> <li>Return bulk unused inhibited MEG/brine package for onshore disposal where possible.</li> </ul>   |

| Potential Risk/Impact   | Description of Source of Potential Impact/Risk  | Description of Potential Impact/Risk  | Preliminary Mitigation and/or Management Measures <sup>1</sup>   |
|---|---|---|--|
| <b>Atmospheric emissions and greenhouse gas (GHG) emissions</b> | <ul style="list-style-type: none"> <li>Atmospheric emissions and GHG emissions will be generated from internal combustion engines and incinerators on the WIV, support vessels and helicopters.</li> <li>Emissions may arise from venting of hydrocarbons at surface and small volume gas releases subsea.</li> </ul> | <ul style="list-style-type: none"> <li>Emissions from vessels may result in temporary, localised reductions in air quality in the immediate vicinity.</li> <li>Given the offshore location and short duration of the activity, and the low volumes of atmospheric emissions expected to be generated, biodiversity, ecological integrity, social amenities and human health are not expected to be impacted.</li> <li>Given the nature and scale of GHG emissions from vessels fuel usage for this activity, the potential GHG impact and risk from this activity is considered negligible.</li> </ul>  | <ul style="list-style-type: none"> <li>Comply with regulatory requirements for marine air pollution and GHG emissions reporting.</li> <li>Vessel operations planned, where practicable, such that fuel consumption and subsequent emissions are minimised (e.g. managing vessel speeds).</li> <li>Contractors engaged on energy/GHG emissions efficiencies and opportunities identified are implemented where feasible and ALARP.</li> <li>Fuel types selected to reduce expected greenhouse gas emissions (i.e. alternative fuel types such as Marine Gas Oil and Marine Diesel Oil can reduce emissions compared to heavy or intermediate fuel oils).</li> </ul> |
| <b>External lighting on the WIV and project vessels</b>         | <ul style="list-style-type: none"> <li>External light emissions onboard WIV and project vessels.</li> <li>Light emissions from underwater ROV operations.</li> </ul>  | <ul style="list-style-type: none"> <li>Light emissions may affect fauna (such as marine turtles and birds) in two main ways:                             <ol style="list-style-type: none"> <li>Behaviour: artificial lighting has the potential to create a constant level of light at night that can override natural levels and cycles.</li> <li>Orientation: if an artificial light source is brighter than a natural source, the artificial light may override natural cues, leading to disorientation.</li> </ol> </li> <li>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 species. Given the expected negligible contribution of light emissions to the environment from the activity, it is anticipated that light emissions from the activity are unlikely to result in more than a localised behavioural disturbance to isolated transient individuals with no lasting effect to species.</li> <li>As the Operational Area is offshore and away from islands or other emergent features, presence of seabirds or shorebirds is likely to be of a transient nature only. Behavioural disturbance to birds from light is expected to be localised to within the vicinity of the WIV and vessels, and should not seriously disrupt the lifecycle of an ecologically significant proportion of migratory birds.</li> </ul> | <ul style="list-style-type: none"> <li>Lighting limited to the minimum required for navigational and safety requirements, except for emergency events.</li> <li>Implementation of the Woodside Seabird Management Plan.</li> </ul>   |

| Potential Risk/Impact                                       | Description of Source of Potential Impact/Risk  | Description of Potential Impact/Risk   | Preliminary Mitigation and/or Management Measures <sup>1</sup>  |
|---|---|--|---|
| <b>Unplanned</b>  |   |  |   |
| <b>Unplanned hydrocarbon release – loss of well control</b> | <ul style="list-style-type: none"> <li>Accidental loss of hydrocarbons to the marine environment due to loss of well containment.</li> <li>A loss of well containment could credibly occur due to damage to the equipment used for the well intervention activity.</li> <li>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.</li> </ul>  | <ul style="list-style-type: none"> <li>A loss of well containment is considered to be a highly unlikely event as it has occurred infrequently in the industry, and never in the Company's history.</li> <li>Potential impacts across the whole EMBA were assessed as including receptors such as plankton, fish, sea snakes, marine mammals, seabirds and migratory shorebirds, tourism, recreation, commercial fisheries and cultural heritage (for example).</li> <li>Taking into account receptor sensitivity, this unplanned event has the potential to result in 'Minor' consequence or less.</li> </ul>  | <p><b>Preventing loss of well control</b></p> <ul style="list-style-type: none"> <li>Well intervened in compliance with the accepted WOMP.</li> <li>Subsea WCP specification, installation and testing compliant with internal Woodside Standards and international requirements.</li> </ul> <p><b>Spill response arrangements</b></p> <ul style="list-style-type: none"> <li>Arrangements supporting the Oil Pollution Emergency Preparation document (OPEP) will be tested to ensure the OPEP can be implemented as planned.</li> <li>Emergency response activities would be implemented in line with the OPEP.</li> </ul>  |
| <b>Unplanned hydrocarbon release – vessel collision</b>     | <ul style="list-style-type: none"> <li>Project vessels will use marine diesel fuel, meaning a vessel collision involving a project vessel or third-party during the activity may result in the release of marine diesel.</li> <li>For a collision to result in the worst-case scenario diesel release, several factors must occur as follows: <ul style="list-style-type: none"> <li>Identified causes of vessel interaction must result in a collision.</li> <li>The collision has enough force to penetrate the vessel hull and in the exact location of the largest fuel tank.</li> <li>The largest fuel tank must be full or at least of volume which is higher than the point of penetration.</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>In the highly unlikely event of a vessel collision causing a release of hydrocarbons, impacts to water quality and marine ecosystems could occur.</li> <li>Modelling of a surface release of marine diesel was undertaken at a location within the Operational Area.</li> <li>Marine diesel is a relatively volatile, non-persistent nature hydrocarbon with up to about 41% evaporating within the first 24 hours.</li> <li>Potential impacts across the whole EMBA were assessed including receptors such as plankton, fish, marine mammals, turtles, seabirds and migratory shorebirds, tourism, recreation and commercial fisheries (for example).</li> <li>Taking into account receptor sensitivity, this unplanned event has the potential to result in 'Minor' consequence or less.</li> </ul> | <p><b>Preventing vessel collision</b></p> <ul style="list-style-type: none"> <li>Comply with regulatory requirements for the prevention of vessel collisions and safety and emergency arrangements.</li> <li>Consult with relevant persons so that other marine users are informed and aware, reducing the likelihood of a collision.</li> <li>Establish temporary exclusion zones around vessels which are communicated to marine users to reduce the likelihood of collision.</li> </ul> <p><b>Spill response arrangements</b></p> <ul style="list-style-type: none"> <li>Arrangements supporting the OPEP will be tested to ensure the OPEP can be implemented as planned.</li> <li>Emergency response activities would be implemented in line with the OPEP.</li> </ul> |

| Potential Risk/Impact   | Description of Source of Potential Impact/Risk   | Description of Potential Impact/Risk   | Preliminary Mitigation and/or Management Measures <sup>1</sup>  |
|---|--|--|---|
| <b>Unplanned discharges: deck and subsea spills</b>                               | <ul style="list-style-type: none"> <li>Accidental discharge of hydrocarbons/chemicals from WIV and project vessels deck activities and equipment (e.g. cranes) and from subsea ROV hydraulic leaks within the Operational Area.</li> </ul>   | <ul style="list-style-type: none"> <li>Accidental spills of hydrocarbons or chemicals from the WIV and support vessels, bulk transfer hose, or release of hydrocarbons during Emergency Disconnect could decrease the water quality in the immediate area of the spill; however, the impacts are expected to be temporary and very localised due to dispersion and dilution in the open ocean environment.</li> <li>Given the small area of a potential spill and the dilution and weathering of any spill, the likelihood of ecological impacts to marine fauna (including protected species), other communities and habitats are expected to be limited to no lasting effect and restricted to individual animals, and temporary, localised contamination of water.</li> </ul> | <ul style="list-style-type: none"> <li>Comply with regulatory requirements for the prevention of marine pollution.</li> <li>Liquid chemical and fuel storage areas are bunded or secondarily contained when they are not being handled/moved temporarily.</li> <li>Deck drainage collected via a closed drainage system where there is a potential for loss of primary containment of oil and chemicals.</li> <li>Spill kits positioned in high-risk locations around the vessel (near potential spill points such as transfer stations).</li> <li>Fluids and additives intended or likely to be discharged to the marine environment reduced to ALARP using the Woodside chemical assessment process.</li> </ul> |
| <b>Unplanned discharge of solid hazardous/non-hazardous solid waste/equipment</b> | <ul style="list-style-type: none"> <li>Accidental loss of hazardous or non-hazardous solid wastes/equipment to the marine environment may occur if dropped or blown overboard.</li> </ul>  | <ul style="list-style-type: none"> <li>The potential impacts of hazardous or non-hazardous solid wastes and 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.</li> <li>The temporary or permanent loss of waste materials/equipment into the marine environment is not likely to have a significant environmental impact, based on the location of the Operational Area, the types, size and frequency of wastes that could occur, and species present.</li> </ul>  | <ul style="list-style-type: none"> <li>Comply with regulatory requirements for the prevention of marine pollution and handling of hazardous wastes.</li> <li>Implement waste management procedures which provide for safe handling and transportation, segregation and storage and appropriate classification of waste generated.</li> <li>Solid waste/equipment dropped to the marine environment will be recovered where safe and practicable to do so.</li> </ul>  |
| <b>Physical presence: unplanned vessel collision with marine fauna</b>            | <ul style="list-style-type: none"> <li>Vessel movements have the potential to result in collisions between project vessel (hull and propellers) and marine fauna.</li> <li>The factors contributing to the frequency and severity of impacts due to collisions vary greatly due to vessel type, vessel operation (specific activity, speed), physical environment (e.g. water depth) and the type of animal potentially present and their behaviours.</li> </ul> | <ul style="list-style-type: none"> <li>Vessel disturbance presents a potential threat to marine mammals, marine reptiles and fish, sharks and rays.</li> <li>The risk of vessel collision with marine fauna is present year-round but is elevated seasonally for species during migration periods.</li> <li>Given the short duration of activities within the Operational Area, and the slow speeds at which project vessels operate during the activity (if not stationary), collisions are considered highly unlikely.</li> </ul>  | <ul style="list-style-type: none"> <li>Comply with regulatory requirements for interactions with marine fauna to reduce the likelihood of a collision occurring.</li> </ul>   |

| Potential Risk/Impact  | Description of Source of Potential Impact/Risk  | Description of Potential Impact/Risk  | Preliminary Mitigation and/or Management Measures <sup>1</sup>  |
|--|---|---|---|
| <b>Physical presence: unplanned dropped object resulting in seabed disturbance</b> | <ul style="list-style-type: none"> <li>Objects accidentally dropped overboard from the WIV or project vessels may result in seabed disturbance.</li> </ul>  | <ul style="list-style-type: none"> <li>Unplanned seabed disturbance may result in localised changes to water and sediment quality or a localised temporary impact to benthic communities.</li> <li>Potential impacts to the Ancient Coastline at 125 m Depth Contour KEF which intersects the Operational Area of the activity are limited to the footprint of a dropped object resulting in potential highly localised and temporary change in habitat.</li> </ul> | <ul style="list-style-type: none"> <li>WIV/installation vessel inductions include control measures for dropped object prevention.</li> <li>Dropped objects to be recovered and relocated where safe and practicable to do so.</li> </ul>  |
| <b>Accidental Introduction of Invasive marine species (IMS)</b>                    | <ul style="list-style-type: none"> <li>WIV/vessels transiting to the Operational Area may be subject to marine fouling whereby organisms attach to the vessel hull.</li> <li>IMS could be present as biofouling on the WIV/vessel hull or on immersible equipment (survey equipment, ROV, etc.) and could be translocated to the Operational Area.</li> <li>Organisms can also be drawn into ballast tanks during onboarding of ballast water.</li> </ul> | <ul style="list-style-type: none"> <li>While project vessels have the potential to introduce IMS into the Operational Area, it is not credible for IMS to be established on the seabed or subsea structures in the Operational Area as this deep, offshore open-water environment (approximately 133 m) is not conducive to the settlement and establishment of IMS.</li> </ul>   | <ul style="list-style-type: none"> <li>Ballast water and biofouling will be managed according to regulatory requirements, including the Australian Ballast Water Management Requirements, and the Australian Biofouling Management Requirements, as applicable.</li> <li>Woodside's IMS risk assessment process will be applied to project vessels and immersible equipment entering the Operational Area.</li> </ul> |

**Feedback**

If you would like to comment on the proposed activities outlined in this information sheet, or would like additional information, please contact Woodside before 17 March 2023 via:

**E: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au)**

**Toll free: 1800 442 977**

You can subscribe on our website to receive Consultation Information Sheets for proposed activities:

**[www.woodside.com/sustainability/consultation-activities](http://www.woodside.com/sustainability/consultation-activities)**

Please note that stakeholder feedback will be communicated to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) as required under legislation. Woodside will communicate any material changes to the proposed activity to affected stakeholders as they arise.

Please note that 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 2009 (Cth)*.

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the EP in order for this information to remain confidential to NOPSEMA.

## 4.2 Woodside bespoke Consultation Information Sheet (sent to all relevant person Traditional Custodians)



# TPA-03 WELL INTERVENTION SUMMARY INFORMATION SHEET

This is a summary of the activity in plain English. More detailed information is included in the TPA03 Well Intervention Environment Plan (EP) Information Sheet.

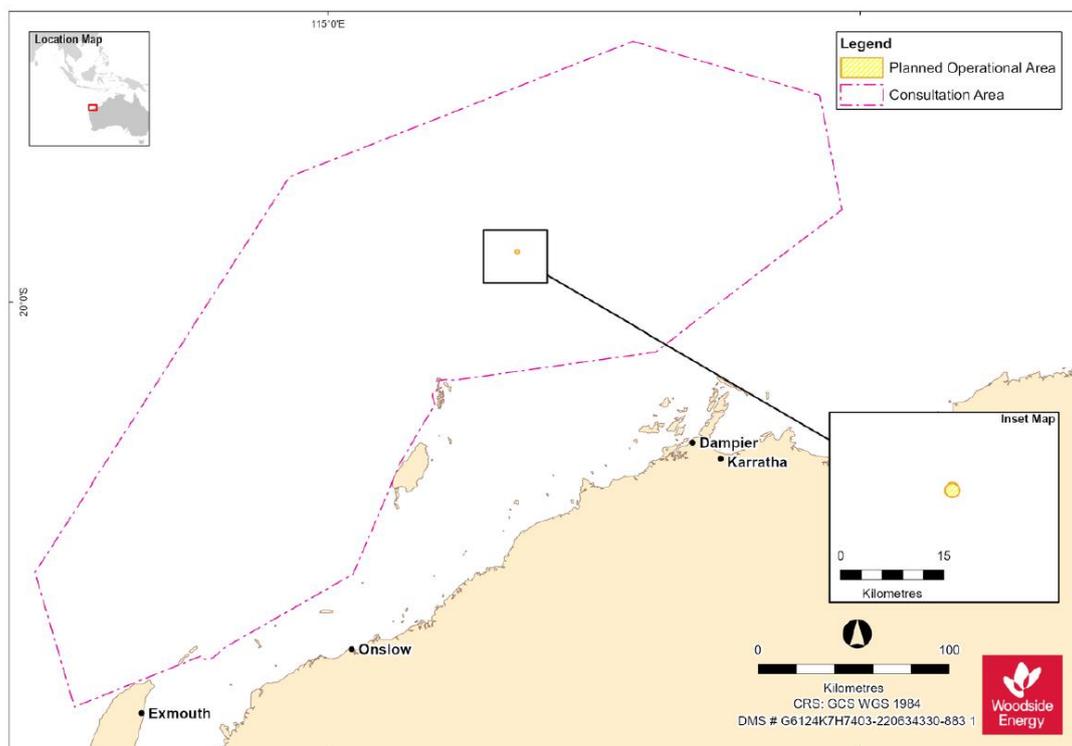
### Overview

Woodside plans to carry out intervention (maintenance) activities on the existing gas production well called TPA03. The aim of the intervention activities is to restore flow in the well to re-establish production from the lower part of the well.

This work will take place in Commonwealth waters, approximately 140 km north-west of Dampier in title area WA-5-L and at a water depth of approximately 115m.

Woodside is planning to start the TPA03 Well Intervention work upon acceptance of the EP, and the aim is to start work in around the second half of 2023. The activity is expected to take about 1-2 weeks to complete.

A map showing the location of this work is below.



# TPA03 Well Intervention Environment Plan

## Work Method

A Well Intervention Vessel will lower tools or sensors into the existing TPA03 well on a wire through a Well Control Package (WCP). The WCP allows the wireline to seal as it enters the well. The wireline will be used to de-isolate the section of the well containing gas. Once the intervention activity has been completed, the WCP will be disconnected. The well will then be re-started and operated which is part of a separate Environment Plan.

## Environmental Impacts and Management

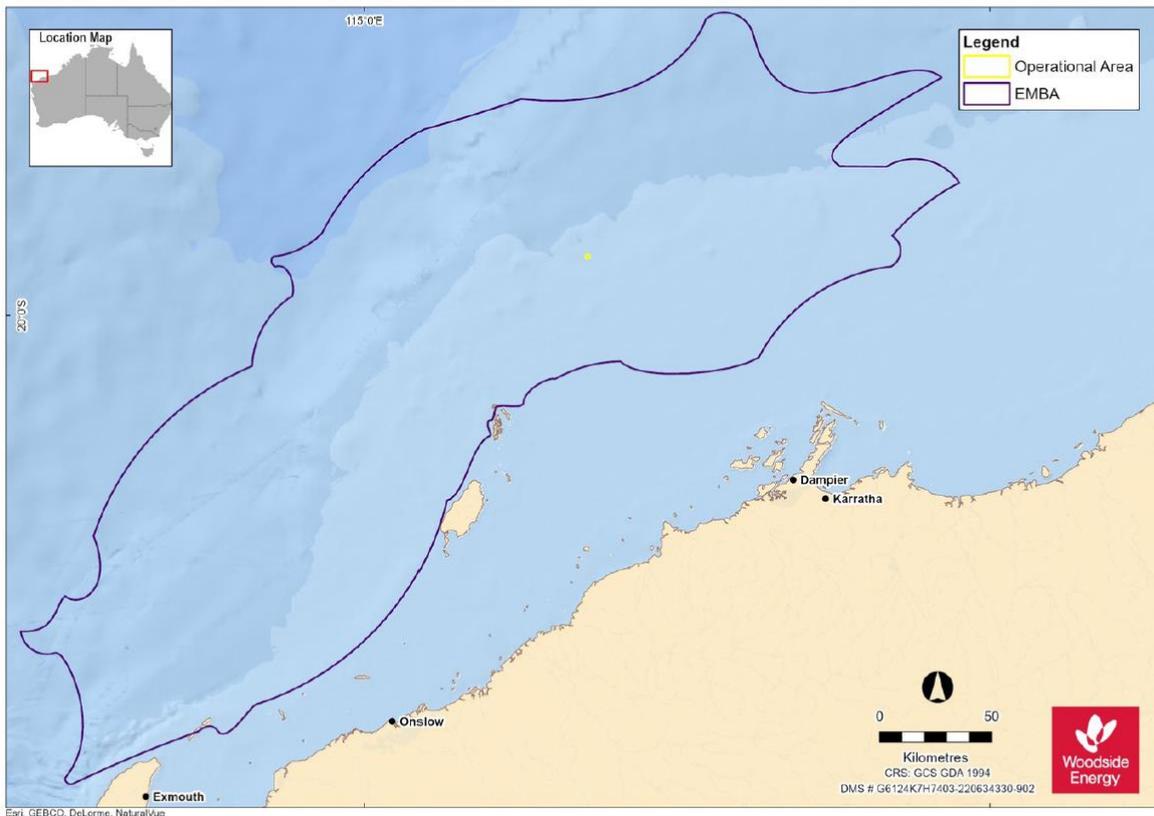
This work program includes Planned Activities but may also result in Unplanned Activities. Both Planned and Unplanned Activities may impact the environment. Woodside manages the work program to reduce impacts and risks to as low as practical.

Planned Activities are activities that Woodside knows will happen as part of this work program. For example, Planned Activities include other marine users being temporarily stopped from accessing the work area, and the marine vessels used for the work may generate underwater noise, light emissions, atmospheric emissions, and routine discharges (such as sewage, waste, and deck drainage), and other authorised waste. The intervention activities may also disturb the seabed.

Unplanned Activities are not planned as part of the work program, but may be the result of an accident, incident, or emergency situation. It is highly unlikely that there will be an Unplanned Activity. Unplanned Activities might include a spill of fuel or oil from a vessel collision, a release from the well, a spill on the deck of a vessel (such as during refuelling deck equipment), unplanned seabed disturbance, accidental collision with marine animals, waste entering the environment and accidental introduction of invasive species from outside the region. Management measures are in place to reduce the probability and impacts of these unplanned activities to as low as practical.

A table showing all planned and unplanned activities, potential impacts, and management measures for each is included in the attached Information Sheet, Table 2.

The total area over which unplanned events could have environmental impacts is shown in the map below. This is referred to as the environment that may be affected (EMBA). The location in which the TPA03 Well Intervention activities will occur, known as the Operational Area, is also shown on the map below. In the highly unlikely event such as a fuel spill from a vessel collision, the entire EMBA will not be affected. The part of the EMBA that is affected will only be known at the time of the event.



## TPA03 Well Intervention Environment Plan

### Providing Feedback

If you have an interest in the area of the “environment that may be affected” (EMBA) by this work program and would like more information or have any concerns, you can tell Woodside by calling **1800 442 977** or sending an email to **Feedback@woodside.com.au**. Please contact Woodside before **17th March 2023** so your questions or concerns can be considered during the environmental approval process.

If you would prefer to speak to the government directly, they can be contacted on **+61 (0)8 6188 8700** or send an email to [communications@nopsema.gov.au](mailto:communications@nopsema.gov.au)

### Conclusion

Woodside produces energy that Western Australia, Australia, and the world needs. Woodside has made this energy from its oil and gas projects in Western Australia for over 35 years safely, reliably, and without any major environmental incident. Woodside is very proud of this legacy.

There are always potential risks with projects like this. Woodside has carefully planned this work program so that the risk of environmental impact is reduced to as low as reasonably practical and of an acceptable level. There are also strict government laws in place to protect the environment. Woodside complies with these laws and has systems in place to keep following these laws and rules for each project it undertakes.

If you would like information about Woodside’s work to study and care for the environment, you can find it at <https://www.woodside.com/sustainability/environment>.

### Further Information

You can find the detailed Consultation Information Sheet for proposed activity on our website: <https://www.woodside.com/sustainability/consultation-activities>.

### 4.3 Newspaper advertisement in The Australian, The West Australian, Pilbara News, North West Telegraph, Midwest Times (15 February 2023) and the Geraldton Guardian (17 February 2023)

## ENVIRONMENT PLANS NOTICE

Woodside Energy (Australia) Pty Ltd (ACN 006 923 829), Woodside Energy Julimar Pty Ltd (ACN 130 338 363) and Woodside Burnup Pty Ltd (ACN 100 237 416) are proposing to conduct activities in Commonwealth waters as described below:

| TPA03 Well Intervention Environment Plan (Woodside Energy Ltd) |   |  |
|--|---|--|
| <b>Activity summary:</b>                                       | Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir |  |
| <b>Location:</b>   | 150 km north-west of Dampier  |  |
| <b>Commencement timing:</b>                                    | Anticipated around mid 2023 pending approvals, vessel availability and weather constraints                              |  |
| <b>Estimated duration:</b>                                     | 5 to 14 days and will take place 24 hours, 7 days a week  |  |
| <b>Consultation commenced:</b>                                 | June 2022   | First EP submission to NOPSEMA August 2022 |

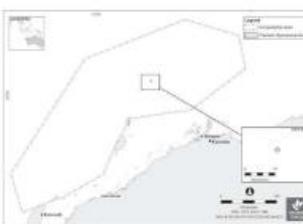
  

| Julimar Drilling and Surveys Environment Plan (Woodside Energy Julimar Pty Ltd) |   |  |
|---|---|--|
| <b>Activity summary:</b>  | Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well and plug and abandonment of Julimar South-1 if required  |  |
| <b>Location:</b>  | 180 km west north-west of Dampier   |  |
| <b>Commencement timing:</b>   | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |  |
| <b>Estimated duration:</b>  | ~40 days for drilling and appraisal, ~45 days geophysical and geotechnical surveys and ~21 for decommissioning of the Julimar South-1 well. Activities will be conducted 24 hours per week, seven days per week |  |
| <b>Consultation commenced:</b>  | August 2022   | First EP submission to NOPSEMA Not yet Submitted |

| WA-34-L Pyrite Drilling and Subsea Installation Environment Plan (Woodside Burnup Pty Ltd) |  |  |
|--|--|--|
| <b>Activity summary:</b>   | Drilling and subsea infrastructure installation activities for one well (PLA06) and contingent well intervention activities for current production wells   |  |
| <b>Location:</b>   | ~170 km north-west of Dampier  |  |
| <b>Commencement timing:</b>  | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints  |  |
| <b>Estimated duration:</b>   | ~50 days for the PLA06 well, ~70 days per well for well intervention activities and ~30 days for subsea installation activities. Activities will be conducted 24 hours per week, 7 days per week |  |
| <b>Consultation commenced:</b>   | June 2022  | First EP submission to NOPSEMA Not yet Submitted |



**Figure 1 (TPA03), Figure 2 (Julimar) and Figure 3 (WA-34-L Pyrite):** Describes the Operational Areas and the Environment that May Be Affected (EMBA), based on a composite of many different paths and furthest distance where a highly unlikely unplanned event could have an impact based on weather and ocean conditions.

Woodside has undertaken an assessment to identify potential impacts and risks to the marine environment arising from both planned and unplanned activities. Mitigation and management measures have been developed for each of the risks identified and will be outlined in the relevant EP.

Impacts associated with the planned activities include the physical presence of a Mobile Offshore Drilling Unit (MODU) and vessels, interaction with other marine users, seabed disturbance (such as infrastructure placement) and other vessel, drilling and construction impacts (such as noise, light, air emissions and marine discharges). Impacts that could occur due to an unplanned event include hydrocarbon release (contaminants, marine diesel or other vessel fuel), vessel collisions with marine fauna, additional seabed disturbance, introduced marine species, accidental loss of waste or other discharges.

**Figure 1, Figure 2 and Figure 3** illustrate indicative EMBA's to support persons or organisations understanding of whether their functions, interests or activities may be affected by the proposed activities, with detailed information found in Woodside's Consultation Information Sheets.

#### Consultation Participation and Feedback

Woodside is seeking to consult with relevant persons to inform the preparation of Environment Plans (EPs) for these activities. Consultation is designed to notify and obtain input from relevant persons to assist Woodside identify measures to lessen or avoid potential adverse effects of the proposed activity on the environment.

Consultation will inform the development of each EP in accordance with environmental regulations administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under the Offshore Petroleum and Greenhouse Gas Storage Act 2020 (OPGSA) and support other regulatory submissions associated with the planned activities. Detailed consultation information sheets are available at [www.woodside.com/sustainability/consultation-activities](http://www.woodside.com/sustainability/consultation-activities) if you would like additional information about these activities. You can also subscribe via our website to receive future information on proposed activities.

If you would like to comment on the proposed activities outlined above, please contact Woodside before Friday, 17 March 2023 via:

**E: [Feedback@woodside.com](mailto:Feedback@woodside.com)**  
**Toll free: 1800 442 877**

## Pandemic hangover hits Ansell's profit

**18 THE AUSTRALIAN, WEDNESDAY, FEBRUARY 15, 2023**  
[theaustralian.com.au/business/markets](http://theaustralian.com.au/business/markets)



**JARRED LYNCH**

Ansell chief executive Neil Salomon says a dive in the protective clothing maker's profitability will be short-lived as the cost of global supply chains and economic uncertainty lift the company.

Ansell's full-year net profit plunged 0.2 per cent to \$156.13m (17p) as a sales increase was offset by higher division swapped gains in its industrial business unit. The result was Ansell's share price falling 0.87 per cent to \$25.64, its lowest level since early October.

Ansell's customers have been running down inventories after amassing stockpiles during the pandemic. Mr Salomon said supply chain bottlenecks eased, "unlocking trends" had become more widespread, expanding from medical markets to industrial settings and elsewhere.

"This was due to a combination of customers becoming cautious on economic conditions while growing more comfortable to reduce inventory as supply chain pressures have eased and product availability has broadly improved," he said. "The rebound is largely a correction phase we are working through. Viewers are going to have to decide if the quicker it gets through the better and then we will be back to more normal business operations."

While Mr Salomon said the dip would be short-lived, it was "difficult to predict with accuracy" when the company would rebound. "But we will make progress towards that over the next six months and I hope that 2024 will be a much more normal business environment for us."

Mr Salomon said the easing of supply chains meant the company could return to focusing on developing new products.

"For a couple of years we took a major detour into supply chain reliability and resilience being a sole focus - now it's tracking back to what we want to be doing every day, which is creating new products," he said. "We've launched some new products with the electrical protection range that we ideally asked to electrical car manufacturing and the worker feedback we're getting on this is a new star."

Half-year revenue fell 0.2 per cent to \$155.8m for the six months to December 31. Sales across all divisions increased, which accounts for 56 per cent of overall revenue, despite 26.1 per cent to \$154.7m or 21.1 per cent on constant currency basis.

Full-year revenue fell 0.2 per cent to \$156.13m for the six months to December 31. Sales across all divisions increased, which accounts for 56 per cent of overall revenue, despite 26.1 per cent to \$154.7m or 21.1 per cent on constant currency basis.

Full-year revenue fell 0.2 per cent to \$156.13m for the six months to December 31. Sales across all divisions increased, which accounts for 56 per cent of overall revenue, despite 26.1 per cent to \$154.7m or 21.1 per cent on constant currency basis.

## CSL chief says mRNA vaccines 'no silver bullet'

**Courtesy (from Page 15)**

Despite the hype around mRNA (the technology behind the job of Pfizer's Covid-19), Mr Perreault said cell-based shots were the next generation of influenza vaccines.

"It's early days, the mRNA have not been commercialised for its vaccines so far," he said. "You're not thinking about it as mRNA, but it's difficult. You have to think about it as you have four antigens going into a vaccine, but you have to make a universal one. The mRNA is a delivery system and the first generation and still has issues we need to solve for stability."

Mr Perreault also said most people took the vaccine for granted despite the virus killing about 30,000 in the US each year alone.

"We have low levels of influenza circulating during the pandemic," he said. "This has worked and we are seeing the highest and earliest protection of influenza like all-masks nearly subsided."

CSL will pay an interim dividend of \$150 of a share - a 3 per cent increase on the same period last year - on April 15, he confirmed.

Full-year profit guidance of \$152.7m to \$153.8m.

Sam Playter, an analyst at ratings agency S&P, said strong growth in plasma supply and increased demand should continue to support CSL's earnings.

"Additional earnings contributions from recently acquired CSL Vitar and solid performance from CSL's influenza business, Singapore, are also helping to improve credit metrics," Mr Playter said.

"We believe EBITDA margins at the company's plasma division, CSL Biologics, remain consistent. Higher donor compensation and labour costs, along with the rise in US inventory levels of plasma, have kept the cost per litre of plasma collection low."

Mr Playter also expected CSL's fixed cost absorption per plasma unit collected to continue to improve.

Josh Gilbert, market analyst at Citic, said the half-year result was a "positive nod to Paul Perreault's reign" and CSL investors could expect accelerated financial year.

Chief operating officer Paul McKenzie will succeed Mr Perreault as chief executive.

## NOTICES & TENDERS

[www.theaustralian.com.au](http://www.theaustralian.com.au)

**NEW WOMEN'S AND CHILDREN'S HOSPITAL (South Australia)**

**SUPPLIERS AND SUBCONTRACTORS - MARKET SOUNDING**

Landwise Construction (Southern) Pty Limited has been awarded the ECI Phase Contract (Early Contractor Involvement) for the above-mentioned project. We are seeking input from local and national suppliers and subcontractors in relation to specific trades and services in association with the following:

- Capability and capacity to deliver this project
- Appelle to deliver this project
- Risks associated with this project
- Opportunities associated with this project
- Maximising South Australian Industry Participation outcomes

**Project Details**

|                               |  |
|-------------------------------|--|
| <b>Location</b>               | • Main hospital site - 1 Gaird Road, Adelaide, South Australia   |
|                               | • Westpac Precinct Carpark - Lot 13 Gaird Road, Adelaide, South Australia  |
| <b>Description of Work</b>    | • New Hospital - circa 117,000m <sup>2</sup> SoA New Build (multi-storey)  |
|                               | • Multi-Deck Carpark - circa 42,000m <sup>2</sup>  |
|                               | • Pedestrian bridges over railway  |
|                               | • External landscaping, roadworks and intersection works   |
| <b>Overall Project Budget</b> | • Government has indicated a potential project cost of approximately \$3.0bn to \$3.2bn, subject to final resolution |
| <b>Principal</b>              | • SA Health  |
| <b>Project Manager</b>        | • SA Health, New WCH Project Management Office   |

Please note that this request for feedback is NOT a formal Expression of Interest, but will assist Landwise and the Principal in their understanding of market risks and opportunities on the project, including initiatives to expedite the commencement of the works.

**Registration and completion of questionnaire - ION Gateway**

Suppliers and subcontractors are asked to visit the ION Gateway at [www.NewWCH.ion.gov.au](http://www.NewWCH.ion.gov.au) for detailed project information and to complete the market sounding questionnaire.

This project market sounding period will be open from Friday 3 February 2023 until Tuesday 28 February 2023

Please direct all enquiries through the ION Gateway at [www.NewWCH.ion.gov.au](http://www.NewWCH.ion.gov.au)

**MARKETPROFIT ACT 180**

NOTICE OF INTENTION TO EXERCISE A FIRST OPTION TO PURCHASE

Market Profit (Pty) Ltd, 180/182, North Beach, Adelaide SA 5018

It is my intention to pay a bid (amount) to acquire the above units. I have on 7 March 2023, on the date of which notice of bid must be lodged, any offer for the units to purchase the bid. The bid will be reduced from the bid amount.

Date: 12 February 2023

Mark Cooper, 180/182 North Beach, Adelaide SA 5018

Phone: 08 8363 1000

SA 180/182 Unit 180/182, Adelaide SA 5018

[www.marketprofit.com.au](http://www.marketprofit.com.au)

'Summer Reading Guide' competition to win a \$1000 gift voucher has been won by IAN Simpson, Denistone West, NSW.

Direct further queries to the bookshop that accepted your entry.

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## ENVIRONMENT PLANS NOTICE

Woodside Energy (Australia) Pty Ltd (ACN 006 923 879), Woodside Energy Julimar Pty Ltd (ACN 130 391 365) and Woodside Burrup Pty Ltd (ACN 120 237 416) are proposing to conduct activities in Commonwealth waters as described below.

### TPA03 Well Intervention Environment Plan (Woodside Energy Ltd)

|                                       |  |
|---------------------------------------|--|
| <b>Activity summary:</b>              | Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. |
| <b>Location:</b>                      | ~155 km north-west of Dampier  |
| <b>Commencement timing:</b>           | Anticipated around mid 2023 pending approvals, vessel availability and weather constraints                               |
| <b>Estimated duration:</b>            | 5 to 14 days and will take place 24 hours, 7 days a week   |
| <b>Consultation commenced</b>         | June 2022  |
| <b>First EP submission to NOPSEMA</b> | August 2022  |

### Julimar Drilling and Surveys Environment Plan (Woodside Energy Julimar Pty Ltd)

|                                       |  |
|---------------------------------------|--|
| <b>Activity summary:</b>              | Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well and plug and abandonment of Julimar South-1H required   |
| <b>Location:</b>                      | ~80 km west-north-west of Dampier  |
| <b>Commencement timing:</b>           | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints  |
| <b>Estimated duration:</b>            | ~40 days for drilling and logs at, ~45 days geophysical and geotechnical surveys and ~21 for decommissioning of the Julimar South-1 well. Activities will be conducted 24 hours per day, seven days per week |
| <b>Consultation commenced</b>         | August 2022  |
| <b>First EP submission to NOPSEMA</b> | Not yet Submitted  |

### WA-34-L Pyxis Drilling and Subsea Installation Environment Plan (Woodside Dampier Pty Ltd)

|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells  |
| <b>Location:</b>                      | ~170 km north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |
| <b>Estimated duration:</b>            | ~50 days for the PLA08 well, ~70 days per well for well intervention activities and ~30 days for subsea installation activities. Activities will be conducted 24 hours per day, 7 days per week |
| <b>Consultation commenced</b>         | June 2022   |
| <b>First EP submission to NOPSEMA</b> | Not yet Submitted   |

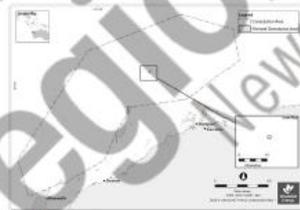


Figure 1

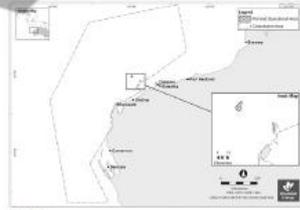


Figure 2

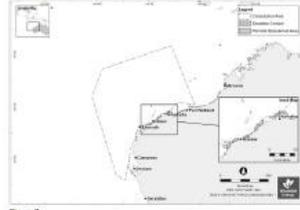


Figure 3

Figure 1 (TPA03), Figure 2 (Julimar) and Figure 3 (WA-34-L Pyxis) shows the Operational Areas and the Environment That May Be Affected (EMBA) based on a composite of many different points and further distance where a highly unlikely, unplanned event could have an impact based on weather and ocean conditions.

Woodside has undertaken an assessment to identify potential impacts and risks to the marine environment arising from both planned and unplanned activities. Mitigation and management measures have been developed for each of the risks identified and will be outlined in the relevant EP. Impacts associated with the planned activities include the physical presence of a Mobile Offshore Drilling Unit (MODU) and vessels, interaction with other marine users, seabed disturbance (such as infrastructure placement) and other vessel, drilling and construction impacts (such as noise, light, air emissions and marine discharges). Impacts that could occur due to an unplanned event include hydrocarbon releases (condensates, marine diesel or other vessel fuels), vessel collisions with marine fauna, additional seabed disturbance, introduced marine species, accidental loss of waste or other discharges.

Figure 1, Figure 2 and Figure 3 illustrate indicative EMBA's to support persons or organisations understanding of whether their functions, interests or activities may be affected by the proposed activities, with detailed information found in Woodside's Consultation Information Sheets.

### Consultation Participation and Feedback

Woodside is seeking to consult with relevant persons to inform the preparation of Environment Plans (EPs) for these activities. Consultation is designed to notify and obtain input from relevant persons to assist Woodside identify measures to lessen or avoid potential adverse effects of the proposed activity on the environment.

Consultation will inform the development of each EP in accordance with environmental regulations administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGSSA) and support other regulatory submissions associated with the planned activities.

Detailed consultation information sheets are available at: [www.woodside.com/sustainability/consultation-activities](http://www.woodside.com/sustainability/consultation-activities) if you would like additional information about these activities. You can also subscribe via our website to receive future information on proposed activities.

If you would like to comment on the proposed activities outlined above, please contact Woodside before Friday, 17 March 2023 via:

E: [Feedback@woodside.com](mailto:Feedback@woodside.com)  
Toll free: 1800 442 977

**PUBLIC NOTICES**

**DECEASED ESTATES**

**ESTATE OF MARGARET MARY MURPHY**  
 MARGARET MARY MURPHY, late of Perth, Western Australia, widow, deceased.  
 I, the undersigned, being a duly qualified and acting executor of the will of the said deceased, hereby give notice that the said will has been proved to the satisfaction of the Court of Probate at Perth, Western Australia, and that the said will has been admitted to probate by the said Court of Probate at Perth, Western Australia, on the 11th day of January 2022.

**ESTATE OF MARGARET MARY MURPHY**  
 MARGARET MARY MURPHY, late of Perth, Western Australia, widow, deceased.  
 I, the undersigned, being a duly qualified and acting executor of the will of the said deceased, hereby give notice that the said will has been proved to the satisfaction of the Court of Probate at Perth, Western Australia, and that the said will has been admitted to probate by the said Court of Probate at Perth, Western Australia, on the 11th day of January 2022.

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**ESTATE OF MARGARET MARY MURPHY**  
 MARGARET MARY MURPHY, late of Perth, Western Australia, widow, deceased.  
 I, the undersigned, being a duly qualified and acting executor of the will of the said deceased, hereby give notice that the said will has been proved to the satisfaction of the Court of Probate at Perth, Western Australia, and that the said will has been admitted to probate by the said Court of Probate at Perth, Western Australia, on the 11th day of January 2022.

**ChemCentre**

**Have your say!**  
**Disability Access and Inclusion Plan 2023-2028**

The ChemCentre is an exciting public research facility, helping shape and deliver our world-leading research. We are currently developing a Disability Access and Inclusion Plan (DAIP) 2023-2028. We are looking for people, organisations, and other interested parties to provide feedback on our DAIP. We will engage with the feedback to ensure we have an inclusive and accessible facility for all.

The DAIP will include:

1. Accessible events,
2. Building a culture of inclusion,
3. Information,
4. Quality of service,
5. Complaints, and
6. Consideration of partners.

The DAIP will be shared on our website and we will hold a series of public consultations. You can respond to a copy of the DAIP via email to [daip@chemcentre.org.au](mailto:daip@chemcentre.org.au) or by phone on 08 9422 8816.

Also available to read & download on request.

Please provide your comments and suggestions by Friday 10 March 2023 to: [daip@chemcentre.org.au](mailto:daip@chemcentre.org.au)

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**Perth Airport**

**Perth Airport Abandoned Vehicles**

All the direction of Perth Airport Pty Ltd, under the Airport's Control of On-Airport Activities Regulations 1997, the following abandoned vehicles will be disposed of if not claimed by 5.00pm (AEST) Thursday 9 March 2023.

| VIN Number          | REGISTRATION | YEAR | MAKE/ MODEL          | COLOR  | STATE |
|---------------------|--------------|------|----------------------|--------|-------|
| KVAJAG52V5429642    | No Plates    | 1998 | Kia Sportage         | White  | WA    |
| 4T 1E3BK40000067940 | No Plates    | 2009 | Toyota Camry         | Silver | TAS   |
| JN0TBN13D40004487   | No Plates    | 2003 | Nissan X-trail       | Silver | WA    |
| GF9AAU1C8P102648    | Q1D394       | 1996 | Ford Falcon Ute      | White  | WA    |
| JTDKT1534001916466  | 18F0432      | 2001 | Toyota Echo          | Green  | WA    |
| GF9AAU1C8P1026477   | 18B1346      | 2002 | Ford Falcon          | Grey   | WA    |
| JTDW1510000000098   | M-4R004      | 2001 | Toyota Echo          | Grey   | WA    |
| AG19AG2F0L134896    | No Plates    | 2003 | Holden Commodore Ute | Green  | VIC   |
| JT171GAD000000017   | No Plates    | 1998 | Toyota Townace       | White  | WA    |
| JAAT101A01020039    | 8BD020       | 1991 | Holden Rodeo         | White  | WA    |
| JTFD16A6600000099   | No Plates    | 2003 | Toyota Hilux         | Blue   | WA    |
| K081UAG18F9AC00116  | No Plates    | 1992 | Hyundai Excel        | White  | WA    |

If you are interested in a right to claim to a vehicle listed, please contact perthairport@perthairport.com.au and suggest more money to buy or you wish.

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In the **The West Australian**

**ENVIRONMENT PLANS NOTICE**

Woodside Energy (Australia) Pty Ltd (ASX:WOL) (Woodside Energy) is proposing to conduct activities in Commonwealth waters in accordance with the following:

**TPA03 Well Intervention Environment Plan (Woodside Energy Ltd)**

|                               |   |
|-------------------------------|---|
| <b>Activity summary</b>       | Activities on the TPA03 production well to remediate down hole issues and continue production from the lower reservoir. |
| <b>Location</b>               | 532 km north west of Geelong  |
| <b>Commencement timing</b>    | Anticipated around mid 2023 pending approvals, seasonal availability and weather conditions.                            |
| <b>Estimated duration</b>     | 4 to 6 days and will take place 24 hours, 7 days a week.  |
| <b>Consultation commenced</b> | June 2021 <b>Final EP submission to WOTEMRA</b> August 2021   |

**Adrian Drilling and Seismic Intervention Environment Plan (Woodside Energy Ltd)**

|                               |   |
|-------------------------------|---|
| <b>Activity summary</b>       | Geotechnical and geophysical surveys, drilling and approval of the Adrian South F1 well and plug and abandonment of Adrian South F12 well.  |
| <b>Location</b>               | 92 km west south west of Geelong  |
| <b>Commencement timing</b>    | Anticipated around second half of 2023 pending approvals, seasonal availability and weather conditions.   |
| <b>Estimated duration</b>     | 40 days for drilling and approval, 20 days for geophysical and geotechnical surveys and 21 for decommissioning of the Adrian South F12 well. Together will be conducted for 23 hours per day seven days per week. |
| <b>Consultation commenced</b> | August 2021 <b>Final EP submission to WOTEMRA</b> Not yet submitted   |

**WB-04 Ryan Drilling and Seismic Intervention Environment Plan (Woodside Energy Pty Ltd)**

|                               |  |
|-------------------------------|--|
| <b>Activity summary</b>       | Drilling and seismic activities on the Ryan well to remediate the Ryan well (TPA03) and undergo and intervention on the Ryan production wells.   |
| <b>Location</b>               | 102 km north west of Geelong   |
| <b>Commencement timing</b>    | Anticipated around second half of 2023 pending approvals, seasonal availability and weather conditions.  |
| <b>Estimated duration</b>     | 40 days for the TPA03 well, 20 days per well for well intervention activities and 40 days for seismic intervention activities. Activities will be conducted 24 hours per day, 7 days per week. |
| <b>Consultation commenced</b> | June 2021 <b>Final EP submission to WOTEMRA</b> Not yet submitted  |



Figure 1 (TPA03), Figure 2 (Adrian) and Figure 3 (WB-04 Ryan) show the location of the wells in Commonwealth waters. The location of the wells is shown in relation to the coastline and the location of the wells is shown in relation to the coastline.



Figure 2 (Adrian) and Figure 3 (WB-04 Ryan) show the location of the wells in Commonwealth waters. The location of the wells is shown in relation to the coastline and the location of the wells is shown in relation to the coastline.



Figure 3 (WB-04 Ryan) shows the location of the well in Commonwealth waters. The location of the well is shown in relation to the coastline and the location of the well is shown in relation to the coastline.

**Consultation Participation and Feedback**

Woodside is seeking to consult with relevant persons to inform the preparation of Environment Plans (EPs) for these activities. Consultation is designed to notify and obtain input from relevant persons to assist Woodside identify measures to minimise potential adverse effects of the proposed activities on the environment.

Consultation will inform the development of each EP in accordance with environmental regulations administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under the Offshore Petroleum and Greenhouse Gas Regulator Act 2020 (OPGGA) and support other regulatory requirements associated with the proposed activities.

For additional consultation information please see our website: [www.woodside.com.au/consultation/consultation-activities](http://www.woodside.com.au/consultation/consultation-activities) or if you would like additional information about these activities, you can also submit feedback via our website to receive further information on proposed activities.

If you would like to comment on the proposed activities listed above, please contact Woodside before Friday 17 March 2023 via:

E: [Feedback@woodside.com](mailto:Feedback@woodside.com)  
 Tel: +61 8 9304 8277

### TRANSPORT

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### PUBLIC NOTICES

#### Building Regulations 2012

##### Town of Port Hedland

### AMENDMENT TO CLAUSE 1, SCHEDULE 4 OF THE BUILDING REGULATIONS 2012

Notice is hereby given that the Town of Port Hedland (the Town) has initiated the above-mentioned Amendment to the Regulations.

Schedule 4, Clause 1 of the Building Regulations sets out areas of the state (being specific regional or remote areas) where a building permit is not required for certain work. The proposed amendment will remove Port Hedland from Schedule 4, Clause 1.

Further information can be found on the Town's website at [www.porthedland.wa.gov.au](http://www.porthedland.wa.gov.au).

Comments or objections should be lodged with the Town on or before close of business on 22 March 2023, in writing addressed to Development Services, Town of Port Hedland, PO Box 41, Port Hedland WA 6721 or via email: [aplanning@porthedland.wa.gov.au](mailto:aplanning@porthedland.wa.gov.au)

#### Land Administration Act 1997

##### Town of Port Hedland

### NOTICE OF PUBLIC ADVERTISEMENT OF PEDESTRIAN ACCESS WAY CLOSURE - LOT 3280 STEAMER AVENUE, SOUTH HEDLAND

Notice is hereby given that the Town of Port Hedland (Town) has received an application to close the above-mentioned pedestrian access way.

Details of the proposal are available to view at the Town's Civic Centre during office hours up to and including close of business on 8 March 2023. Any queries can be directed to Development Services on 9158 9300. The proposal can also be viewed on the Town of Port Hedland website at: <http://www.porthedland.wa.gov.au/planning-building-and-environment/planning/public-consultation.aspx>

Submissions on the proposal may be lodged in writing addressed to Development Services, Town of Port Hedland, PO Box 41, Port Hedland WA 6721 or via email: [aplanning@porthedland.wa.gov.au](mailto:aplanning@porthedland.wa.gov.au)

Submissions should be lodged with the Town on or before close of business on 8 March 2023.

Carl Askew  
Chief Executive Officer

Enviro Infrastructure wishes to advise local road users of upcoming road closures on North West Coastal Highway, required for critical maintenance works. Closures will be in effect as below:

Bridge 0843 (Robe River Bridge) - Tuesday 28th of February; 10:00PM to 5:00AM  
Bridge 0845 (Maitland River Bridge) - Wednesday 1st of March; 10:00PM to 5:00AM

Please monitor the Main Roads WA online travel map for updates.

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# ENVIRONMENT PLANS NOTICE

Woodside Energy (Australia) Pty Ltd (AN 006 923 879), Woodside Energy Julimar Pty Ltd (AN 130 309 365) and Woodside Burrup Pty Ltd (AN 100 237 416) are proposing to conduct activities in Commonwealth waters as described below.

**TPA03 Well Intervention Environment Plan (Woodside Energy Ltd)**

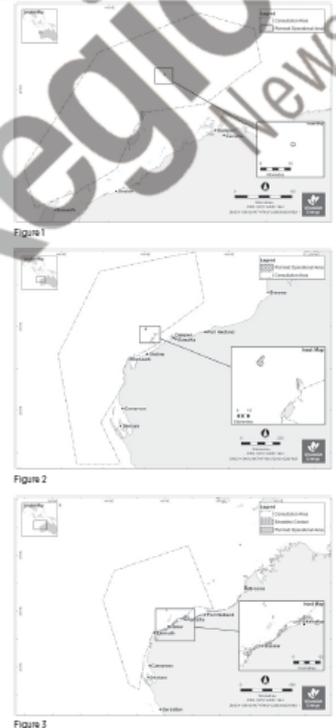
|  |   |
|--|---|
| <b>Activity summary:</b>               | Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir |
| <b>Location:</b>                       | ~136 km north-west of Dampier   |
| <b>Commencement timing:</b>            | Anticipated around mid 2023 pending approvals, vessel availability and weather constraints                              |
| <b>Estimated duration:</b>             | ~5 to 14 days; and will take place 24 hours, 7 days a week  |
| <b>Consultation commenced:</b>         | June 2022   |
| <b>First EP submission to NOPSEMA:</b> | August 2022   |

**Julimar Drilling and Surveys Environment Plan (Woodside Energy Julimar Pty Ltd)**

|  |  |
|--|--|
| <b>Activity summary:</b>               | Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well and, plug and abandonment of Julimar South-1if required   |
| <b>Location:</b>                       | ~182 km west-north-west of Dampier   |
| <b>Commencement timing:</b>            | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints  |
| <b>Estimated duration:</b>             | ~40 days for Julimar South-1if and ~45 days for geophysical and geotechnical surveys and ~21 for decommissioning of the Julimar South-1if well. Activities will be conducted 24 hours per day, seven days per week |
| <b>Consultation commenced:</b>         | August 2022  |
| <b>First EP submission to NOPSEMA:</b> | Not yet Submitted  |

**WA-344 Pyris Drilling and Subsea Installation Environment Plan (Woodside Burrup Pty Ltd)**

|  |   |
|--|---|
| <b>Activity summary:</b>               | Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells  |
| <b>Location:</b>                       | ~170 km north-west of Dampier   |
| <b>Commencement timing:</b>            | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |
| <b>Estimated duration:</b>             | ~50 days for the PLA08 well, ~70 days per well for well intervention activities and ~30 days for subsea installation activities. Activities will be conducted 24 hours per day, 7 days per week |
| <b>Consultation commenced:</b>         | June 2022   |
| <b>First EP submission to NOPSEMA:</b> | Not yet Submitted   |



**Figure 1 (TPA03), Figure 2 (Julimar) and Figure 3 (WA-344 Pyris)**

Describes the Operational Areas and the Environment That May Be Affected (EMBA) based on a composite of many different paths and further distance where a highly unlikely, unplanned event could have an impact based on weather and ocean conditions.

Woodside has undertaken an assessment to identify potential impacts and risks to the marine environment arising from both planned and unplanned activities. Mitigation and management measures have been developed for each of the risks identified and will be outlined in the relevant EP. Impacts associated with the planned activities include the physical presence of a Mobile Offshore Drilling Unit (MODU) and vessels, interaction with other marine users, vessel disturbance (such as infrastructural placement) and other vessel, drilling and construction impacts (such as noise, light, air emissions and marine discharge). Impacts that could occur due to an unplanned event include hydrocarbon release (condensates, marine diesel or other vessel fuels), vessel collisions with marine fauna, additional seabed disturbance, introduced marine species, accidental loss of waste or other discharge.

Figure 1, Figure 2 and Figure 3 illustrate indicative EMBA's to support persons or organisations understanding of whether their functions, interests or activities may be affected by the proposed activities, with detailed information found in Woodside's Consultation Information Sheets.

**Consultation Participation and Feedback**

Woodside is seeking to consult with relevant persons to inform the preparation of Environment Plans (EPs) for these activities. Consultation is designed to notify and obtain input from relevant persons to assist Woodside identify measures to lessen or avoid potential adverse effects of the proposed activity on the environment.

Consultation will inform the development of each EP in accordance with environmental regulations administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGSA) and support other regulatory submissions associated with the planned activities. Detailed consultation information sheets are available at: [www.woodside.com/sustainability/consultation-activities](http://www.woodside.com/sustainability/consultation-activities) if you would like additional information about these activities. You can also subscribe via our website to receive future information on proposed activities.

If you would like to comment on the proposed activities outlined above, please contact Woodside before Friday 17 March 2023 via:

**E: Feedback@woodside.com**  
Toll free: 1800 442 077

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# ENVIRONMENT PLANS NOTICE

Woodside Energy (Australia) Pty Ltd (ACN 006 923 879), Woodside Energy Julimar Pty Ltd (ACN 130 301 365) and Woodside Burnup Pty Ltd (ACN 120 237 416) are proposing to conduct activities in Commonwealth waters as described below:

**TPA03 Well Intervention Environment Plan (Woodside Energy Ltd)**

|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir |
| <b>Location:</b>                      | ~138 km north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around mid 2023 pending approvals, vessel availability and weather constraints                              |
| <b>Estimated duration:</b>            | ~5 to 14 days and will take place 24 hours, 7 days a week   |
| <b>Consultation commenced</b>         | June 2022   |
| <b>First EP submission to NOPSEMA</b> | August 2022   |

**Julimar Drilling and Survey Environment Plan (Woodside Energy Julimar Pty Ltd)**

|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well and, plug and abandonment of Julimar South-1H required   |
| <b>Location:</b>                      | ~182 km north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |
| <b>Estimated duration:</b>            | ~40 days for drilling and appraisal, ~45 day geophysical and geotechnical surveys and ~21 for decommissioning of the Julimar South-1 well. Activities will be conducted 24 hours per day, seven days per week |
| <b>Consultation commenced</b>         | August 2022   |
| <b>First EP submission to NOPSEMA</b> | Not yet Submitted   |

**WA-34-L Pylaris Drilling and Subsea Installation Environment Plan (Woodside Burnup Pty Ltd)**

|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells  |
| <b>Location:</b>                      | ~170 km north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |
| <b>Estimated duration:</b>            | ~50 days for the PLA08 well, ~70 days per well for well intervention activities and ~30 days for subsea installation activities. Activities will be conducted 24 hours per day, 7 days per week |
| <b>Consultation commenced</b>         | June 2022   |
| <b>First EP submission to NOPSEMA</b> | Not yet Submitted   |

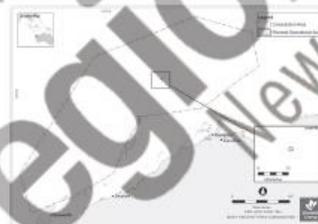


Figure 1



Figure 2

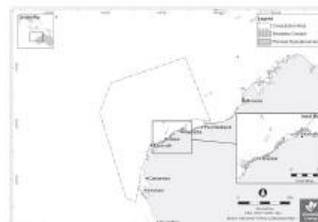


Figure 3

**Figure 1 (TPA03), Figure 2 (Julimar) and Figure 3 (WA-34-L Pylaris)**  
 Displays the Operational Areas and the Environment That May Be Affected (ETMA) based on a composite of many different paths and further distance where a highly unlikely, unplanned event could have an impact based on weather and ocean conditions.

Woodside has under taken an assessment to identify potential impacts and risks to the marine environment arising from both planned and unplanned activities. Mitigation and management measures have been developed for each of the risks identified and will be outlined in the relevant ER.

Impacts associated with the planned activities include the physical presence of a Mobile Offshore Drilling Unit (MODU) and vessels, interaction with other marine users, seabed disturbance (such as infrastructure placement) and other vessel, drilling and construction impacts (such as noise, light, air emissions and marine discharge). Impacts that could occur due to an unplanned event include hydrocarbon release (condensates, marine diesel or other vessel fuels), vessel collisions with marine fauna, additional seabed disturbance, introduced marine species, accidental loss of waste or other discharge.

**Figure 1, Figure 2 and Figure 3** illustrate indicative ETMAs to support persons or organisations understanding of whether their functions, interests or activities may be affected by the proposed activities, with detailed information found in Woodside's Consultation Information Sheets.

**Consultation Participation and Feedback**

Woodside is seeking to consult with relevant persons to inform the preparation of Environment Plans (EPs) for these activities. Consultation is designed to notify and obtain input from relevant persons to assist Woodside identify measures to lessen or avoid potential adverse effects of the proposed activity on the environment.

Consultation will inform the development of each EP in accordance with environmental regulations administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGSA) and support other regulatory submissions associated with the planned activities.

Detailed consultation information sheets are available at: [www.woodside.com/sustainability/consultation-activities](http://www.woodside.com/sustainability/consultation-activities) if you would like additional information about these activities. You can also subscribe via our website to receive future information on proposed activities.

If you would like to comment on the proposed activities outlined above, please contact Woodside before Friday, 17 March 2023 via:

E: [Feedback@woodside.com](mailto:Feedback@woodside.com)  
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## DEATHS

**BURNS** (Latham James): 30.12.1936 - 11.02.2023  
Formerly of Cunderdin, Sella and Lathlain.  
Dearly loved husband of Kay for 61 years.  
Loved Dad of Sharyn and Andrew, Brad and Raylene.  
Treasured Pop to Emily and Dorcas, Luke, Chelsea, Tom and Celeste.  
Love you forever.  
Private Family Cremation will be held for Latham, and a Celebration of his Life will be held later at a time to be confirmed.

**BURNS** (Latham): Great Friend and neighbour of Bill and Barbara and the Hermitte Family. Will be sadly missed.

**HARRIS** (Carmel Rose) (nee McCartney): 18.5.1932 - 12.2.2023  
Our beautiful and much-loved Mum passed peacefully away on 12th February 2023.  
Beloved Wife of Keith (dec). Dearly loved Mum of Michael, Carol, Eric, Brett and Peter.  
Loved Mother-in-Law of Susan, Dave and Gayle.  
Much loved Nanna of 12 and Special Great Nanna of 17.  
Forever in our hearts and thoughts.

Our family would like to sincerely thank Dr Ray Birchard, St John of God Nursing Staff and the Palliative Care Nurses for the amazing care given to our Mum and the wonderful support given to her family.

**HARRIS** (Carmel Rose): Loved Mum to Brett and Gayle. Awesome Nanna to Kaegan and Luke, Erin and Callum, Aela. Precious Little Nanna to Aona, Harper and Eno. We will greatly miss your lovely gentle presence. Thank you for your love, selflessness and for the treasured memories we will hold dear always. Rest easy now.

**HARRIS** (Carmel Rose): 18.5.32 - 12.2.23  
Dearly loved Mother of Michael, Mother in law to Sue, Nana of Luke and Ash, Matthew, Christopher and Phinnón. Little Nana of Jason, Sienna, Amelie, Leon, James, Lily and Fletcher. Gentle Soul now resting in Gods loving arms. Treasured memories are ours to keep and forever in our hearts.

*Forever in Our Hearts*  
**HARRIS** (Carmel Rose): 18.5.1932 - 12.2.2023  
Much loved Mum of Carol and Dave.  
Devoted Nanna to Daniel and Susan, Andrew and Lauren, Adrian and Kristal, Owen and Nina. Special little Granny to Emily and Eva, Ryleigh, Kash and Knox and Kalarai.  
Our love for you has no boundaries, special memories to keep. Reunited with Dad now and resting in God's loving care.

**HARRIS** (Carmel): Cherished memories. Rest peacefully Little Granny. Love Andy, Liz and Ryleigh.

*We can help create a fitting tribute to celebrate the life of a loved one*  
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## FUNERAL NOTICES

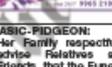
**HARRIS:** Her Family respectfully advise Relatives and Friends, that the Funeral Service lovingly celebrating the life of Mrs Carmel Rose Harris, late of Beachlands, will be held at the Geraldton Crematorium, TUESDAY (24.02.2023) beginning at 2.00pm.



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**MAZZA:** Family and friends of the late Colin Peter Mazza are respectfully informed that a Funeral Service to pay tribute to Colin's life will take place at GERALDTON Crematorium, TUESDAY (21.02.2023) at 10.00am.



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## PUBLIC NOTICES



**mainroads**  
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### Speed Limit Change Chapman Road, City of Greater Geraldton

Main Roads WA advises road users that changes to the speed limit on Chapman Road will occur on Monday 20 February 2023.  
The existing 80km/h speed zone will be reduced to 50km/h for 21km from Phelps St to Caddy St. The proposed changes will be implemented as part of Main Roads ongoing review of speed limits in the Mid West region and commitment to road safety. Motorists are reminded that speeding is an offence. Further information can be obtained by contacting: Main Roads on 9999 1200.

NRWA 0160

# ENVIRONMENT PLANS NOTICE

Woodside Energy (Australia) Pty Ltd (ACN 006 925 676), Woodside Energy Jullimar Pty Ltd (ACN 150 331 395) and Woodside Bump Pty Ltd (ACN 125 237 485) are proposing to conduct activities in Commonwealth waters as described below:

### TPA03 Well Intervention on Environment Plan (Woodside Energy Ltd)

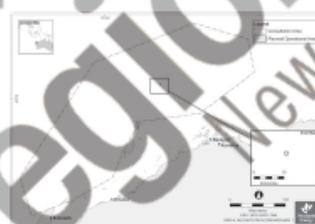
|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir |
| <b>Location:</b>                      | ~128 km north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around mid 2023 pending approvals, vessel availability and weather constraints                              |
| <b>Estimated duration:</b>            | ~5 to 14 days and will take place 24 hours, 7 days a week   |
| <b>Consultation commenced:</b>        | June 2022   |
| <b>Final EP submitted to NOPPSMA:</b> | August 2022   |

### Adhear Drilling and Service Environment Plan (Woodside Energy Jullimar Pty Ltd)

|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Geotechnical and geophysical surveys, drilling and appraisal of the Jullimar South-1 well and plug and abandonment of Jullimar South-1 if required  |
| <b>Location:</b>                      | ~82 km west-north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |
| <b>Estimated duration:</b>            | ~40 days for drilling and appraisal, ~45 days geophysical and geotechnical surveys and ~21 for decommissioning of the Jullimar South-1 well. Activities will be conducted 24 hours per day, seven days per week |
| <b>Consultation commenced:</b>        | August 2022   |
| <b>Final EP submitted to NOPPSMA:</b> | Not yet Submitted   |

### WA-34-L Pylae Drilling and Service Installation Environment Plan (Woodside Energy Pty Ltd)

|                                       |   |
|---------------------------------------|---|
| <b>Activity summary:</b>              | Drilling and vessel infrastructure installation activities for one well (PLA03) and contingent well intervention activities for current production wells  |
| <b>Location:</b>                      | ~170 km north-west of Dampier   |
| <b>Commencement timing:</b>           | Anticipated around second half of 2023 pending approvals, vessel availability and weather constraints   |
| <b>Estimated duration:</b>            | ~50 days for the PLA03 well, ~70 days per well for well intervention activities and ~30 days for vessel installation activities. Activities will be conducted 24 hours per day, 7 days per week |
| <b>Consultation commenced:</b>        | June 2022   |
| <b>Final EP submitted to NOPPSMA:</b> | Not yet Submitted   |

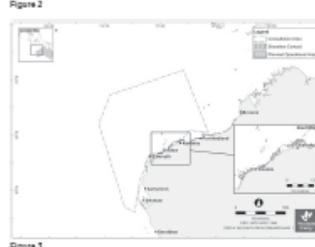


**Figure 1 (TPA03), Figure 2 (Adhear) and Figure 3 (WA-34-L Pylae)** Describe the Operational Areas and the Environment that May be Affected (EMBA) based on a composite of many different paths and distance estimates where a highly unlikely, unplanned event could have an impact based on weather and ocean conditions.

Woodside has undertaken an assessment to identify potential impacts and risks to the marine environment arising from both planned and unplanned activities. Mitigation and management measures have been developed for each of the risks identified and will be outlined in the relevant EP. Impacts associated with the planned activities include the physical presence of a Mobile Offshore Drilling Unit (MODU) and vessels, interaction with other marine users, seabed disturbance (such as infrastructure placement) and other vessel, drilling and construction impacts (such as noise, light, air emissions and marine discharge). Impacts that could occur due to an unplanned event include hydrocarbon releases (condensates, methane gas) or other vessel hull, vessel collisions with marine fauna, additional seabed disturbance, introduced marine species, accidental loss of waste or other discharge.



**Figure 1, Figure 2 and Figure 3** illustrate EMBA to support persons or organisations understanding of whether their functions, interests or activities may be affected by the proposed activities, with detailed information found in Woodside's Consultation Information Sheets.



### Consultation Participation and Feedback

Woodside is seeking to consult with relevant persons to inform the preparation of Environment Plans (EPs) for these activities. Consultation is designed to identify and obtain input from relevant persons to assist Woodside identify measures to lessen or avoid potential adverse effects of the proposed activity on the environment. Consultation will inform the development of each EP in accordance with environmental regulations administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPPSMA) under the Offshore Petroleum and Greenhouse Gas Storage Act 2006 (OPGSA) and support other regulatory submissions associated with the planned activities. Detailed consultation information sheets are available at [www.woodside.com.au/sustainability/consultation-activities](http://www.woodside.com.au/sustainability/consultation-activities) if you would like additional information about these activities. You can also subscribe via our website to receive future information on proposed activities. If you would like to comment on the proposed activities outlined above, please contact Woodside before Friday 17 March 2023 via: [E.Feedback@woodside.com](mailto:E.Feedback@woodside.com) Toll free: 1800 442 977

**4.4 Email sent to ABF, AFMA, AHO, AMSA – Marine Pollution, AMSA – Marine Safety, DPIRD, DCCEEW / DAFF, Director of National Parks (DNP), DBCA, DISR, DMIRS (15 February 2023)**

Dear Stakeholder

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have additional feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP  | PLA08 EP   |
|-----------------|--|---|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South- | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production |

TPA03 Well Intervention Environment Plan

|                                 |  |  |  |
|---------------------------------|--|--|--|
|                                 | <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>   | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier  | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>  | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be   | Drilling is currently anticipated in Q3 2023. However, drilling may be   | Planned drilling, completions, subsea installation and pre-  |

TPA03 Well Intervention Environment Plan

|  |  |  |   |
|--|--|--|---|
|  | <p>completed around Q1 2023 – Q3 2023<br/>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br/>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   |
| <b>Duration:</b>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>  | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. Activities may occur intermittently over a two-year period.</p> |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>   | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place. A 4000 m radius Operational Area will</p>  |

|                 |  |   |  |
|-----------------|--|---|--|
|                 |  |   | apply around a moored MODU, if used.<br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.   |
| <b>Vessels:</b> | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:  
[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.5 Email sent to DoD, DoT (15 February 2023)**

Dear Stakeholder

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

TPA03 Well Intervention Environment Plan

- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

Woodside is also consulting on the following additional activity in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have additional feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP  | PLA08 EP   |
|-----------------|--|---|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.<br><br>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.<br><br>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. | Drill and develop the proposed PLA08 production well.<br><br>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to |

TPA03 Well Intervention Environment Plan

|                                 |  |   |   |
|---------------------------------|--|---|---|
|                                 | <p>infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>monitor and maintain their integrity, if required.</p>   |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or</p>   | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey</p>  | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> |

TPA03 Well Intervention Environment Plan

|  |   |  |   |
|--|---|--|---|
|  | unforeseen circumstances.   | activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.   | Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.  |
| <b>Duration:</b>                       | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required. | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period. |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br><br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br><br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.                                   | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br><br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst   |

|                 |   |  |   |
|-----------------|---|--|---|
|                 |   |  | <p>activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>   |
| <b>Vessels:</b> | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.6 Email sent to Department of Planning, Lands and Heritage (DPLH) (15 February 2023)**

Dear Stakeholder

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|  |          |            |          |
|--|----------|------------|----------|
|  | TPA03 EP | Julimar EP | PLA08 EP |
|--|----------|------------|----------|

TPA03 Well Intervention Environment Plan

|                            |   |   |  |
|----------------------------|---|---|--|
| <p><b>Summary:</b></p>     | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <p><b>Permit area:</b></p> | <p>WA-5-L</p>   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title</p>   | <p>WA-34-L</p>   |

TPA03 Well Intervention Environment Plan

|                                 |   |  |   |
|---------------------------------|---|--|---|
|                                 |   | areas WA-5-R, WA-76-R and WA-526-P   |   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m   |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.                                      |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21  | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will |

TPA03 Well Intervention Environment Plan

|  |   |  |   |
|--|---|--|---|
|  |   | days to complete, if required.   | take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.   |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <b>Vessels:</b>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.7 Email sent to Ningaloo Coast World Heritage Advisory Committee (NCWHAC) (15 February 2023)**

Dear [REDACTED]

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022

([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

TPA03 Well Intervention Environment Plan

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP   |
|-----------------|---|---|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development,</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

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|                                 |  | <p>completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</p>   |   |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> |
| <b>Duration:</b>                | Well intervention activities are expected  | Drilling, appraisal and suspension activities are currently anticipated to  | Drilling activities for the proposed PLA08 well are currently expected to   |

TPA03 Well Intervention Environment Plan

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|  | to take approximately 1-2 weeks to complete.  | take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br><br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br><br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br><br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.<br><br>A 4000 m radius Operational Area will apply around a moored MODU, if used.<br><br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities. |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br><br>General supply/support vessels<br><br>The vessels will operate on dynamic positioning and will not  | MODU<br><br>General supply/support vessels<br><br>Survey / AHT vessel<br><br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.   | A dynamically positioned MODU is intended to be used for the drilling activities.<br><br>The MODU may be supported by subsea installation and light well intervention vessels.   |

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|  | <p>anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |
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**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009 (Cth)*.

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.8 Email sent to North West Slope and Trawl (4 Licence Holders), Western Deepwater Trawl (5 Licence Holders) (15 February 2023)**

Dear Stakeholder

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**); and
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**).

Woodside has previously consulted you on its plans for drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have additional feedback on revised PLA08 EP and/or any specific feedback for each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP   | PLA08 EP   |
|-----------------|--|--|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

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|                                 | production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).  | Development of the Julimar South-1 well is subject to future development decisions <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |  |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br><br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br><br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point  | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or |

TPA03 Well Intervention Environment Plan

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|   |  | <p>during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   | <p>unforeseen circumstances.</p>   |
| <p><b>Duration:</b></p>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |
| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p>  |

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|                 |  |   | A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.   |
| <b>Vessels:</b> | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

#### 4.9 Email sent to Commonwealth Fisheries Association (CFA) (15 February 2023)

Dear Stakeholder,

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

#### Activity:

|                 | TPA03 EP  | Julimar EP  | PLA08 EP   |
|-----------------|---|---|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. | Drill and develop the proposed PLA08 production well.<br><br>Contingent activities including well intervention workover or |

TPA03 Well Intervention Environment Plan

|                     |   |   |   |
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|                     | <p>production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <b>Permit area:</b> | WA-5-L  | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>    | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |

TPA03 Well Intervention Environment Plan

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| <p><b>Approx. Water Depth (m):</b></p> | <p>~113 m</p>  | <p>Operational Area ~ 130-240 m<br/><br/>Proposed Julimar South-1 well location ~ 163 m</p>   | <p>PLA08: ~820 m</p>   |
| <p><b>Schedule:</b></p>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br/><br/>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br/><br/>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br/><br/>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br/><br/>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>  |
| <p><b>Duration:</b></p>                | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br/><br/>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br/><br/>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>   | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br/><br/>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br/><br/>If required, well intervention activities will take up to 70 days per well to complete.<br/><br/>Activities may occur intermittently over a two-year period.</p> |

TPA03 Well Intervention Environment Plan

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| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <p><b>Vessels:</b></p>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

## TPA03 Well Intervention Environment Plan

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

### 4.10 Email sent to Pearl Producers Association (PPA) (15 February 2023)

Dear Stakeholder,

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP  |
|-----------------|---|---|---|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs. Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

|                                 |   |   |  |
|---------------------------------|---|---|--|
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br>Geotechnical and geophysical surveys:<br>Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.  |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. |

TPA03 Well Intervention Environment Plan

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|  |  |  | Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.   | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place. A 4000 m radius Operational Area will apply around a moored MODU, if used. A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.            |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities.  | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

#### 4.11 Email sent to WAFIC (16 February 2023)

Dear [REDACTED]

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

TPA03 Well Intervention Environment Plan

|                     | TPA03 EP  | Julimar EP  | PLA08 EP   |
|---------------------|---|---|--|
| <b>Summary:</b>     | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <b>Permit area:</b> | WA-5-L  | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring</p>  | WA-34-L  |

TPA03 Well Intervention Environment Plan

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|                                 |   | Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  |   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m   |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.                                      |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21  | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will |

TPA03 Well Intervention Environment Plan

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|  |   | days to complete, if required.   | take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.   |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <b>Vessels:</b>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.12 Email sent to Recfishwest, Marine Tourism WA, WA Game Fishing Association  
(16 February 2023)**

Dear Stakeholder,

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022

([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

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Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP   |
|-----------------|---|---|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development,</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

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|                                 |  | <p>completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</p>   |   |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> |
| <b>Duration:</b>                | Well intervention activities are expected  | Drilling, appraisal and suspension activities are currently anticipated to  | Drilling activities for the proposed PLA08 well are currently expected to   |

TPA03 Well Intervention Environment Plan

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|  | to take approximately 1-2 weeks to complete.  | take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br><br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br><br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br><br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.<br><br>A 4000 m radius Operational Area will apply around a moored MODU, if used.<br><br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities. |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br><br>General supply/support vessels<br><br>The vessels will operate on dynamic positioning and will not  | MODU<br><br>General supply/support vessels<br><br>Survey / AHT vessel<br><br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.   | A dynamically positioned MODU is intended to be used for the drilling activities.<br><br>The MODU may be supported by subsea installation and light well intervention vessels.   |

TPA03 Well Intervention Environment Plan

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|  | anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | Vessels will operate 24 hours per day for the duration of the activities. | Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |
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**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009 (Cth)*.

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.13 Email sent to APPEA, NERA (16 February 2023)**

Dear Stakeholder,

Woodside plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and

associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP   | PLA08 EP   |
|-----------------|---|--|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is</p> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

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|                                 | the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).   | subject to future development decisions <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |  |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br><br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P   | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br><br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point                           | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |

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|  |  | <p>during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   |  |
| <b>Duration:</b>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p>  |

|                 |  |   |  |
|-----------------|--|---|--|
|                 |  |   | A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.   |
| <b>Vessels:</b> | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

#### 4.14 Email sent to Exmouth Recreational Marine Users (50 Licence Holders), Karratha Recreational Marine Users (9 Licence Holders) (16 February 2023)

Dear Stakeholder,

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

#### **Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP   |
|-----------------|---|---|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur | Drill and develop the proposed PLA08 production well.<br><br>Contingent activities including well intervention workover or |

TPA03 Well Intervention Environment Plan

|                                 |   |   |   |
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|                                 | <p>production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <b>Permit area:</b>             | WA-5-L  | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m  | PLA08: ~820 m   |

TPA03 Well Intervention Environment Plan

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|                  |  | Proposed Julimar South-1 well location ~ 163 m  |  |
| <b>Schedule:</b> | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>  |
| <b>Duration:</b> | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>   | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |

TPA03 Well Intervention Environment Plan

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| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <p><b>Vessels:</b></p>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

## TPA03 Well Intervention Environment Plan

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.15 Email sent to BP Developments Australia, Chevron Australia / Osaka Gas gorgon / Tokyo Gas gorgon / JERA Gorgon, Lightmark Enterprises, Fugro Exploration, INPEX Alpha, KUFPEC, Kyushu Electric Wheatstone, Exxon Mobil Australia Resources Company, PE Wheatstone, Santos, Sapura OMV Upstream / OMV Australia, Shell Australia, Vermillion Oil and Gas, KATO Energy / KATO Corowa / KATO NWS / KATO Amulet, Carnarvon Energy, ENI Australia, FINDER No 9/10/16/17 (16 February 2023)**

Dear Stakeholder,

Woodside plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

TPA03 Well Intervention Environment Plan

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP   |
|-----------------|---|---|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development,</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

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|                                 |  | <p>completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</p>   |   |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> |
| <b>Duration:</b>                | Well intervention activities are expected  | Drilling, appraisal and suspension activities are currently anticipated to  | Drilling activities for the proposed PLA08 well are currently expected to   |

TPA03 Well Intervention Environment Plan

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|  | to take approximately 1-2 weeks to complete.  | take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br><br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br><br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br><br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.<br><br>A 4000 m radius Operational Area will apply around a moored MODU, if used.<br><br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities. |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br><br>General supply/support vessels<br><br>The vessels will operate on dynamic positioning and will not  | MODU<br><br>General supply/support vessels<br><br>Survey / AHT vessel<br><br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.   | A dynamically positioned MODU is intended to be used for the drilling activities.<br><br>The MODU may be supported by subsea installation and light well intervention vessels.   |

TPA03 Well Intervention Environment Plan

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|  | anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | Vessels will operate 24 hours per day for the duration of the activities. | Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |
|--|---|---|--|

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009 (Cth)*.

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.16 Email sent to 350A, ACF, AMCS, CCWA, GAP, Cape Conservation Group and Protect Ningaloo (16 February 2023)**

Dear Stakeholder,

Woodside plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and

associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP   | PLA08 EP   |
|-----------------|---|--|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is</p> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

|                                 |   |   |  |
|---------------------------------|---|---|--|
|                                 | the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).   | subject to future development decisions <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |  |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br><br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P   | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br><br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point                           | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |

TPA03 Well Intervention Environment Plan

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|  |  | <p>during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   |  |
| <b>Duration:</b>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p>  |

|                 |  |   |  |
|-----------------|--|---|--|
|                 |  |   | A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.   |
| <b>Vessels:</b> | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.17 Email sent to Exmouth Community Liaison Group - CRG (16 February 2023)**

Dear Exmouth Community Liaison Group,

TPA03 Well Intervention Environment Plan

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP   | PLA08 EP  |
|-----------------|--|--|---|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.<br><br>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.<br><br>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the | Drill and develop the proposed PLA08 production well.<br><br>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) |

TPA03 Well Intervention Environment Plan

|                                 |  |   |  |
|---------------------------------|--|---|--|
|                                 | <p>subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>to monitor and maintain their integrity, if required.</p> |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier                                |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be   | Drilling is currently anticipated in Q3 2023. However, drilling may be  | Planned drilling, completions, subsea installation and pre-  |

TPA03 Well Intervention Environment Plan

|  |   |  |  |
|--|---|--|--|
|  | <p>completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   |
| <b>Duration:</b>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>   | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>  | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the</p>                               | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the</p>   | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the</p>  |

|                        |   |  |   |
|------------------------|---|--|---|
|                        | <p>HWIV to manage vessel movements.</p>   | <p>JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>   | <p>PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>  |
| <p><b>Vessels:</b></p> | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

#### 4.18 Email sent to Western Australian Museum (16 February 2023)

Dear Stakeholder,

Woodside plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

#### Activity:

|  | TPA03 EP | Julimar EP | PLA08 EP |
|--|----------|------------|----------|
|--|----------|------------|----------|

TPA03 Well Intervention Environment Plan

|                            |   |   |  |
|----------------------------|---|---|--|
| <p><b>Summary:</b></p>     | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <p><b>Permit area:</b></p> | <p>WA-5-L</p>   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title</p>   | <p>WA-34-L</p>   |

TPA03 Well Intervention Environment Plan

|                                 |   |  |   |
|---------------------------------|---|--|---|
|                                 |   | areas WA-5-R, WA-76-R and WA-526-P   |   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m   |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.                                      |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21  | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will |

TPA03 Well Intervention Environment Plan

|  |   |  |   |
|--|---|--|---|
|  |   | days to complete, if required.   | take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.   |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <b>Vessels:</b>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.19 Email sent to Shire of Exmouth (16 February 2023)**

Hi [REDACTED]

(You will also have received this email as a member of the Exmouth CLG)

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022

([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP   | PLA08 EP   |
|-----------------|---|--|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

|                                 |   |  |  |
|---------------------------------|---|--|--|
|                                 |   | development, completions and end of field life (EOFL) P&A activities would be subject to a future EP.  |  |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br><br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br><br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                | Well intervention activities are expected   | Drilling, appraisal and suspension activities are currently anticipated to   | Drilling activities for the proposed PLA08 well are currently expected to  |

TPA03 Well Intervention Environment Plan

|  |   |  |  |
|--|---|--|--|
|  | to take approximately 1-2 weeks to complete.  | take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br><br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br><br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br><br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.<br><br>A 4000 m radius Operational Area will apply around a moored MODU, if used.<br><br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities. |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br><br>General supply/support vessels<br><br>The vessels will operate on dynamic positioning and will not  | MODU<br><br>General supply/support vessels<br><br>Survey / AHT vessel<br><br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.   | A dynamically positioned MODU is intended to be used for the drilling activities.<br><br>The MODU may be supported by subsea installation and light well intervention vessels.   |

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|  | <p>anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |
|--|--|--|---|

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009 (Cth)*.

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Regards

**4.20 Letter sent to Gascoyne Recreational Marine Users (65 Licence Holders) and Pilbara/Kimberley Recreational Marine Users (95 Licence Holders) (17 February 2023)**

Dear **[Stakeholder]**

Woodside is providing this update on the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (EP) (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Please see the relevant QR codes below which link directly to Consultation Information Sheets which provide additional background on the proposed activities, including summaries

of potential key impacts and risks, and associated management measures. These are also available on our website [www.woodside.com](http://www.woodside.com). You can also subscribe to receive updates on our consultation activities by subscribing through our Consultation Activities page.

**TPA03 EP:**



**Julimar EP:**



**PLA08 EP:**



**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have included the information in this one letter. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP  |
|-----------------|---|---|---|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena |

TPA03 Well Intervention Environment Plan

|                                 |   |   |   |
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|                                 | <p>production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <b>Permit area:</b>             | WA-5-L  | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |

TPA03 Well Intervention Environment Plan

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| <p><b>Schedule:</b></p>                       | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years). Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>  |
| <p><b>Duration:</b></p>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>   | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. Activities may occur intermittently over a two-year period.</p> |
| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place. A 4000 m radius Operational Area will apply</p>  |

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|                 |  |   | around a moored MODU, if used.<br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.   |
| <b>Vessels:</b> | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**4.21 Letter sent to Marine Aquarium Managed Fishery (12 Licence Holders), Mackerel Managed Fishery (Area 2 and 3) (43 Licence Holders), West Coast Deep Sea Crustacean Managed Fishery (7 Licence Holders), Specimen Shell Managed Fishery (29 Licence Holders), Onslow Prawn Managed Fishery (30 Licence Holders), Nickol Bay Prawn Managed Fishery (14 Licence Holders), Western Australian Sea Cucumber Managed Fishery (6 Licence Holders), Exmouth Gulf Prawn (15 Licence Holders), Pilbara Crab Managed Fishery (1 Licence Holder) and Land Hermit Crab Managed Fishery (5 Licence Holders) (17 February 2023)**

Dear [Stakeholder]

Woodside is providing this update on the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (EP) (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Please see the relevant QR codes below which link directly to Consultation Information Sheets which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also

available on our website [www.woodside.com](http://www.woodside.com). You can also subscribe to receive updates on our consultation activities by subscribing through our Consultation Activities page.

**TPA03 EP:**



**Julimar EP:**



**PLA08 EP:**



**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have included the information in this one letter. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP  | PLA08 EP  |
|-----------------|--|---|---|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL- |

TPA03 Well Intervention Environment Plan

|                                 |  |   |   |
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|                                 | <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p>  |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at</p>  | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> |

TPA03 Well Intervention Environment Plan

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|  |  | any point during the life of the EP (3 years).<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.   |  |
| <b>Duration:</b>                       | Well intervention activities are expected to take approximately 1-2 weeks to complete.   | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required. | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br>If required, well intervention activities will take up to 70 days per well to complete.<br>Activities may occur intermittently over a two-year period.          |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.                              | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.                                   | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.<br>A 4000 m radius Operational Area will apply around a moored MODU, if used.<br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities. |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities.  | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.   |

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|  | duration of the activities. | The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities. |
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**State-managed fisheries implications:**

We note the following overlapping State managed fisheries below.

- Exmouth Gulf Beach Seine and Mesh Net Managed Fish
- Exmouth Gulf Prawn Managed Fishery
- Land Hermit Crab Fishery
- Mackerel Managed Fishery (Area 2)
- Mackerel Managed Fishery (Area 3)
- Marine Aquarium Fish Managed Fishery
- Nickol Bay Prawn Managed Fishery
- Onslow Prawn Managed Fishery
- Pilbara Crab Managed Fishery
- Northern Demersal Scalefish Fishery
  - Pilbara Fish Trawl (Interim) Managed Fishery
  - Pilbara Line Fishery (Condition)
  - Pilbara Trap Managed Fishery
- Specimen Shell Managed Fishery
- West Australian Sea Cucumber Fishery
- West Australian North Coast Shark Managed Fishery
- West Coast Deep Sea Crustacean Managed Fishery

**4.22 Email sent to Karratha Community Liaison Group (17 February 2023)**

Dear CLG members,

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures.

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022

([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

TPA03 Well Intervention Environment Plan

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

Woodside would also like to provide an update on the progressive decommissioning of the Griffin and Stybarrow fields, previously operated by BHP Petroleum Pty Ltd (BHP).

We are providing this information on progressive decommissioning of Griffin and Stybarrow fields to ensure relevant persons are informed about the status of proposed activities, as there have been changes to activity scope and supporting consultation information since consultation commenced for these decommissioning projects in 2021. The Griffin Field is in Commonwealth waters in Petroleum Licence WA-10-L, 65 km northwest of Onslow and 94 km northeast of Exmouth, Western Australia and in water depths of approximately 120 m. The Stybarrow Field is in Commonwealth waters in Petroleum Licence WA-32-L, approximately 53 km northwest of Exmouth, Western Australia and in water depths of approximately 810 – 850 m.

Updated consultation Information Sheets for each of the activities listed above are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) at the bottom of this email which you may wish to use to provide your feedback specific to the proposed EPs.**

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP   | PLA08 EP  | Griffin Field Decommissioning Activities   | Stybarrow Field Decommissioning Activities  |
|-----------------|--|--|---|--|---|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, | <b>Removal Activities</b> <ul style="list-style-type: none"> <li>Removal of subsea equipment (wellheads, trees, distribution skids, risers, flexible flowlines, rigid</li> </ul> | <b>Plugging and Abandonment (P&amp;A) Activities</b> <ul style="list-style-type: none"> <li>Pre-execution activities associated with the well P&amp;A, such as barrier testing and removal of marine growth.</li> <li>Well P&amp;A of the 10</li> </ul> |

TPA03 Well Intervention Environment Plan

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|  | <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs. Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completion</li> </ul> | <p>Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> | <p>flowlines, umbilicals, and the pipeline end module (PLEM)). Removal of the Riser Turret Mooring (RTM) and its moorings. Depending on the vessel utilised, recovery of the RTM may require sections of it to be towed to shallower water out of the title. Removal of an exploration wellhead (Ramillies-1 in neighbouring petroleum title WA-12-L). Ongoing field management activities. Pigging and subsequent removal of the 26 km of Griffin Gas Export Pipeline (GEP) within Commonwealth waters.</p> | <p>productions/injection wells by placing cement plugs in the wells to permanently prevent hydrocarbon release. Cutting and removal of the wellhead and subsea tree assembly. Unblocking of the H4 flowline, if deemed feasible.</p> <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• Removal of subsea equipment (wellheads, trees, manifolds, risers, flexible flowlines, and umbilicals).</li> <li>• Removal of the Disconnectable Turret Mooring (DTM) and its moorings. Recovery of the DTM may require it to be towed to shallower water outside of permit area WA-32-L to support the DTM removal from the marine environment.</li> <li>• Ongoing field management activities (equipment</li> </ul> |
|--|--|--|---|--|---|

|                                 |                               |   |                               |  |   |
|---------------------------------|-------------------------------|---|-------------------------------|--|---|
|                                 |                               | ns and end of field life (EOFL) P&A activities would be subject to a future EP.   |                               | <b>In Situ Activities</b><br>Proposal to leave in situ 12 RTM drag anchors (buried), 6 concrete gravity bases and 5 piled foundations for the PLEM and 4 distribution skids. | monitoring and inspection).<br><b>In Situ Activities</b> <ul style="list-style-type: none"> <li>Proposed leave in situ of the 9 DTM drag anchors (buried), nine suction piles for the riser holdbacks and the historical exploration wellhead, Eskdale-1, which was unable to be removed following its drilling and abandonment in 2003.</li> </ul> |
| <b>Permit area:</b>             | WA-5-L                        | Drilling: WA-49-L<br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P | WA-34-L                       | WA-10-L  | WA-32-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier | ~160 km north-west of Dampier   | ~170 km north-west of Dampier | 94 km northeast of Exmouth, Western Australia.   | 53 km northwest of Exmouth, Western Australia.  |
| <b>Approx. Water Depth (m):</b> | ~113 m                        | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m                 | Approx. 120 m.   | Approx. 810 – 850 m.  |

TPA03 Well Intervention Environment Plan

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| <p><b>Schedule:</b></p> | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years). Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• Earliest proposed removal activity start is estimated to be Q4 2023, subject to approvals, vessel availability and weather constraints.</li> <li>• Facilities removal must be completed no later than 31 December 2024, pursuant to General Direction 832.</li> </ul> | <p><b>Plugging and Abandonment (P&amp;A) Activities</b></p> <ul style="list-style-type: none"> <li>• Earliest P&amp;A start is estimated to be Q4 2023, subject to approvals, MODU and vessel availability and weather constraints.</li> <li>• P&amp;A activities must be completed no later than 30 September 2024, pursuant to General Direction 833.</li> </ul> <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• Earliest facilities and DTM removal is estimated to be Q4 2023, subject to approvals, vessel availability and weather constraints.</li> </ul> <p>Equipment removal must be completed no later than 31 March 2025, pursuant to General Direction 833.</p> |
| <p><b>Duration:</b></p> | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p>   | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately</p>  | <p><b>Removal Activities</b></p> <p>Removal activities are anticipated to take approximately 6 months to complete and</p>   | <p><b>Plugging and Abandonment (P&amp;A) Activities</b></p> <ul style="list-style-type: none"> <li>• P&amp;A activities are anticipated to take approximately 6 – 9 months.</li> </ul>  |

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|  |  | Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | Approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. Activities may occur intermittently over a two-year period. | GEP removal activities are anticipated to take approximately 2 months to complete.  | <b>Removal Activities</b><br>Removal activities are anticipated to take approximately 4-6 months to complete and DTM removal activities are anticipated to take approximately 1 month to complete.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst  | <b>Removal Activities</b><br><ul style="list-style-type: none"> <li>The temporary Operational Area includes the area encompassing an approximate 1,500 m radius around the equipment. <ul style="list-style-type: none"> <li>A temporary 500 m exclusion zone will</li> </ul> </li> </ul> | <b>P&amp;A Activities</b><br><ul style="list-style-type: none"> <li>The Operational Area includes the area encompassing an approximate 3,000 m radius around each of the four drill centers within WA-32-L.</li> <li>A temporary 500 m exclusion zone will apply around the MODU and the associated project vessels during P&amp;A activities.</li> </ul> |

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|                 |  |  | <p>activities are taking place. A 4000 m radius Operational Area will apply around a moored MODU, if used. A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p> | <p>apply around the project vessels during removal and potential tow activities.</p>   | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• The temporary Operational Area includes the area encompassing an approximate 1,500 m radius around the subsea infrastructure and wellheads.</li> <li>• The DTM has an existing 1200 m radius petroleum safety zone which will continue to be in place until it is removed.</li> <li>• A temporary 500 m exclusion zone will apply around the CSV and the associated project vessels during removal activities.</li> </ul> <p>A temporary 500 m exclusion zone will apply around the HLV and the associated project vessels during the removal of the DTM.</p> |
| <b>Vessels:</b> | <p>Well Intervention Vessel (WIV)<br/>General supply/support vessels<br/>The vessels will operate on dynamic positioning and will not anchor/moo</p> | <p>MODU General supply/support vessels<br/>Survey / AHT vessel<br/>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> | <p>A dynamically positioned MODU is intended to be used for the drilling activities. The MODU may be supported by subsea installation</p>   | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• Construction support vessel (CSV) and Heavy Lift Vessel (HLV) for recovery and pipeline</li> </ul> | <p><b>P&amp;A activities</b></p> <ul style="list-style-type: none"> <li>• Semi-Submersible Mobile Offshore Drilling Unit (MODU)</li> <li>• The MODU will be supported by 2 to 3 offshore support vessels.</li> </ul>  |

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|  | <p>r on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>and light well intervention vessels. Support vessels may be used including, anchor handling vessels and activity support vessels. The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>removal activities. An anchor handling tug (AHT) to support the towing of the RTM to sheltered water.</p> | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• CSV and HLV for recovery and activities.</li> <li>• AHTs to support the towing of the DTM to the shallower water location (if required).</li> </ul> |
|--|---|--|--|--|---|

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009 (Cth)*.

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Best regards,

**4.23 Email sent to City of Karratha (17 February 2023)**

Dear [REDACTED]

## *TPA03 Well Intervention Environment Plan*

Woodside has previously consulted the City of Karratha on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures.

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

Woodside would also like to provide an update on the progressive decommissioning of the Griffin and Stybarrow fields, previously operated by BHP Petroleum Pty Ltd (BHP).

We are providing this information on progressive decommissioning of Griffin and Stybarrow fields to ensure relevant persons are informed about the status of proposed activities, as there have been changes to activity scope and supporting consultation information since consultation commenced for these decommissioning projects in 2021. The Griffin Field is in Commonwealth waters in Petroleum Licence WA-10-L, 65 km northwest of Onslow and 94 km northeast of Exmouth, Western Australia and in water depths of approximately 120 m. The Stybarrow Field is in Commonwealth waters in Petroleum Licence WA-32-L, approximately 53 km northwest of Exmouth, Western Australia and in water depths of approximately 810 – 850 m.

Updated consultation Information Sheets for each of the activities listed above are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) at the bottom of this email which you may wish to use to provide your feedback specific to the proposed EPs.**

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP  | Griffin Field Decommissioning Activities   | Stybarrow Field Decommissioning Activities  |
|-----------------|---|---|---|--|---|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not</li> </ul> | <p>Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• Removal of subsea equipment (wellheads, trees, distribution skids, risers, flexible flowlines, rigid flowlines, umbilicals, and the pipeline end module (PLEM)).</li> <li>• Removal of the Riser Turret Mooring (RTM) and its moorings. Depending on the vessel utilised, recovery of the RTM may require sections of it to be towed to shallower water out of the title.</li> <li>• Removal of an exploration wellhead (Ramillies-1 in</li> </ul> | <p><b>Plugging and Abandonment (P&amp;A) Activities</b></p> <ul style="list-style-type: none"> <li>• Pre-execution activities associated with the well P&amp;A, such as barrier testing and removal of marine growth.</li> <li>• Well P&amp;A of the 10 productions/injection wells by placing cement plugs in the wells to permanently prevent hydrocarbon release.</li> <li>• Cutting and removal of the wellhead and subsea tree assembly.</li> <li>• Unblocking of the H4 flowline, if deemed feasible.</li> </ul> <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>• Removal of subsea equipment (wellheads, trees, manifolds, risers, flexible flowlines, and umbilicals).</li> <li>• Removal of the Disconnectable</li> </ul> |

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|                     | will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022). | <p>developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</p> <ul style="list-style-type: none"> <li>If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |         | <p>neighbouring petroleum title WA-12-L).</p> <ul style="list-style-type: none"> <li>Ongoing field management activities.</li> <li>Pigging and subsequent removal of the 26 km of Griffin Gas Export Pipeline (GEP) within Commonwealth waters.</li> </ul> <p><b>In Situ Activities</b><br/>Proposal to leave in situ 12 RTM drag anchors (buried), 6 concrete gravity bases and 5 piled foundations for the PLEM and 4 distribution skids.</p> | <p>Turret Mooring (DTM) and its moorings. Recovery of the DTM may require it to be towed to shallower water outside of permit area WA-32-L to support the DTM removal from the marine environment.</p> <ul style="list-style-type: none"> <li>Ongoing field management activities (equipment monitoring and inspection).</li> </ul> <p><b>In Situ Activities</b></p> <ul style="list-style-type: none"> <li>Proposed leave in situ of the 9 DTM drag anchors (buried), nine suction piles for the riser holdbacks and the historical exploration wellhead, Eskdale-1, which was unable to be removed following its drilling and abandonment in 2003.</li> </ul> |
| <b>Permit area:</b> | WA-5-L  | Drilling: WA-49-L<br>Geotechnical and geophysical surveys: Within the WA-49-L title area and   | WA-34-L | WA-10-L   | WA-32-L   |

TPA03 Well Intervention Environment Plan

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|                                 |   | neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  |   |   |   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   | 94 km northeast of Exmouth, Western Australia.  | 53 km northwest of Exmouth, Western Australia.  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m   | Approx. 120 m.  | Approx. 810 – 850 m.  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | <b>Removal Activities</b><br><ul style="list-style-type: none"> <li>• Earliest proposed removal activity start is estimated to be Q4 2023, subject to approvals, vessel availability and weather constraints.</li> <li>• Facilities removal must be completed no later than 31 December 2024, pursuant to General Direction 832.</li> </ul> | <b>Plugging and Abandonment (P&amp;A) Activities</b><br><ul style="list-style-type: none"> <li>• Earliest P&amp;A start is estimated to be Q4 2023, subject to approvals, MODU and vessel availability and weather constraints.</li> <li>• P&amp;A activities must be completed no later than 30 September 2024, pursuant to General Direction 833.</li> </ul> <b>Removal Activities</b><br><ul style="list-style-type: none"> <li>• Earliest facilities and DTM removal is estimated to be Q4 2023, subject to approvals, vessel availability and</li> </ul> |

TPA03 Well Intervention Environment Plan

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|                         |   |   |   |  | <p>weather constraints. Equipment removal must be completed no later than 31 March 2025, pursuant to General Direction 833.</p>  |
| <p><b>Duration:</b></p> | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p> | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. Activities may occur intermittently over a two-year period.</p> | <p><b>Removal Activities</b></p> <p>Removal activities are anticipated to take approximately 6 months to complete and GEP removal activities are anticipated to take approximately 2 months to complete.</p> | <p><b>Plugging and Abandonment (P&amp;A) Activities</b></p> <ul style="list-style-type: none"> <li>• P&amp;A activities are anticipated to take approximately 6 – 9 months.</li> </ul> <p><b>Removal Activities</b></p> <p>Removal activities are anticipated to take approximately 4-6 months to complete and DTM removal activities are anticipated to take approximately 1 month to complete.</p> |

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| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place. A 4000 m radius Operational Area will apply around a moored MODU, if used. A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p> | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>The temporary Operational Area includes the area encompassing an approximate 1,500 m radius around the equipment.</li> <li>A temporary 500 m exclusion zone will apply around the project vessels during removal and potential tow activities.</li> </ul> | <p><b>P&amp;A Activities</b></p> <ul style="list-style-type: none"> <li>The Operational Area includes the area encompassing an approximate 3,000 m radius around each of the four drill centers within WA-32-L.</li> <li>A temporary 500 m exclusion zone will apply around the MODU and the associated project vessels during P&amp;A activities.</li> </ul> <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>The temporary Operational Area includes the area encompassing an approximate 1,500 m radius around the subsea infrastructure and wellheads.</li> <li>The DTM has an existing 1200 m radius petroleum safety zone which will continue to be in place until it is removed.</li> <li>A temporary 500 m exclusion zone will apply around the CSV and the associated project vessels</li> </ul> |
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|                 |   |   |   |   | <p>during removal activities.</p> <p>A temporary 500 m exclusion zone will apply around the HLV and the associated project vessels during the removal of the DTM.</p>  |
| <b>Vessels:</b> | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>Construction support vessel (CSV) and Heavy Lift Vessel (HLV) for recovery and pipeline removal activities.</li> </ul> <p>An anchor handling tug (AHT) to support the towing of the RTM to sheltered water.</p> | <p><b>P&amp;A activities</b></p> <ul style="list-style-type: none"> <li>Semi-Submersible Mobile Offshore Drilling Unit (MODU)</li> <li>The MODU will be supported by 2 to 3 offshore support vessels.</li> </ul> <p><b>Removal Activities</b></p> <ul style="list-style-type: none"> <li>CSV and HLV for recovery and activities.</li> <li>AHTs to support the towing of the DTM to the shallower water location (if required).</li> </ul> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **17 March 2023**.

Best regards,

**4.24 Email sent to Onslow Chamber of Commerce and Industry (18 February 2023)**

Dear [REDACTED]

I'm hopeful we can meet in early March to discuss some of our environment plan activities please.

Woodside is providing the Chamber with updated advice on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022

([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

TPA03 Well Intervention Environment Plan

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **20 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP   |
|-----------------|---|---|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development,</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

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|                                 |  | <p>completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</p>   |   |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> |
| <b>Duration:</b>                | Well intervention activities are expected  | Drilling, appraisal and suspension activities are currently anticipated to  | Drilling activities for the proposed PLA08 well are currently expected to   |

TPA03 Well Intervention Environment Plan

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|  | to take approximately 1-2 weeks to complete.  | take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre.<br><br>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements. | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.<br><br>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.<br><br>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU.<br><br>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.<br><br>A 4000 m radius Operational Area will apply around a moored MODU, if used.<br><br>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities. |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br><br>General supply/support vessels<br><br>The vessels will operate on dynamic positioning and will not  | MODU<br><br>General supply/support vessels<br><br>Survey / AHT vessel<br><br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.   | A dynamically positioned MODU is intended to be used for the drilling activities.<br><br>The MODU may be supported by subsea installation and light well intervention vessels.   |

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|  | <p>anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |
|--|--|--|---|

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009 (Cth)*.

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **20 March 2023**.

Regards

**4.25 Email sent to Shire of Ashburton (18 February 2023)**

Dear [REDACTED]

Another email on Woodside environment plan activities for the Shire to review please. We're meeting with [REDACTED] on 2 March and will provide an update on our activities during this meeting also.

Woodside is providing the Shire with updated advice on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **20 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP   | PLA08 EP   |
|-----------------|--|--|--|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.</p> <p>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

|                                 |   |  |  |
|---------------------------------|---|--|--|
|                                 | production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).  | Development of the Julimar South-1 well is subject to future development decisions <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |  |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br><br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br><br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point  | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or |

TPA03 Well Intervention Environment Plan

|   |  |   |  |
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|   |  | <p>during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   | <p>unforeseen circumstances.</p>   |
| <p><b>Duration:</b></p>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |
| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p>  |

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|                 |  |   | A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.   |
| <b>Vessels:</b> | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **20 March 2023**.

Regards

**4.26 Email sent to Robe River Kuruma Aboriginal Corporation (RRKAC) (20 February 2023)**

Good morning [REDACTED]

Further to our recent communications, I attach Summary Information sheets for the following three projects:

- Julimar Appraisal Drilling and Survey Environment Plan
- TPA-03 Well Intervention Environment Plan Environment Plan
- WA-34-L Pyxis Drilling and Subsea Installation Environment Plan

In preparation for the activities in each of the work programs, Woodside has undertaken an assessment to identify potential impacts and risks to the marine environment arising from both planned and unplanned activities. Mitigation and management measures have been developed for each of the risks identified and will be outlined in the Environmental Plan.

We have a number of detailed Consultation Information Sheets, available on [our website](#), which provide further background on the proposed approaches, including a summary of potential key risks and associated management measures for the primary activity and alternative options.

Woodside is seeking to understand the nature of the interests that Robe River Kuruma Aboriginal Corporation (RRKAC) and its members may have in the 'environment that may be affected' (EMBA) of each these activities. The EMBA is the total area over which unplanned events could have environmental impacts, as set out in the Summary Information sheet attached.

If you would like to speak with us, please let us know by **20 March 2023**. Please also let us know how you would like us to engage with you as soon as possible.

RRKAC can also provide feedback directly to me on the details below, to [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or by calling 1800 442 977, or directly to the Australian Government's National Offshore Petroleum Safety and Environmental Management Authority to [communications@nopsema.gov.au](mailto:communications@nopsema.gov.au) or (08) 6188 8700.

Please feel free to forward this email and, the attached documents to RRKAC members as required. Woodside would be pleased to speak with RRKAC members in addition to the RRKAC Board / office holders.

We look forward to hearing from you.

Kind regards

#### **4.27 Email sent to Western Australian Marine Science Institution (WAMSI) (21 February 2023)**

Dear [REDACTED]

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and

TPA03 Well Intervention Environment Plan

- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**Woodside is seeking your advice regarding any research activities that WAMSI may be undertaking that may overlap with our proposed activities.**

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **23 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP   | PLA08 EP   |
|-----------------|---|--|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required. |

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|                                 |  |   |   |
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|                                 | <p>be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p>  | <p>Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |   |
| <b>Permit area:</b>             | WA-5-L   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier  | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m   | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m   |
| <b>Schedule:</b>                | <p>Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point</p>  | <p>Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> |

TPA03 Well Intervention Environment Plan

|  |  |   |   |
|--|--|---|---|
|  |  | <p>during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   |   |
| <b>Duration:</b>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p>          |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p> |
| <b>Vessels:</b>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p>  | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p>  | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p>  |

|  |  |  |   |
|--|--|--|---|
|  | <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>The MODU may be supported by subsea installation and light well intervention vessels. Support vessels may be used including, anchor handling vessels and activity support vessels. The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p> |
|--|--|--|---|

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **23 March 2023**.

Regards

**4.28 Email sent to Australian Institute of Marine Science (AIMS) (21 February 2023)**

Dear [REDACTED]

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**Woodside is seeking your advice regarding any research activities that AIMS may be undertaking that may overlap with our proposed activities.**

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **23 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP   | PLA08 EP   |
|-----------------|--|--|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs. Development of the Julimar South-1 well is subject to future development decisions | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required. |

TPA03 Well Intervention Environment Plan

|                                 |   |   |   |
|---------------------------------|---|---|---|
|                                 | Operations EP (March 2022).   | <ul style="list-style-type: none"> <li>If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul>   |   |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P   | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m   |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |

TPA03 Well Intervention Environment Plan

|   |  |   |  |
|---|--|---|--|
| <p><b>Duration:</b></p>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p> | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. Activities may occur intermittently over a two-year period.</p>          |
| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place. A 4000 m radius Operational Area will apply around a moored MODU, if used. A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p> |
| <p><b>Vessels:</b></p>                        | <p>Well Intervention Vessel (WIV)<br/>General supply/support vessels<br/>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU<br/>General supply/support vessels<br/>Survey / AHT vessel<br/>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities.</p>  | <p>A dynamically positioned MODU is intended to be used for the drilling activities. The MODU may be supported by subsea installation and light well intervention vessels. Support vessels may be used including, anchor handling vessels and activity support vessels. The vessels will operate on dynamic positioning</p>  |

|  |  |  |   |
|--|--|--|---|
|  |  |  | and will not anchor/moor on the seabed. Vessels will operate 24 hours per day for the duration of the activities. |
|--|--|--|---|

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **23 March 2023**.

Regards

**4.29 Email sent to Commonwealth Scientific and Industrial Research Organisation (CSIRO) (21 February 2023)**

Dear [REDACTED]

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**Woodside is seeking your advice regarding any research activities that CSIRO may be undertaking that may overlap with our proposed activities.**

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

TPA03 Well Intervention Environment Plan

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **23 March 2023**.

**Activity:**

|                 | TPA03 EP   | Julimar EP  | PLA08 EP   |
|-----------------|--|---|--|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022). | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs. Development of the Julimar South-1 well is subject to future development decisions <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> </ul> | Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required. |

|                                 |   |   |   |
|---------------------------------|---|---|---|
|                                 |   | <ul style="list-style-type: none"> <li>If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul>   |   |
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br>Geotechnical and geophysical surveys:<br>Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  | WA-34-L   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m   |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently   | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will  |

|   |   |  |   |
|---|---|--|---|
|   |   | <p>anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>   | <p>commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p>  |
| <p><b>Exclusionary / Cautionary Zone:</b></p> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <p><b>Vessels:</b></p>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **23 March 2023**.

Regards

#### 4.30 Email sent to University of Western Australia (UWA) (21 February 2023)

Dear ■■■

Woodside is planning to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**Woodside is seeking your advice regarding any research activities that UWA may be undertaking that may overlap with our proposed activities.**

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022

([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **23 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP  |
|-----------------|---|---|---|
| <b>Summary:</b> | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs. Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>Drill and develop the proposed PLA08 production well. Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |

TPA03 Well Intervention Environment Plan

|                                 |   |   |  |
|---------------------------------|---|---|--|
| <b>Permit area:</b>             | WA-5-L  | Drilling: WA-49-L<br>Geotechnical and geophysical surveys:<br>Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m  | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign. Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023. Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.  |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete. Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete. Well P&A activities are currently anticipated to take approximately 21 days to complete, if required.  | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete. Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days. If required, well intervention activities will take up to 70 days per well to complete. |

TPA03 Well Intervention Environment Plan

|  |  |  |  |
|--|--|--|--|
|  |  |  | Activities may occur intermittently over a two-year period.  |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.   | An approximate 50 km <sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities. A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location. A 500 m safety exclusion zone will apply around the MODU to manage vessel movements. | A 500 m radius Operational Area will be applied around the dynamically positioned MODU. A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place. A 4000 m radius Operational Area will apply around a moored MODU, if used. A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.            |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. | MODU<br>General supply/support vessels<br>Survey / AHT vessel<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities.  | A dynamically positioned MODU is intended to be used for the drilling activities.<br>The MODU may be supported by subsea installation and light well intervention vessels.<br>Support vessels may be used including, anchor handling vessels and activity support vessels.<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities. |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **23 March 2023**.

Regards

#### **4.31 Email sent to Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) via the Yamatji Marlpa Aboriginal Corporation (YMAC) (21 February 2023)**

Dear [REDACTED]

Firstly, thank you for your assistance in arranging the meeting between NTGAC and Woodside on 16 February. It was a pleasure to meet the NTGAC Board and YMAC staff. We were most grateful for the opportunity to provide information about our plans and to learn of NTGAC's questions. We will write separately to thank the NTGAC Board for the meeting.

As was discussed during our meeting, please find attached information about Woodside's decommissioning and drilling activities. With the exception of removing the Nganhurra Riser Turret Mooring, for which Woodside seeks NTGAC's feedback soonest, Woodside is seeking feedback on these decommissioning and drilling activities by 17 March. The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. To recap, these activities are:

##### Decommissioning Activities:

- Removal of the Nganhurra Riser Turret Mooring (RTM). Information about the RTM was previously emailed on 18 January. For ease of reference, the summary information is attached and the consultation information sheet for the RTM can be found at the link below.
  - [consultation-information-sheet---nganhurra-operations-cessation-environment-plan-revision.pdf \(woodside.com\)](#)
- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A), and decommissioning.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

Woodside also looks forward to receiving NTGAC's feedback on the four Scarborough project activities as soon as is possible.

In providing this information and requests for feedback, I acknowledge [REDACTED] email of 20 February outlining NTGAC's request of Woodside to provide funding for YMAC's in-house environmental scientist to undertake a review of the RTM environmental plan. [REDACTED] [REDACTED] will be in contact with [REDACTED] directly about this in the coming days.

Thanks again [REDACTED] for your assistance last week, your consideration of these matters and for your work to progress these important consultations.

Yours sincerely

#### **4.32 Email sent to Yinggarda Aboriginal Corporation – YAC via YMAC (22 February 2023)**

Dear [REDACTED]

I hope this message finds you well.

Further to my correspondence of 18 January regarding Woodside's plan to remove the Nganhurra Riser Turret Mooring (RTM), and [REDACTED] correspondence of 20 January regarding Woodside's Scarborough project, please find attached information about Woodside's decommissioning and drilling activities that we are seeking to consult with Yinggarda Aboriginal Corporation (YAC) about.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside is seeking YAC's feedback as soon as possible, Woodside is seeking YAC's feedback on these decommissioning and drilling activities by 17 March. The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

##### Decommissioning Activities:

- Removal of the Nganhurra Riser Turret Mooring (RTM). Information about the RTM was previously emailed on 18 January. For ease of reference, the summary information is attached and the consultation information sheet for the RTM can be found at the link below.
  - [consultation-information-sheet---nganhurra-operations-cessation-environment-plan-revision.pdf \(woodside.com\)](#)
- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.

- [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

In providing this information and requests for feedback, I acknowledge [REDACTED] correspondence of 6 February and my response of 10 February in which we discussed arrangements for a meeting between YAC and Woodside. Woodside would be most grateful for the opportunity to meet with YAC, at YAC's earliest convenience, and at a location suitable to YAC. Woodside would also be pleased to provide the resources necessary to hold this meeting and we look forward to receiving a budget for consideration. If there is anything else, we can do at this time to facilitate consultation about these planned work activities please let me know.

Thank you, [REDACTED] for yours, YAC's and YMAC's consideration of these matters and work to progress these important consultations.

As always, please feel free to contact me on the details below if you require further information or assistance.

Yours sincerely

#### **4.33 Email sent to Buurabalayji Thalanyji Aboriginal Corporation (BTAC) (22 February 2023)**

Dear [REDACTED]

Firstly, thank you for your correspondence of 20 February regarding consultations about the Scarborough project. We will respond to this correspondence in the coming days and would be most grateful for the opportunity to meet with you to discuss the matters raised in your letter and our relationship more broadly.

WAC

Further to my correspondence of 18 January regarding Woodside's plan to remove the Nganhurra Riser Turret Mooring (RTM), and of 20 January regarding Woodside's Scarborough project, please find attached information about Woodside's decommissioning and drilling activities that we are seeking to consult with Buurabalayji Thalanyji Aboriginal Corporation (BTAC) about.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside is seeking BTAC's feedback as soon as possible, Woodside is seeking BTAC's feedback on these decommissioning and drilling activities by 17 March. The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

Decommissioning Activities:

- Removal of the Nganhurra Riser Turret Mooring (RTM). Information about the RTM was previously emailed on 18 January. For ease of reference, the summary

## TPA03 Well Intervention Environment Plan

information is attached and the consultation information sheet for the RTM can be found at the link below.

- [consultation-information-sheet---nganhurra-operations-cessation-environment-plan-revision.pdf \(woodside.com\)](#)
- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

We look forward to meeting with you to discuss and respond to the matters raised in your letter, this correspondence, and to discuss other matters important to BTAC and Woodside.

Thank you,

Yours sincerely

### 4.34 Email sent to Wirrawandi Aboriginal Corporation (WAC) (24 February 2023)

Good morning [REDACTED]

I hope your Friday is going well.

I mentioned I would be sharing more information when we met on Tuesday 21 February, to discuss the Environmental Plan (EP) information shared with you to date for Scarborough and Nganhurra RTM. This is the email with further information for Wirrawandi to consider if they have any interests in the Environment that may be affected (EMBA) relative to the attached information sheets.

It would be greatly appreciated if you could please acknowledge receipt and confirm the opportunity to meet with the Wirrawandi board when they are next due to meet in Perth in March.

This email provides information on Woodside's decommissioning and drilling activities that we are seeking to consult with Wirrawandi about.

## TPA03 Well Intervention Environment Plan

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside is seeking Wirrawandi's feedback as soon as possible, Woodside is seeking Wirrawandi's feedback on these decommissioning and drilling activities by **17 March 2023**. The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

### Decommissioning Activities:

- Removal of the Nganhurra Riser Turret Mooring (RTM). Information about the RTM was previously emailed on 18 January. For ease of reference, the summary information is attached and the consultation information sheet for the RTM can be found at the link below.
  - [consultation-information-sheet---nganhurra-operations-cessation-environment-plan-revision.pdf \(woodside.com\)](#)
- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

In providing this information and requests for feedback, I acknowledge that we are working towards presenting to the Wirrawandi board at their next board meeting in March. Woodside would be most grateful for the opportunity to meet at Wirrawandi's earliest convenience, and at a location suitable to Wirrawandi. Woodside would also be pleased to provide the resources necessary to hold this meeting and we look forward to receiving a budget for consideration. If there is anything else, we can do at this time to facilitate consultation about these planned work activities please let me know.

Thank you, [REDACTED] for consideration of these matters and work to progress these important consultations.

Please feel free to contact me on the details below if you require further information or assistance.

Kind regards

## 4.35 Email sent to JX Nippon Oil & Gas Exploration Corporation (24 February 2023)

Dear [REDACTED]

Thank you for your response.

Please see attached environment plan consultations that Woodside has sent to JX, but unfortunately has received bounce back messages.

We would be grateful if you could please pass these onto the appropriate JX representative for their consideration and feedback, if any.

We would also be grateful if you could please advise us of the appropriate representative's contact details for future correspondence.

Cheers,

#### 4.36 Email sent to Kariyarra Aboriginal Corporation (24 February 2023)

Hello [REDACTED]

In follow up to our telephone conversation on the 27<sup>th</sup> January please let me know if you have any questions regarding the Environmental Plan (EP) information shared with you to date for Scarborough and Nganhurra RTM.

This email provides further information on Woodside's decommissioning and drilling activities that we are seeking to understand if Kariyarra has any interests in the Environment that may be affected (EMBA) relative to the attached information sheets and if Kariyarra would like us to consult further on these EPs.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside is seeking Kariyarra's feedback as soon as possible, Woodside is also seeking Kariyarra's feedback on these decommissioning and drilling activities by **17 March 2023**. The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

##### Decommissioning Activities:

- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.

- [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

If there is anything else, Woodside can do at this time to facilitate consultation if Kariyarra make an assessment that this is required to provide more information about these planned work activities please let me know.

Thank you for your time in considering these matters.

Please feel free to contact me on the details below if you require further information or assistance.

Kind regards

#### 4.37 Email sent to Murujuga Aboriginal Corporation (MAC) (24 February 2023)

Wayiba [REDACTED]

I understand that you met with Woodside on Monday 20 February to further discuss the information shared to date on the Nganghurra RTM decommissioning and Scarborough project activity Environmental Plans (EPs). I believe you have been made aware of other EPs we also request your feedback on.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside is seeking MAC's feedback as soon as possible, Woodside is also seeking MAC's feedback on these decommissioning and drilling activities by **17 March 2023**.

The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

##### Decommissioning Activities:

- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)

- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

Thank you for your time in considering these matters and please feel free to contact me on the details below if you require further information or assistance.

Kind regards

#### 4.38 Email sent to Yindjibarndi Aboriginal Corporation (24 February 2023)

Hello [REDACTED]

I understand you last spoke with [REDACTED] on 25 January regarding the Environmental Plan (EP) information shared with YAC for the Scarborough project activity and Nganhurra RTM.

This email provides further information on Woodside's decommissioning and drilling activities that we are seeking to understand if YAC has any interests in the Environment that may be affected (EMBA) relative to the attached information sheets and if YAC would like us to consult further on these EPs.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which I understand YAC has verbally advised they have no interests, Woodside is also seeking YAC's feedback on these decommissioning and drilling activities by **17 March 2023**.

The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

##### Decommissioning Activities:

- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

Thank you for your time in considering these matters. We look forward to hearing from you.

Please feel free to contact me on the details below if you require further information or assistance.

Kind regards

#### **4.39 Email sent to Robe River Kuruma Aboriginal Corporation (RRKAC) (24 February 2023)**

Hello [REDACTED]

I understand you met with [REDACTED] on 31 January regarding the Environmental Plan (EP) information shared with Robe River Kuruma Aboriginal Corporation (RRKAC) for the Scarborough project activity and Nganhurra RTM and that this information was to be presented at the RRKAC Board meeting this week 21-22 February. [REDACTED] advised we have a number of EPs we will reach out to RRKAC on.

This email provides further information on Woodside's decommissioning and drilling activities that we are seeking to understand if RRKAC has any interests in the Environment that may be affected (EMBA) relative to the attached information sheets and if RRKAC would like us to consult further on these EPs.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside would appreciate feedback on as soon as possible, Woodside is also seeking RRKAC's feedback on these decommissioning and drilling activities by **17 March 2023**.

The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

##### Decommissioning Activities:

- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.
  - [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

Thank you for your time in considering these matters. We look forward to hearing from you.

Please feel free to contact me on the details below if you require further information or assistance.

Kind regards

#### 4.40 Email sent to Ngarluma Aboriginal Corporation (NAC) (24 February 2023)

Good morning [REDACTED]

I mentioned I would be sharing more information when we met on Friday 17 February, to discuss the Environmental Plan (EP) information shared with you to date for Scarborough and Nganhurra RTM. This is the email with further information for NAC to consider if they have any interests in the EMBA (Environment that may be affected) relative to the attached information sheets.

It would be greatly appreciated if you could please acknowledge receipt and confirm the opportunity to meet with the NAC board when they are next due to meet on 29 or 30 March. We welcome the opportunity to spend a whole day with the board on a different day if that works.

This email provides information on Woodside's decommissioning and drilling activities that we are seeking to consult with NAC about.

With the exception of removing the Nganhurra RTM and the Scarborough project, for which Woodside is seeking NAC's feedback as soon as possible, Woodside is seeking NAC's feedback on these decommissioning and drilling activities by **17 March** 2023. The plain English summary of each of these activities is attached, and I have provided a link to the more detailed consultation information sheets below. These activities are:

##### Decommissioning Activities:

- Removal of the Nganhurra Riser Turret Mooring (RTM). Information about the RTM was previously emailed on 20 January. For ease of reference, the summary information is attached and the consultation information sheet for the RTM can be found at the link below.
  - [consultation-information-sheet---nganhurra-operations-cessation-environment-plan-revision.pdf \(woodside.com\)](#)
- Stybarrow. This involves two work activities that are subject to separate environment plans; plug and abandonment (P&A) of the wells and decommissioning the infrastructure.
  - [consultation-information-sheet---stybarrow-plug-and-abandonment-environment-plan.pdf \(woodside.com\)](#)
  - [Consultation Information Sheet - Stybarrow Decommissioning Environment Plans \(woodside.com\)](#)
- Griffin decommissioning.
  - [consultation-information-sheet---griffin-decommissioning-environment-plans.pdf \(woodside.com\)](#)

##### Drilling Activities:

- TPA03 Well Intervention.
  - [Consultation Information Sheet - TPA03 Well Intervention Environment Plan \(woodside.com\)](#)
- WA-34-L Pyxis Drilling and Subsea Installation.

*TPA03 Well Intervention Environment Plan*

- [Consultation Information Sheet - WA-34-L Pyxis Drilling and Subsea Installation Environment Plan \(woodside.com\)](#)
- Julimar Appraisal Drilling.
  - [Consultation Information Sheet - Julimar Appraisal Drilling and Survey Environment Plan \(woodside.com\)](#)

In providing this information and requests for feedback, I acknowledge that we are working towards presenting to the NAC board at their next board meeting in March. Woodside would be most grateful for the opportunity to meet with NAC, at NAC's earliest convenience, and at a location suitable to NAC. Woodside would also be pleased to provide the resources necessary to hold this meeting and we look forward to receiving a budget for consideration. If there is anything else, we can do at this time to facilitate consultation about these planned work activities please let me know.

Thank you, [REDACTED] for consideration of these matters and work to progress these important consultations.

Please feel free to contact me on the details below if you require further information or assistance.

Regards

## 5. Additional Consultation (March, April and May 2023)

### 5.1 Email sent to AHO (7 March 2023)

Dear AHO,

Woodside previously consulted you (email below) on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (TPA03 EP);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (Julimar EP); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (PLA08 EP).

The Shipping Lane figure for the proposed activities Operational Areas is attached. A separate figure showing the Environment that May Be Affected (EMBA) for the proposed activities is also been attached for reference.

Please let us know should you have any feedback relating to the proposed activities by 17 March 2023.

Kind Regards,

### 5.2 Email sent to ABF, AFMA, AMSA – Marine Pollution, DPIRD, DCCEEW / DAFF – Fisheries and Biosecurity, Director of National Parks (DNP), DISR and DMIRS (7 March 2023)

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### 5.3 Email sent to DoD (7 March 2023)

Dear Department of Defence

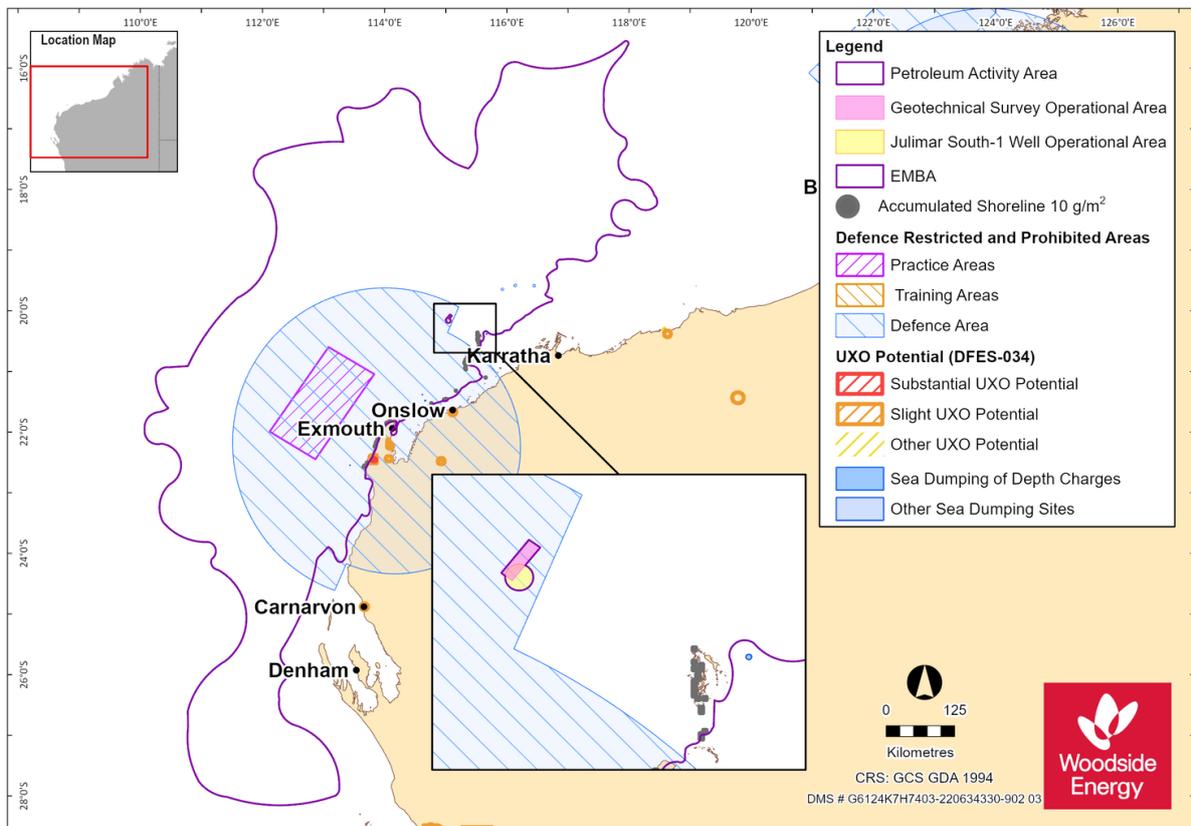
Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

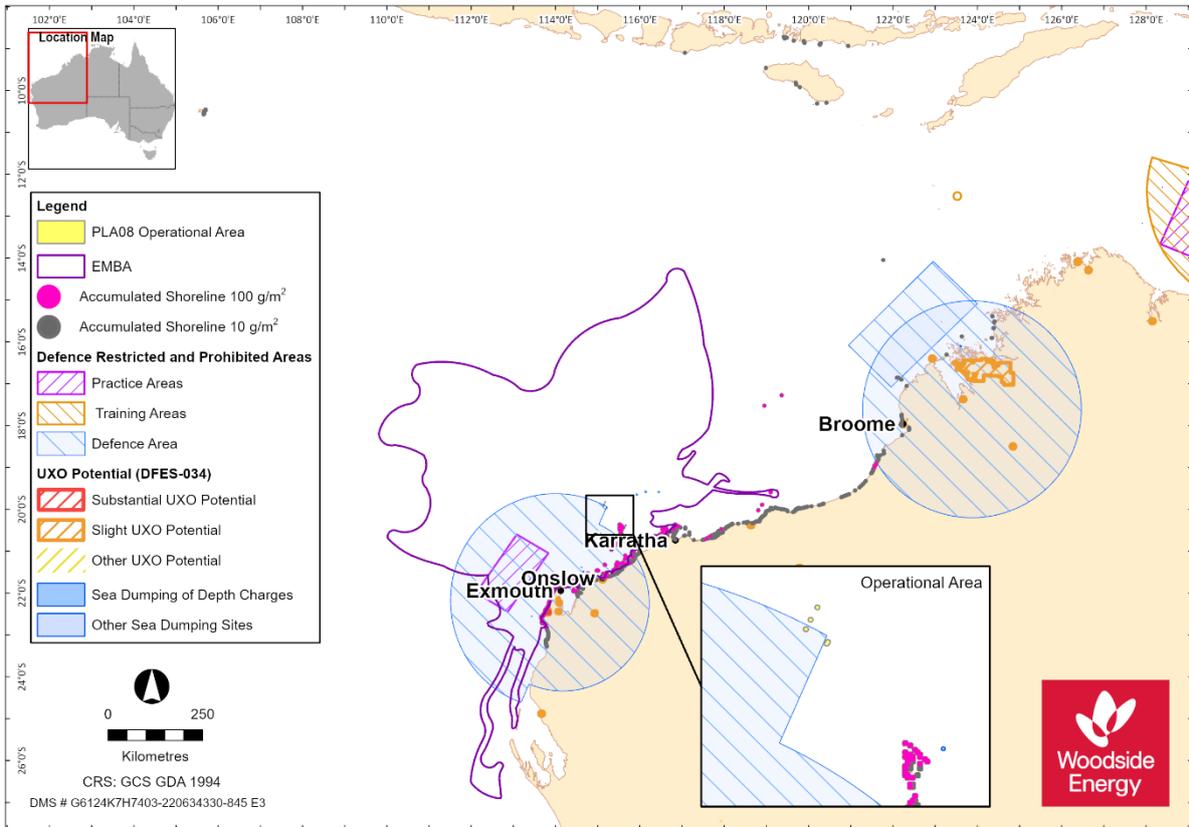
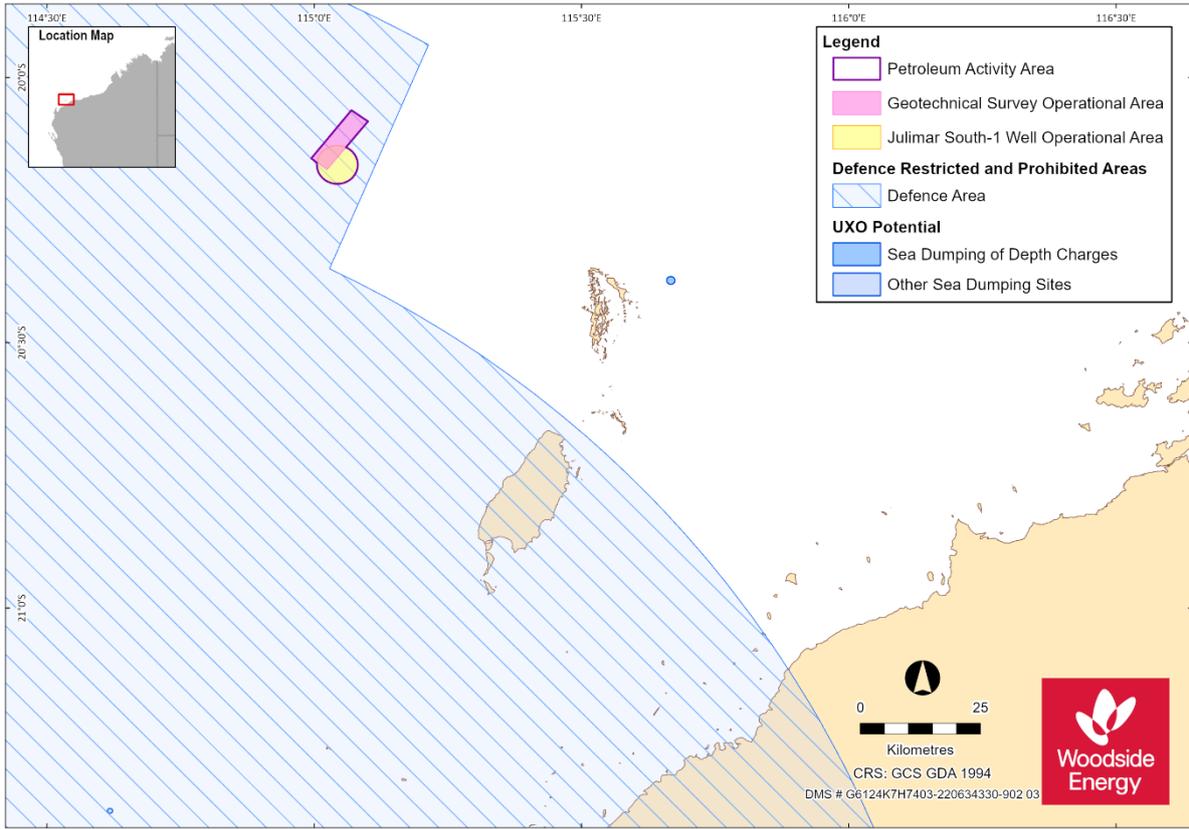
The Defence figure for the proposed environment plans as relevant to their Petroleum Activities Program and associated Operational Areas is attached. A separate figure showing the Environment that May Be Affected (EMBA) for each environment plan is also attached for reference.

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

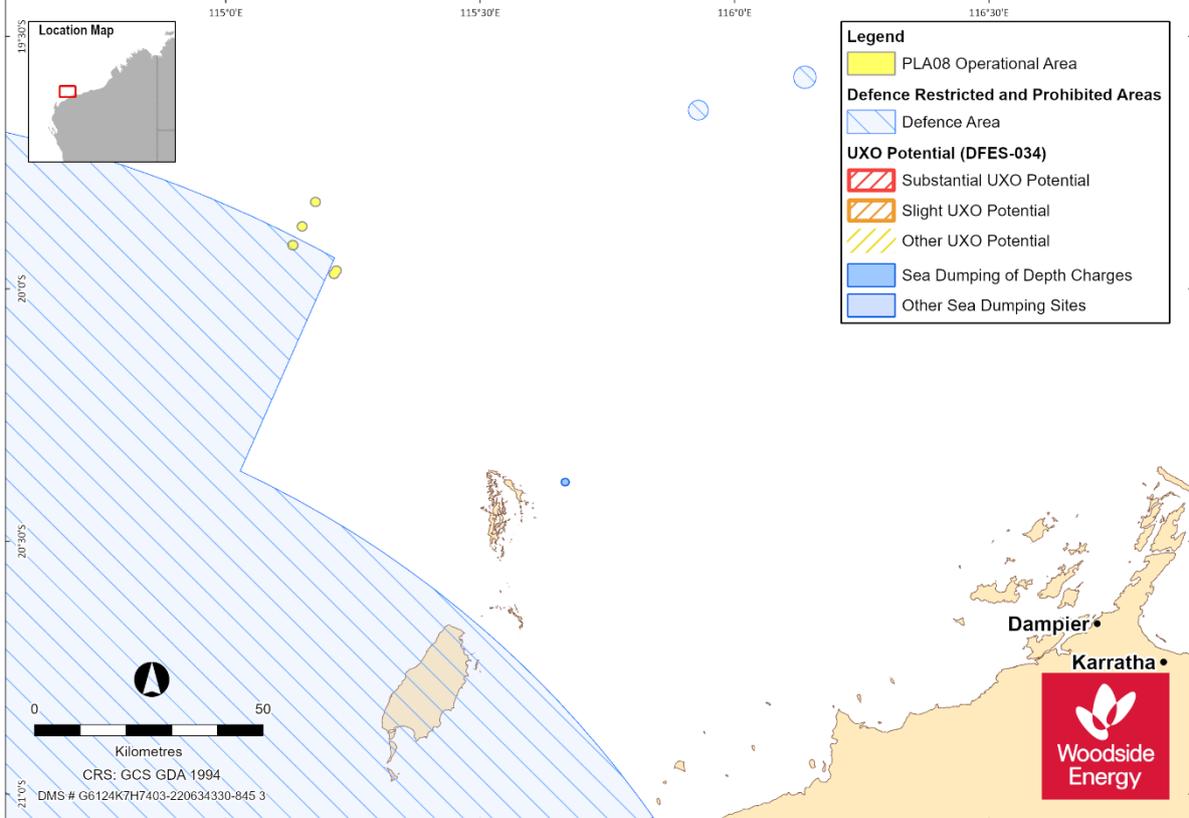
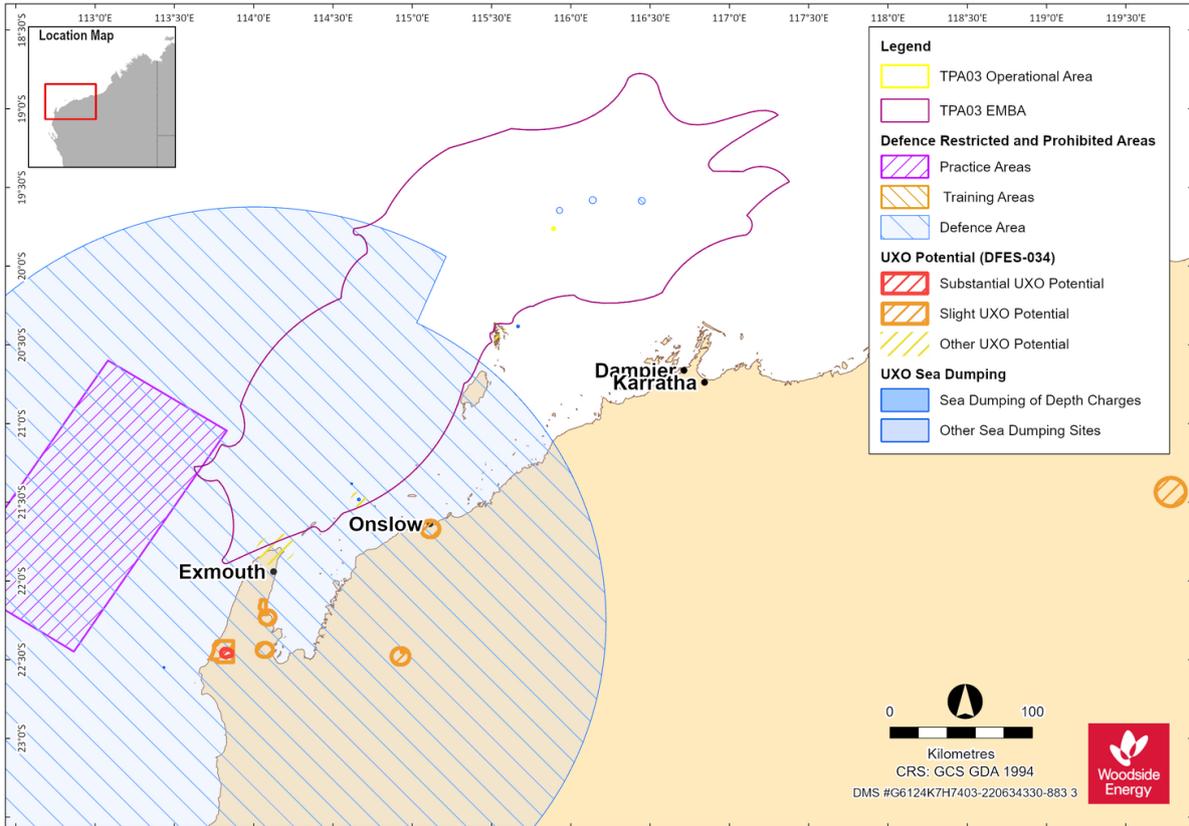
Kind regards,



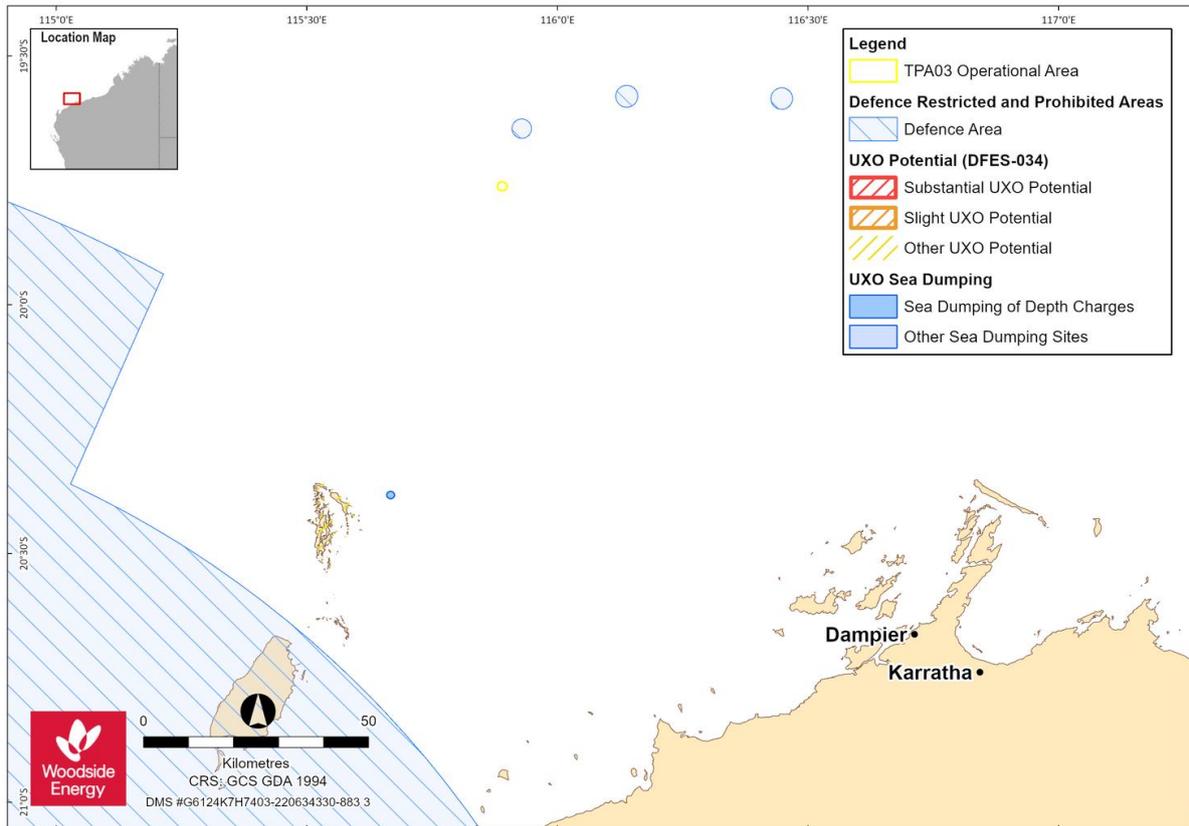
# TPA03 Well Intervention Environment Plan



# TPA03 Well Intervention Environment Plan



## TPA03 Well Intervention Environment Plan



### 5.4 Email sent to Department of Planning, Lands and Heritage (DPLH) (7 March 2023)

Dear DPLH

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

#### 5.4.1 Follow up email sent to DPLH (9 May 2023)

Dear DPLH,

Woodside previously consulted the DPLH on its following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Should DPLH have any feedback on the above proposed activities, please let us know.

Regards,

██████████

#### 5.5 Email sent to Ningaloo Coast World Heritage Advisory Committee (NCWHAC) (7 March 2023)

Dear ██████████

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

#### 5.6 Email sent to North West Slope and Trawl Fishery (4 Licence Holders) (7 March 2023)

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

## *TPA03 Well Intervention Environment Plan*

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### **5.7 Email sent to Western Deepwater Trawl Fishery (5 Licence Holders) (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### **5.8 Email sent to Pearl Producers Association (PPA) (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and

## *TPA03 Well Intervention Environment Plan*

- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### **5.9 Email sent to WAFIC (7 March 2023)**

Dear [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### **5.10 Email sent to Recfishwest, Marine Tourism WA and WA Game Fishing Association (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

**5.11 Email sent to Exmouth Recreational Marine Users (50 Licence Holders), Karratha Recreational Marine Users (9 Licence Holders) (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

**5.12 Email sent to BP Developments Australia, Chevron Australia / Osaka Gas gorgon / Tokyo Gas gorgon / JERA Gorgon, Lightmark Enterprises, Fugro Exploration, INPEX Alpha, KUFPEC, Kyushu Electric Wheatstone, Exxon Mobil Australia Resources Company, PE Wheatstone, Santos, Sapura OMV Upstream / OMV Australia, Shell Australia, Vermillion Oil and Gas, KATO Energy / KATO Corowa / KATO NWS / KATO Amulet, Carnarvon Energy, ENI Australia, FINDER No 9/10/16/17 (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

**5.13 Email sent to 350 Australia, Australian Conservation Foundation (ACF), Australian Marine Conservation Society (AMCS), Conservation Council of Western Australia (CCWA), Greenpeace Australia Pacific (GAP), Cape Conservation Group (CCG) and Protect Ningaloo (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

**5.14 Email sent to APPEA, NERA (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### 5.15 Email sent to Exmouth Community Liaison Group (7 March 2023)

Dear Exmouth Community Reference Group

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### 5.16 Email sent to Shire of Exmouth (7 March 2023)

Dear [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

### 5.17 Email sent to WAMSI (7 March 2023)

Dear [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

## TPA03 Well Intervention Environment Plan

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **23 March 2023** to support our development of the proposed environment plans.

Kind regards,

### 5.18 Email sent to Australian Institute of Marine Science (AIMS) (7 March 2023)

Dear [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **23 March 2023** to support our development of the proposed environment plans.

Kind regards,

### 5.19 Email sent to CSIRO (7 March 2023)

Dear [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and

## *TPA03 Well Intervention Environment Plan*

- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **23 March 2023** to support our development of the proposed environment plans.

Kind regards,

### **5.20 Email sent to University of Western Australia (UWA) (7 March 2023)**

Dear 

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **23 March 2023** to support our development of the proposed environment plans.

Kind regards,

### **5.21 Email sent to JX Nippon (7 March 2023)**

Dear Stakeholder

Woodside is sending this email by way of a reminder that the consultation period is closing soon to provide feedback on the following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Kind regards,

## 5.22 Email sent to Karratha Community Liaison Group (8 March 2023)

Dear CLG members,

Woodside is sending this email by way of a reminder that the consultation period to provide feedback on the following proposed activities in Commonwealth waters, is closing soon:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**);
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**);
- Decommissioning of the Griffin field under the Griffin Decommissioning and Field Management EP, Griffin Gas Export Pipeline EP and Griffin Field Deviation EP; and
- Decommissioning of the Stybarrow field under the Stybarrow Plug and Abandonment EP, Stybarrow Decommissioning and Field Management EP and Stybarrow Field Deviation EP.

We would appreciate any feedback you may have by **17 March 2023** to support our development of the proposed environment plans.

Best regards,

## 5.23 Email sent to City of Karratha (8 March 2023)

Hi [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period to provide feedback on the following proposed activities in Commonwealth waters, is closing soon:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (TPA03 EP);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (Julimar EP);
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (PLA08 EP);
- Decommissioning of the Griffin field under the Griffin Decommissioning and Field Management EP, Griffin Gas Export Pipeline EP and Griffin Field Deviation EP; and
- Decommissioning of the Stybarrow field under the Stybarrow Plug and Abandonment EP, Stybarrow Decommissioning and Field Management EP and Stybarrow Field Deviation EP.

We would appreciate any feedback you may have by 17 March 2023 to support our development of the proposed environment plans.

Best regards,

#### **5.24 Email sent to Shire of Ashburton (8 March 2023)**

Hi [REDACTED]

It was good to meet with you both last week. Thanks for your time and the brief discussion had on environment plan consultation.

As requested, we will continue to send advice to the Shire of Ashburton (via both of you). Please find below and attached consultation advice that we're seeking feedback from the Shire on by 20 March 2023. Please get in touch if you require additional information at this time.

Regards

#### **5.25 Email sent to Onslow Chamber of Commerce and Industry (8 March 2023)**

Hi [REDACTED]

It was good to meet with you last week in Onslow.

I understand from our meeting, that you on-forward EP consultation materials to your Board members for their awareness and further distribution (if required). I also understand that OCCI is unlikely to respond to consultation materials. I intend to periodically check-in on any changes to this process and to understand any informal feedback that OCCI may have heard from members. We will continue to share consultations materials.

If you wish to provide feedback specific to each of the proposed activities described under the relevant EPs, we ask OCCI to please respond by 20 March 2023.

Thanks

#### **5.26 Email sent to Pilbara Line Fishery (9 Licence Holders), Pilbara Trap Fishery (6 Licence Holders) and Pilbara Trawl Fishery (7 Licence Holders) (8 March 2023)**

Dear Fishery Stakeholder,

Woodside previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and

TPA03 Well Intervention Environment Plan

- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **17 March 2023**.

**Activity:**

|                 | TPA03 EP  | Julimar EP  | PLA08 EP  |
|-----------------|---|---|---|
| <b>Summary:</b> | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.<br><br>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha | One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties.<br><br>Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision. | Drill and develop the proposed PLA08 production well.<br><br>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required. |

TPA03 Well Intervention Environment Plan

|                                 |   |   |  |
|---------------------------------|---|---|--|
|                                 | <p>Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> |  |
| <b>Permit area:</b>             | WA-5-L  | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title areas WA-5-R, WA-76-R and WA-526-P</p>  | WA-34-L  |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier   | ~170 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b> | ~113 m  | <p>Operational Area ~ 130-240 m</p> <p>Proposed Julimar South-1 well location ~ 163 m</p>   | PLA08: ~820 m  |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023   | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold  | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 |

TPA03 Well Intervention Environment Plan

|  |  |  |  |
|--|--|--|--|
|  | <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>  | <p>Testing will occur prior to this drilling campaign.</p> <p>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p> | <p>Well are anticipated around Q2 – Q4 2023.</p> <p>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.</p>   |
| <b>Duration:</b>                       | <p>Well intervention activities are expected to take approximately 1-2 weeks to complete.</p>  | <p>Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.</p> <p>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.</p> <p>Well P&amp;A activities are currently anticipated to take approximately 21 days to complete, if required.</p>                | <p>Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.</p> <p>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.</p> <p>If required, well intervention activities will take up to 70 days per well to complete.</p> <p>Activities may occur intermittently over a two-year period.</p> |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p> | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-</p>   | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations</p>  |

|                 |   |  |   |
|-----------------|---|--|---|
|                 |   | <p>P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p>  | <p>(PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>  |
| <b>Vessels:</b> | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

*TPA03 Well Intervention Environment Plan*

Please provide your views by **17 March 2023**.

Regards

**5.27 Letter sent to Marine Aquarium Managed Fishery (12 Licence Holders), Mackerel Managed Fishery (Area 2 and 3) (43 Licence Holders), West Coast Deep Sea Crustacean Managed Fishery (7 Licence Holders), Specimen Shell Managed Fishery (29 Licence Holders), Onslow Prawn Managed Fishery (30 Licence**

**Holder), Nickol Bay Prawn Managed Fishery (14 Licence Holders), Western Australian Sea Cucumber Managed Fishery (6 Licence Holders), Exmouth Gulf Prawn (15 Licence Holders), Pilbara Crab Managed Fishery (1 Licence Holder) and Land Hermit Crab Managed Fishery (5 Licence Holders) (9 March 2023)**

Please direct all responses/queries to:  
Woodside Feedback  
T: 1800 442 977  
E: [feedback@woodside.com](mailto:feedback@woodside.com)

09 March 2023

Attn: [Stakeholder]  
[Company]  
[Address]



Woodside Energy (Australia)  
Pty Ltd  
ACN 006 923 879  
Mia Yellagonga  
11 Mount Street  
Perth WA 6000  
Australia  
T +61 8 9348 4000  
[www.woodside.com](http://www.woodside.com)

Dear Stakeholder

Woodside previously consulted you (correspondence dated 17 February 2023) on Woodside's following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (EP) (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Please see the relevant QR codes below which link directly to Consultation Information Sheets which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our website [www.woodside.com](http://www.woodside.com).

TPA03 EP:



Julimar EP:



PLA08 EP:



Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

We would appreciate any feedback you may have by **17 March 2023** to support the development of our proposed environment plans.

Kind regards,

#### Woodside Feedback



Woodside Energy  
Mia Yellagonga  
Kariak, 11 Mount Street  
Perth WA 6000  
Australia

T: 1800 442 977  
E: [feedback@woodside.com.au](mailto:feedback@woodside.com.au)  
[www.woodside.com](http://www.woodside.com)  
f t in o @

## 5.28 Letter sent to Gascoyne Recreational Marine Users (65 Licence Holders) and Pilbara/Kimberley Recreational Marine Users (95 Licence Holders) (9 March 2023)

Please direct all responses/queries to:  
Woodside Feedback  
T: 1800 442 977  
E: [feedback@woodside.com](mailto:feedback@woodside.com)



Woodside Energy (Australia)  
Pty Ltd  
ACN 006 925 879  
Mia Yellaogona  
11 Mount Street  
Perth WA 6000  
Australia  
T +61 8 9348 4000  
[www.woodside.com](http://www.woodside.com)

09 March 2023

Attn: [Stakeholder]  
[Company]  
[Address]

Dear Stakeholder

Woodside previously consulted you (correspondence dated 17 February 2023) on Woodside's following proposed activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (EP) (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULAP) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Please see the relevant QR codes below which link directly to Consultation Information Sheets which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our website [www.woodside.com](http://www.woodside.com).

TPA03 EP:



Julimar EP:



PLA08 EP:



Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

We would appreciate any feedback you may have by **17 March 2023** to support the development of our proposed environment plans.

Kind regards,

**Woodside Feedback**



Woodside Energy  
Mia Yellaogona  
Karlak, 11 Mount Street  
Perth WA 6000  
Australia

T: 1800 442 977  
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f t in v @

## 5.29 Email sent to JX Nippon Oil & Gas Exploration Corporation (10 March 2023)

Dear [REDACTED]

Woodside is sending this email by way of a reminder that the consultation period has closed to provide feedback on the following proposed activities in Commonwealth waters:

## TPA03 Well Intervention Environment Plan

- seabed intervention and trunkline installation activities for the section of the Trunkline in Commonwealth waters under the Scarborough Seabed Intervention and Trunkline Installation EP (**SITI EP**).
- 4D baseline marine seismic survey (MSS) activities over the Scarborough and Jupiter field under the Scarborough 4D Baseline Marine Seismic Survey EP (**Seismic EP**).
- seabed site surveys and installation of subsea production infrastructure under the Subsea Infrastructure Installation EP (**Subsea EP**).

The feedback period is also closing soon for the following proposed activities in Commonwealth waters:

- activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**).
- drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).
- subsea decommissioning activities for the Griffin field under the **Griffin Decommissioning and Field Management EP, Griffin Gas Export Pipeline EP and Griffin Field Deviation EP**.
- subsea decommissioning activities for the Stybarrow field under the **Stybarrow Plug and Production EP, Stybarrow Decommissioning and Field Management EP and Stybarrow Field Deviation EP**.

Please find the attached Consultation Information Sheets relating to the above proposed environment plans (EPs). The Consultation Information Sheets provide background on the proposed activities, including maps, summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

Should JX have feedback on the proposed activities, please let us know. Feedback received after the feedback dates (see emails attached) will continue to be assessed and responded to, as required, through the life of the relevant EP.

**As we have invited consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

### **Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

### 5.30 Email sent to Tuna Australia (13 March 2023)

Dear [REDACTED]

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and
- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

Updated consultation Information Sheets are attached, which provide additional background on the proposed activities, including summaries of potential key impacts and risks, and associated management measures. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

**As we are inviting consultation with you on each of the EPs above, for ease of reference, we have attached the information in this one email. In an effort to simplify feedback, we have also included a feedback template (Appendix A) which you may wish to use to provide your feedback specific to the proposed EPs.**

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in these revisions remain the same, with no material changes.

The Julimar EP and revised PLA08 EP have not yet been submitted to NOPSEMA.

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **12 April 2023**.

#### Activity:

|  | TPA03 EP | Julimar EP | PLA08 EP |
|--|----------|------------|----------|
|--|----------|------------|----------|

TPA03 Well Intervention Environment Plan

|                            |   |   |  |
|----------------------------|---|---|--|
| <p><b>Summary:</b></p>     | <p>Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.</p> <p>The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required.</p> <p>The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022).</p> | <p>One new appraisal-keeper well, Julimar South-1, will be drilled to further understand reservoir properties. Prior to drilling, anchor hold tests will occur around the Julimar South-1 well location. The well will then be drilled, appraisal activities undertaken and then the reservoir section cemented and suspended pending a development decision.</p> <p>Geotechnical and geophysical surveys will be conducted to support Julimar South-1 well activities and future drilling mooring designs.</p> <p>Development of the Julimar South-1 well is subject to future development decisions</p> <ul style="list-style-type: none"> <li>• If the well is not developed, it will be plugged and abandoned (P&amp;A) under this EP (during the three year period).</li> <li>• If the well is selected for development, completions and end of field life (EOFL) P&amp;A activities would be subject to a future EP.</li> </ul> | <p>Drill and develop the proposed PLA08 production well.</p> <p>Contingent activities including well intervention workover or re-drill the Pluto, Pyxis, and Xena production wells (PLA01 to PLA08, PYA01 and PL-PYA02, and XNA01 and XNA02) to monitor and maintain their integrity, if required.</p> |
| <p><b>Permit area:</b></p> | <p>WA-5-L</p>   | <p>Drilling: WA-49-L</p> <p>Geotechnical and geophysical surveys: Within the WA-49-L title area and neighbouring Chevron operated title</p>   | <p>WA-34-L</p>   |

TPA03 Well Intervention Environment Plan

|                                 |   |  |   |
|---------------------------------|---|--|---|
|                                 |   | areas WA-5-R, WA-76-R and WA-526-P   |   |
| <b>Location:</b>                | ~138 km north-west of Dampier   | ~160 km north-west of Dampier  | ~170 km north-west of Dampier   |
| <b>Approx. Water Depth (m):</b> | ~113 m  | Operational Area ~ 130-240 m<br>Proposed Julimar South-1 well location ~ 163 m   | PLA08: ~820 m   |
| <b>Schedule:</b>                | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Drilling is currently anticipated in Q3 2023. However, drilling may be performed at any point within three years of EP acceptance. Anchor hold testing will occur prior to this drilling campaign.<br><br>Geophysical and Geotechnical survey activities are planned to be performed by the end of 2024 but may be performed at any point during the life of the EP (3 years).<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances. | Planned drilling, completions, subsea installation and pre-commissioning activities for the proposed PLA08 well are anticipated around Q2 – Q4 2023.<br><br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.                                      |
| <b>Duration:</b>                | Well intervention activities are expected to take approximately 1-2 weeks to complete.  | Drilling, appraisal and suspension activities are currently anticipated to take approximately 40 days to complete.<br><br>Geophysical and geotechnical survey activities are currently anticipated to take approximately 45 days to complete.<br><br>Well P&A activities are currently anticipated to take approximately 21  | Drilling activities for the proposed PLA08 well are currently expected to take approximately 50 days to complete.<br><br>Installation of subsea infrastructure and pre-commissioning will commence on completion of drilling and is expected to take up to approximately 30 days.<br><br>If required, well intervention activities will |

TPA03 Well Intervention Environment Plan

|  |   |  |   |
|--|---|--|---|
|  |   | days to complete, if required.   | take up to 70 days per well to complete.<br><br>Activities may occur intermittently over a two-year period.   |
| <b>Exclusionary / Cautionary Zone:</b> | <p>A 1 km radius Operational Area will be applied around the TPA03 drill centre.</p> <p>A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.</p>  | <p>An approximate 50 km<sup>2</sup> Operational Area will apply during geophysical and geotechnical survey activities.</p> <p>A 4 km radius Operational Area will apply around the JULA-P well whilst the MODU is on location.</p> <p>A 500 m safety exclusion zone will apply around the MODU to manage vessel movements.</p> | <p>A 500 m radius Operational Area will be applied around the dynamically positioned MODU.</p> <p>A 1500 m radius Operational Area will be applied around the PLA08 well location and subsea installation locations (PLA08 to Pluto manifold) whilst activities are taking place.</p> <p>A 4000 m radius Operational Area will apply around a moored MODU, if used.</p> <p>A temporary 500 m petroleum safety exclusion zone will apply during MODU activities.</p>       |
| <b>Vessels:</b>                        | <p>Well Intervention Vessel (WIV)</p> <p>General supply/support vessels</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> | <p>MODU</p> <p>General supply/support vessels</p> <p>Survey / AHT vessel</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p>   | <p>A dynamically positioned MODU is intended to be used for the drilling activities.</p> <p>The MODU may be supported by subsea installation and light well intervention vessels.</p> <p>Support vessels may be used including, anchor handling vessels and activity support vessels.</p> <p>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.</p> <p>Vessels will operate 24 hours per day for the duration of the activities.</p> |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:

[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **12 April 2023**.

Regards

**5.31 Email sent to Kariyarra Aboriginal Corporation (24 March 2023)**

Good afternoon [REDACTED]

Just a courtesy follow up to check if you have had the chance to review the emails I've shared on respective activity and if I can assist with any questions you may have.

We welcome the opportunity to provide further detail to you and your board if that is of interest.

Please don't hesitate to contact me if you have any queries.

Kind regards

[REDACTED]

**5.32 Email sent to Pilbara Line Fishery (9 Licence Holders), Pilbara Trap Fishery (6 Licence Holders) and Pilbara Trawl Fishery (7 Licence Holders) (31 March 2023)**

Dear Fishery Stakeholder,

Woodside previously consulted you (email below) on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);
- Geotechnical and geophysical surveys, drilling and appraisal of the Julimar South-1 well (previously called JULA-P) and, plug and abandonment of Julimar South-1, if required, under the Julimar Drilling and Surveys Environment Plan (**Julimar EP**); and

## TPA03 Well Intervention Environment Plan

- Drilling and subsea infrastructure installation activities for one well (PLA08) and contingent well intervention activities for current production wells, under the WA-34-L Pyxis Drilling and Subsea Installation Environment Plan Revision (**PLA08 EP**).

If you have feedback specific to each of the proposed activities described under the relevant EPs, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Kind regards,

### 5.33 Email sent to Kariyarra Aboriginal Corporation (18 April 2023)

Good morning [REDACTED]

I hope you are well. I tried reaching out via phone this morning but seem to be having some trouble with the mobile connection so I've also left a message on [REDACTED] mobile to check that I have your current number. In any case please feel free to call me at any stage on [REDACTED]

I just wanted to check in again on the information we have shared with you to date and to seek your guidance on whether or not you would like to arrange a meeting either in-person or online so that we can clarify anything you may have questions on – we are very happy to accommodate what works for you.

If you could let me know at your earliest convenience that would be most appreciated.

Kind regards

### 5.34 Email sent to ASBTIA (27 April 2023)

Dear Stakeholder,

Woodside has previously consulted you on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**);

An updated 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. These are also available on our [website](#). You can also subscribe to receive updates on our consultation activities by subscribing [here](#).

Woodside has previously submitted Revision 0 of the TPA03 EP to NOPSEMA which has been available on the NOPSEMA website since August 2022 ([https://info.nopsema.gov.au/environment\\_plans/606/show\\_public](https://info.nopsema.gov.au/environment_plans/606/show_public)).

Woodside is preparing to submit a further revision of the TPA03 EP to NOPSEMA with recent changes. We confirm the location and duration described in this revision remains the same, with no material changes.

If you have feedback specific to the proposed activities described under the EP, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **27 May 2023**.

**Activity:**

| TPA03 EP                               |  |
|--|--|
| <b>Summary:</b>                        | Well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir. The TPA03 production well is a dual zone well connected to the Tidepole manifold and forms part of the subsea production infrastructure for the Goodwyn Alpha Platform. Once the TPA03 well intervention has been completed, the well will be shut-in until production is required. The shut-in and subsequent return to production of the well will be managed under the accepted Goodwyn Alpha (GWA) Facility Operations EP (March 2022). |
| <b>Permit area:</b>                    | WA-5-L   |
| <b>Location:</b>                       | ~138 km north-west of Dampier  |
| <b>Approx. Water Depth (m):</b>        | ~113 m   |
| <b>Schedule:</b>                       | Planned well intervention activities are anticipated to be completed around Q1 2023 – Q3 2023<br>Timing of activities is subject to approvals, project schedule requirements, vessel availability, weather or unforeseen circumstances.  |
| <b>Duration:</b>                       | Well intervention activities are expected to take approximately 1-2 weeks to complete.   |
| <b>Exclusionary / Cautionary Zone:</b> | A 1 km radius Operational Area will be applied around the TPA03 drill centre. A temporary 500 m safety exclusion zone will apply around the HWIV to manage vessel movements.   |
| <b>Vessels:</b>                        | Well Intervention Vessel (WIV)<br>General supply/support vessels<br>The vessels will operate on dynamic positioning and will not anchor/moor on the seabed.<br>Vessels will operate 24 hours per day for the duration of the activities.   |

**Feedback:**

If you have any issues or concerns with these activities, or any other issues relevant to these locations, please respond to Woodside at:  
[Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977.

Your feedback and our response will be included in our Environment Plans 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 2009* (Cth).

Please let us know if your feedback for any of the activities proposed under an Environment Plan is sensitive and we will make this known to NOPSEMA upon submission of the Environment Plan to ensure this information remains confidential to NOPSEMA.

Please provide your views by **27 May 2023**.

**5.34.1 Email sent to ASBTIA (12 May 2023)**

## TPA03 Well Intervention Environment Plan

Dear Stakeholder,

Woodside has previously consulted you (email below) on its plans to undertake the following activities in Commonwealth waters:

- Activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir, under the TPA03 Well Intervention Environment Plan (**TPA03 EP**).

If you have feedback specific to the proposed activities described under the EP, please respond to Woodside at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or 1800 442 977 by **27 May 2023**.

Kind regards,

### 5.35 Geotargeted social media campaign

A Facebook information campaign was targeted along the coastline from Geraldton to Derby to ensure it reached all communities adjacent to the EMBA. Geotargeting locations are distributed along the coast, with 80 km radiuses around towns, cities and shires. Geotargeting points were also included for spaces between towns, cities and shires to ensure no areas were missed – you'll see below there are latitude and longitude references for those locations.

*As at 9:00am Monday, 29 May 2023*

**Ad reach:** 21,494 users

**Impressions:** 139,972 views

**Clicks through to *Consultation Information* page:** 619 link clicks

#### **Geotargeting locations:**

- Broome (+80 km)
- Carnarvon (+80 km)
- Denham (+80 km)
- Exmouth (+80 km)
- Geraldton (+80 km)
- Onslow (+80 km)
- Port Hedland (+80 km)
- Karratha (+80 km)
- Latitude -17 Longitude 122.65 Dampier Peninsula (+80 km)
- Latitude -22.75 Longitude 114.10 Exmouth Gulf (+80 km)
- Latitude -18.96 Longitude 121.94 Gingerah (+80 km)
- Latitude -27.85 Longitude 114.25 Kalbarri National Park (+80 km)
- Latitude -21.32 Longitude 116.03 Mardie (+80 km)
- Pardoo (+80 km)
- Latitude -20.94 Longitude 117.83 Sherlock (+80 km)
- Latitude -26.96 Longitude 113.95 Tamala (+80 km)
- Latitude -19.88 Longitude 121.15 Telfer (+80 km)
- Latitude -17.52 Longitude 123.56 Willare (+80 km)
- Latitude -22.43 Longitude 114.93 Yannarie (+80 km)

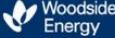
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**Would you like to know what Woodside has planned on land and sea?**

We'd like to talk with you.

To find out about our current and proposed work and to share your views with Woodside on your relevant location, activities or interests visit: [woodside.com/consultation-activities](https://www.woodside.com/consultation-activities).

Alternatively, you can contact us at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or on 1800 442 977.



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**Would you like to know what Woodside has planned on land and sea?**

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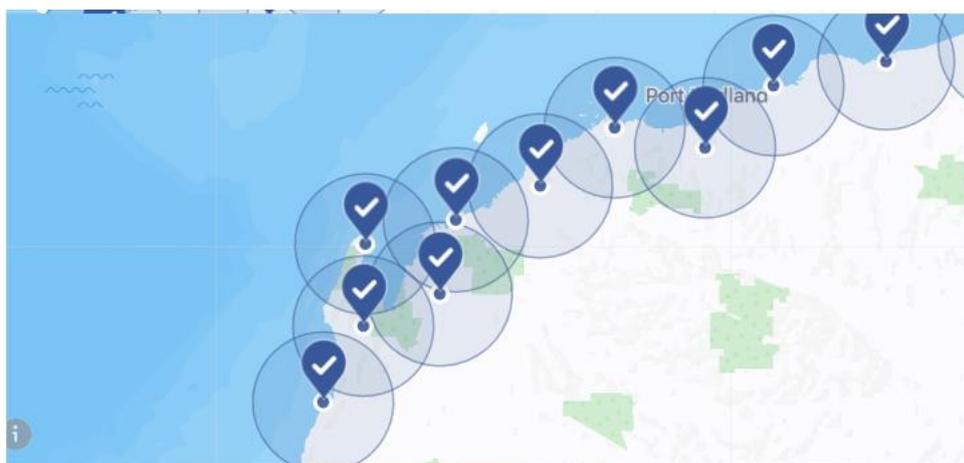
Alternatively, you can contact us at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or on 1800 442 977.

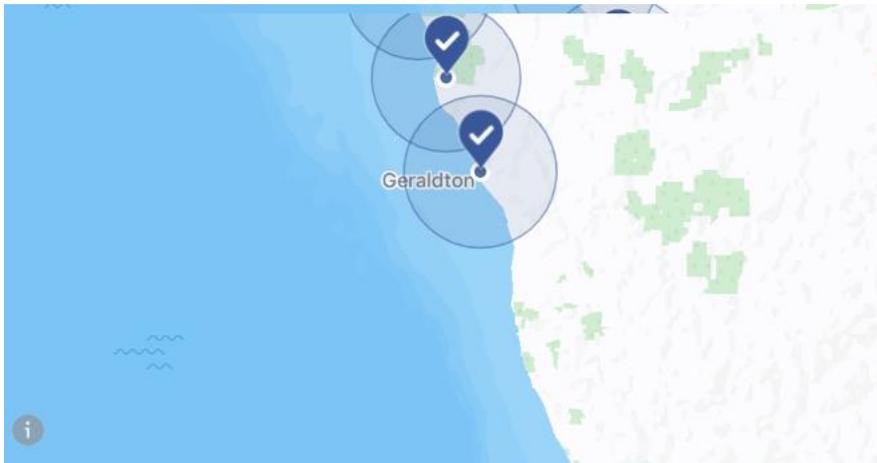
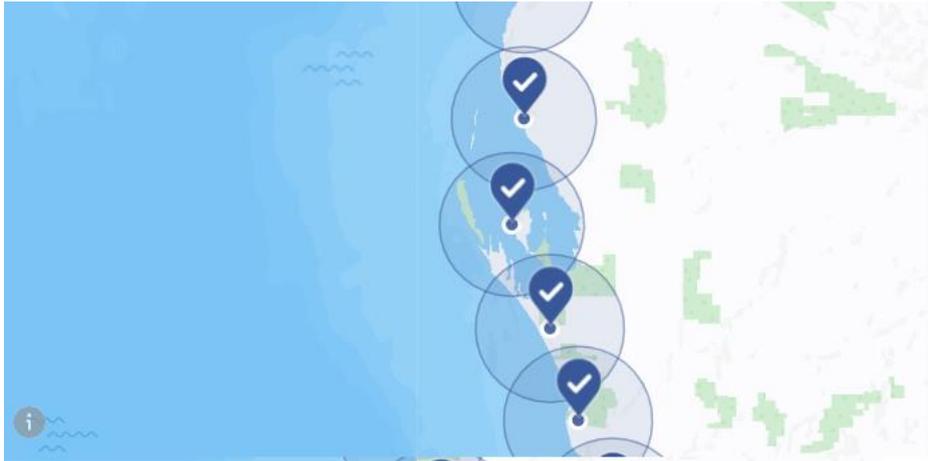


[Learn more](#)



TPA03 Well Intervention Environment Plan





### 5.36 Email sent to Chevron (1 June 2023)

Dear Chevron,

Woodside is following up on consultation with respect to the following proposed environment plans (EPs):

- TPA03 Well Intervention EP (TPA03 EP)
- Julimar Appraisal Drilling & Survey EP (Julimar EP)
- WA-34-L Pyxis Drilling & Subsea Installation EP (PLA08 EP)
- Griffin and Stybarrow field decommissioning, which includes the following EPs:
  - Griffin Decommissioning and Field Management EP
  - Griffin Gas Export Pipeline EP
  - Griffin Field Deviation EP
  - Stybarrow Plug and Abandonment (P&A) EP
  - Stybarrow Decommissioning and Field Management
  - Stybarrow Field Deviation EP

We would welcome any feedback Chevron or its JV partners, Osaka Gas Gorgon, Tokyo Gas Gorgon and JERA Gorgon, may have with respect to the above EPs.

Kind regards,

### 5.37 Geotargeted Social Media Campaign (June 2023)

A Facebook information campaign was targeted along the coastline from Geraldton to Derby to ensure it reached all communities adjacent to the EMBA. Geotargeting locations are distributed along the coast, with 80 km radiuses around towns, cities and shires. Geotargeting points were also included for spaces between towns, cities and shires to ensure no areas were missed – you'll see below there are latitude and longitude references for those locations.

As at 11.30am 30 June 2023

**Reach:** 41,118

**Impressions:** 285,366

**Link clicks:** 1,236

#### Geotargeting locations:

- Broome (+80 km)
- Carnarvon (+80 km)
- Denham (+80 km)
- Exmouth (+80 km)
- Geraldton (+80 km)
- Onslow (+80 km)
- Port Hedland (+80 km)
- Karratha (+80 km)
- Latitude -17 Longitude 122.65 Dampier Peninsula (+80 km)
- Latitude -22.75 Longitude 114.10 Exmouth Gulf (+80 km)
- Latitude -18.96 Longitude 121.94 Gingerah (+80 km)
- Latitude -27.85 Longitude 114.25 Kalbarri National Park (+80 km)
- Latitude -21.32 Longitude 116.03 Mardie (+80 km)
- Pardoo (+80 km)
- Latitude -20.94 Longitude 117.83 Sherlock (+80 km)
- Latitude -26.96 Longitude 113.95 Tamala (+80 km)
- Latitude -19.88 Longitude 121.15 Telfer (+80 km)
- Latitude -17.52 Longitude 123.56 Willare (+80 km)
- Latitude -22.43 Longitude 114.93 Yannarie (+80 km)

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**Would you like to know what Woodside has planned on land and sea?**

We'd like to talk with you.

To find out about our current and proposed work and to share your views with Woodside on your relevant location, activities or interests visit: [woodside.com/consultation-activities](https://www.woodside.com/consultation-activities).

Alternatively, you can contact us at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au) or on 1800 442 977.

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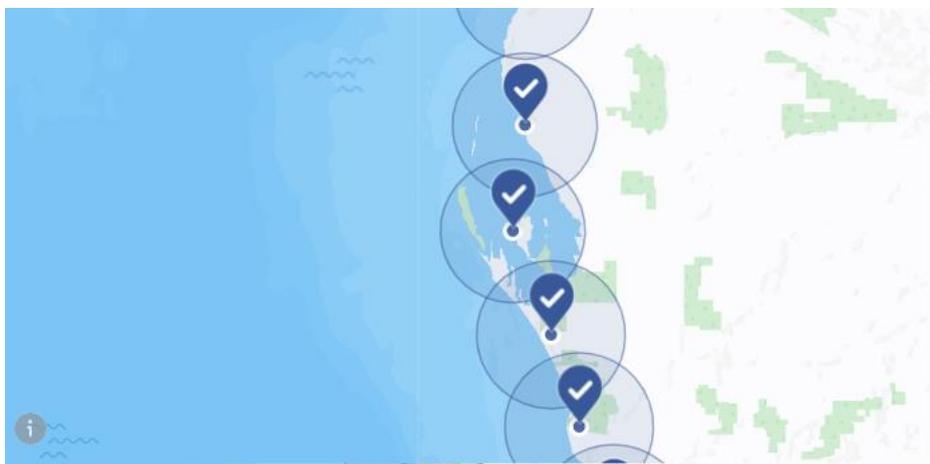
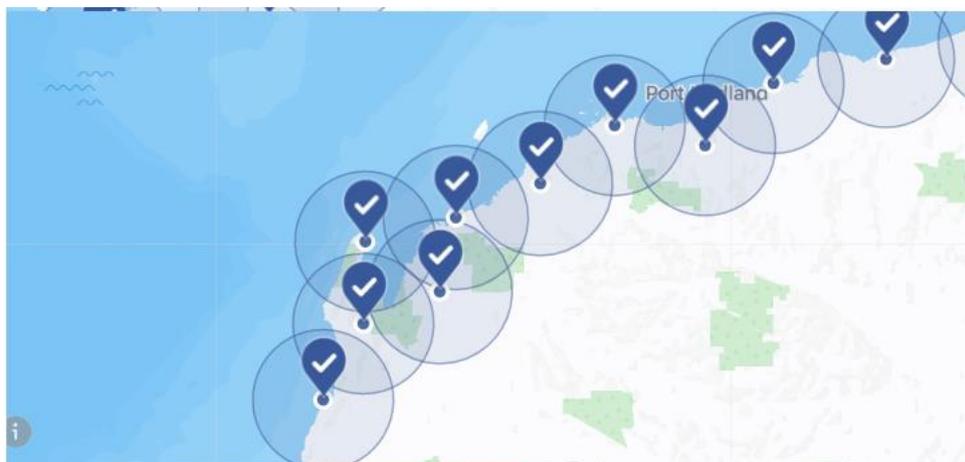
We'd like to talk with you.

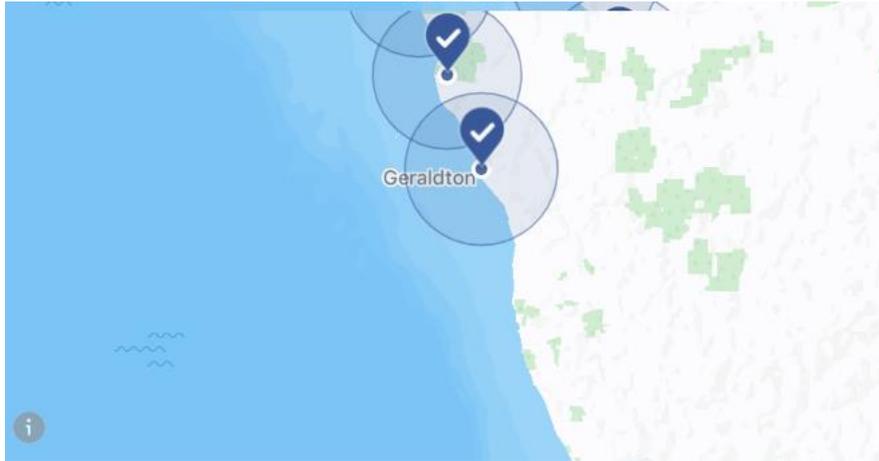
To find out about our current and proposed work and to share your views with Woodside on your relevant location, activities or interests visit: [woodside.com/consultation-activities](https://www.woodside.com/consultation-activities).

Alternatively, you can contact us at [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au)



TPA03 Well Intervention Environment Plan





### 5.38 Exmouth Community Information Session Geotargeted social media campaign (June 2023)

A Facebook information campaign was targeted in Exmouth to ensure it reached communities where the Consultation Information Session was planned to be held. Geotargeting points were also included for spaces between towns, cities and shires to ensure no areas were missed – you'll see below there are latitude and longitude references for those locations.

**Dates:** 15 June 2023 – 17 June 2023

**Platform:** Facebook

**Ad type/placement:** Feed tile and story

**Reach:** 6,801

**Impressions:** 8,237

**Geotargeting (see below)**

- 80km radius around Exmouth
- 80km radius around Coral Bay

TPA03 Well Intervention Environment Plan

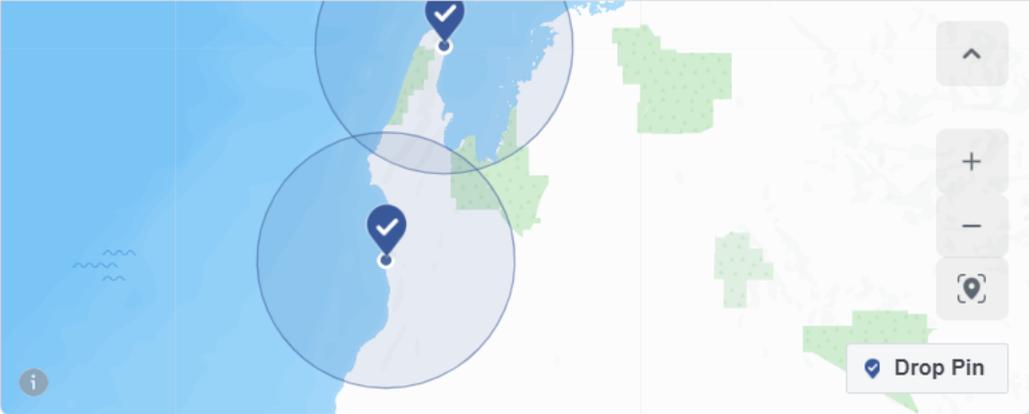
Reach people living in or recently in this location. ⓘ

Australia

✓ Coral Bay, Western Australia City + 80 km ▼

✓ Exmouth, Western Australia City + 80 km ▼

✓ Include ▼ 🔍 Search locations Browse



The map shows Australia with two blue location pins on the western coast. One pin is at Coral Bay and the other is at Exmouth. Both pins have a checkmark and a dropdown arrow. The map also shows a search bar and a 'Drop Pin' button.

**f** Facebook Feeds

**Woodside Energy** added a new photo. Sponsored · 🌐

**Would you like to know what Woodside has planned on land and sea?**

Stop by and say hello to our friendly team at PHI Aviation's Community Open Day.

You'll find Woodside at the Exmouth Aerodrome this weekend where we'll be talking about our Scarborough Project, Environment Plans and how the functions, activities or interests of relevant persons may be affected by our proposed activities.

We'd like to talk with you.

Saturday, 17 June 2023  
10am - 1pm  
Exmouth Aerodrome  
Lot 12 Minilya-Exmouth Road  
Exmouth WA 6707

**Woodside Energy**

👍 Like    💬 Comment    ➦ Share

**f** Facebook Stories

**Woodside Energy** Sponsored

**Would you like to know what Woodside has planned on land and sea?**

Stop by and say hello to our friendly team at PHI Aviation's Community Open Day.

You'll find Woodside at the Exmouth Aerodrome this weekend where we'll be talking about our Scarborough Project, Environment Plans and how the functions, activities or interests of relevant persons may be affected by our proposed activities.

We'd like to talk with you.

Saturday, 17 June 2023  
10am - 1pm  
Exmouth Aerodrome  
Lot 12 Minilya-Exmouth Road  
Exmouth WA 6707

**Woodside Energy**

### 5.39 Roebourne Community Information Session poster (22 June 2023)

On 22 June 2023, Woodside held a consultation information session at its Roebourne office. The consultation information session was hosted by members from Woodside’s Corporate Affairs and Environment teams and was open for all community members to receive information regarding Woodside’s Environment Plans and proposed and planned activities.

Woodside distributed posters advertising the community information session locally, including:

- Front door and front window of Woodside Roebourne office
- Online distribution via the Roebourne Community Calendar
- Roebourne Police Station provided with printed copy

Woodside staff also visited the following offices to advise of the community information session:

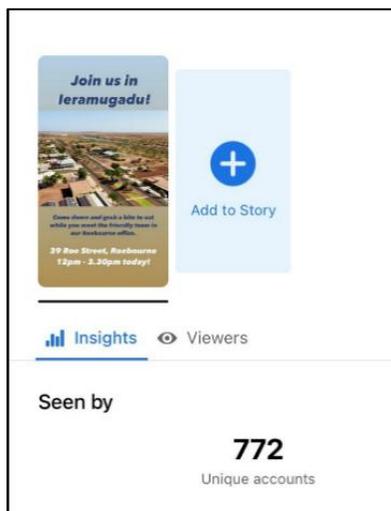
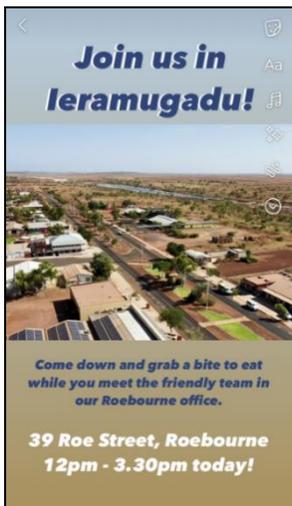
- Ngarluma and Yindjibarndi Foundation Ltd (NYFL)
- Ngarliyarndu Bindirri Aboriginal Corporation
- Yinjaai-Barni Art
- Foundation Foods

#### 5.39.1 Community Information Sessions – Roebourne (May 2023)

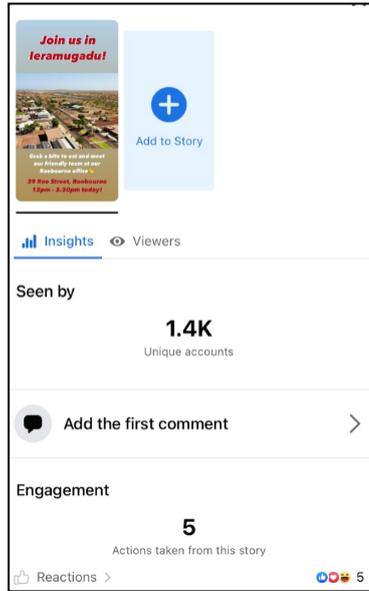
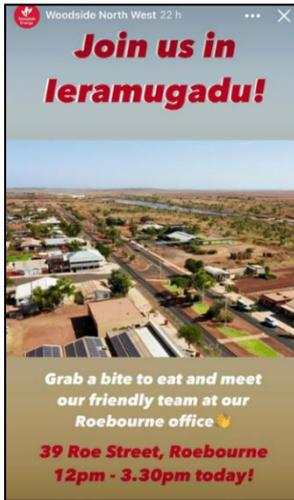
#### Woodside Facebook Stories – May 2023

Facebook stories on Friday 5/5/2023 seen by 772 people (attachment #1 & #2) and another Facebook story on Wednesday 10/5/2023 seen by 1,400 people (attachment #3 & #4).

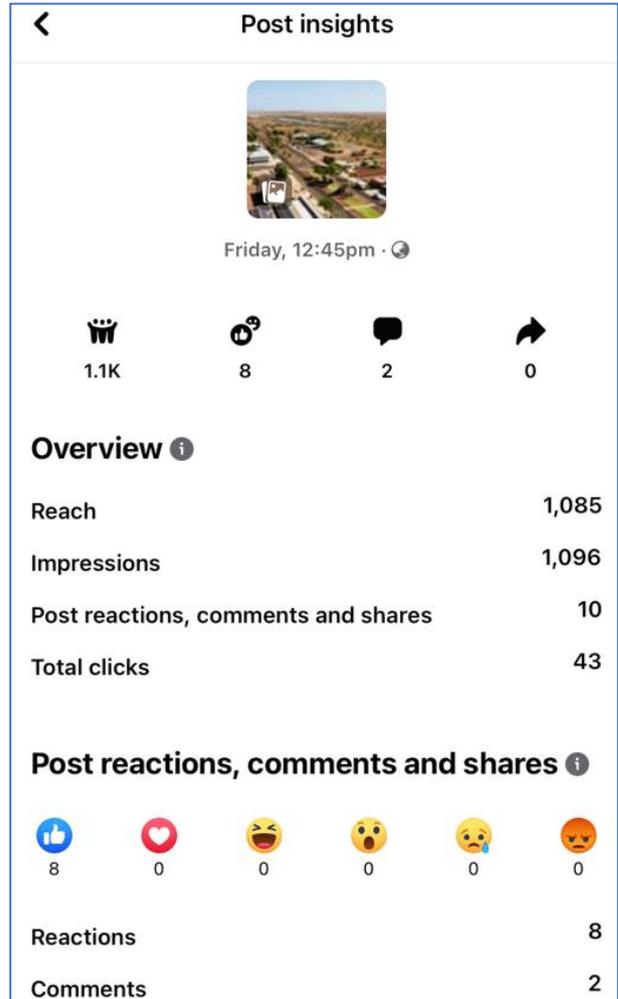
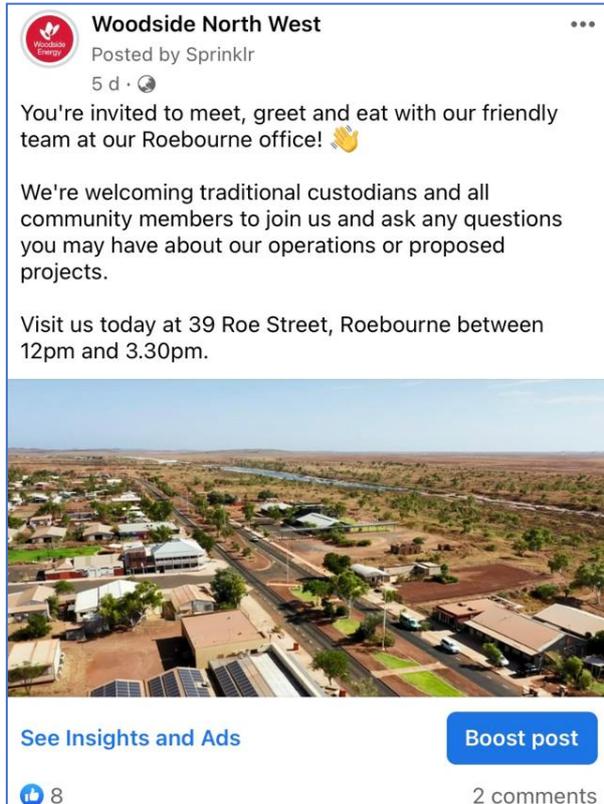
#1 & #2



#3 & #4

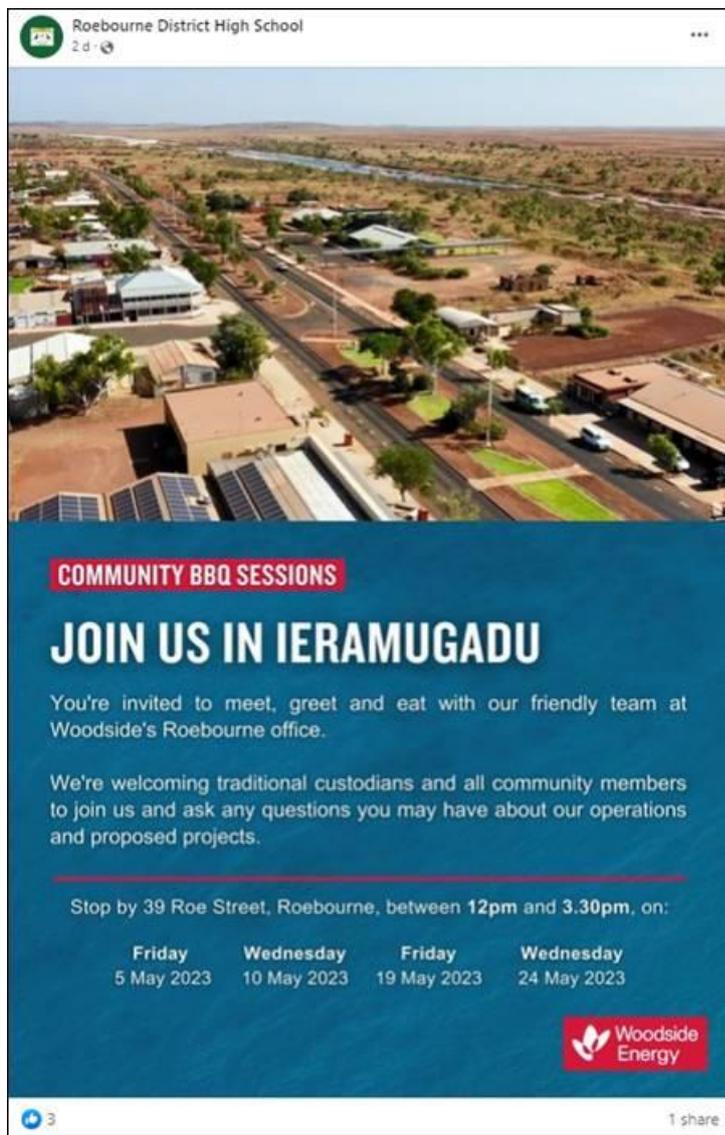


**Woodside Facebook Post**



**Third-party Facebook posts**

Roebourne District High School Facebook page (23/5/23 and 18/5/23)



The image shows a Facebook post from Roebourne District High School. The post features an aerial photograph of a school campus with several buildings, a road, and a large water channel or canal in the background. Below the photo is a blue promotional flyer for Woodside Energy. The flyer has a red header that says "COMMUNITY BBQ SESSIONS" and a large white title "JOIN US IN IERAMUGADU". The text on the flyer invites community members to meet and eat with the Woodside team at their Roebourne office. It lists dates for sessions on Friday 5 May 2023, Wednesday 10 May 2023, Friday 19 May 2023, and Wednesday 24 May 2023, all between 12pm and 3.30pm at 39 Roe Street. The Woodside Energy logo is in the bottom right corner of the flyer. At the bottom of the Facebook post, there are 3 likes and 1 share.

Roebourne District High School  
2 d · 🌐

**COMMUNITY BBQ SESSIONS**

# JOIN US IN IERAMUGADU

You're invited to meet, greet and eat with our friendly team at Woodside's Roebourne office.

We're welcoming traditional custodians and all community members to join us and ask any questions you may have about our operations and proposed projects.

Stop by 39 Roe Street, Roebourne, between **12pm** and **3.30pm**, on:

|               |                  |               |                  |
|---------------|------------------|---------------|------------------|
| <b>Friday</b> | <b>Wednesday</b> | <b>Friday</b> | <b>Wednesday</b> |
| 5 May 2023    | 10 May 2023      | 19 May 2023   | 24 May 2023      |

 Woodside Energy

👍 3 1 share

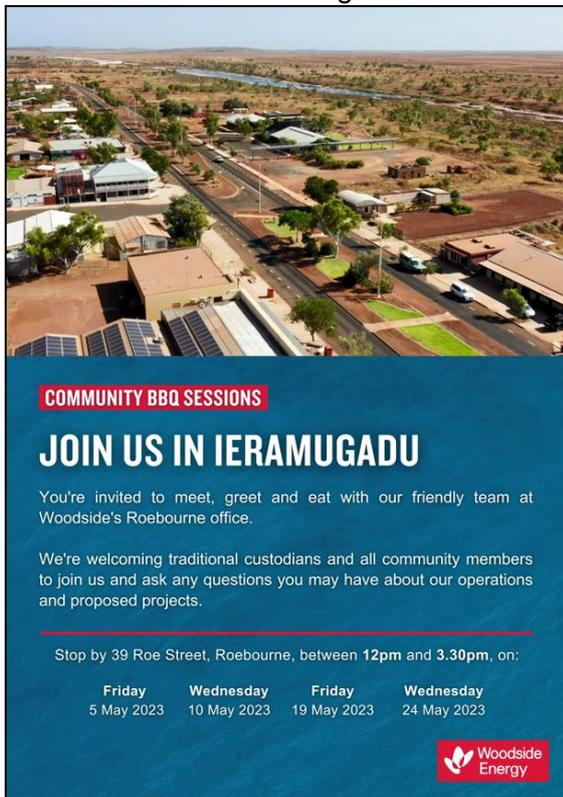
**Posters for Community Information Sessions, Roebourne – 5, 10, 19 and 24 May 2023**

The posters were physically posted up on community boards in Roebourne at:

- BP Service Station
- Post Office community board
- Community Resource Centre board at Foundation Food
- Centrelink office at NBAC

Posters dropped posters to:

- REFAP both Ganalili and work site offices
- Police
- Roebourne District High School – Cultural classroom





**COMMUNITY CONSULTATION**

## COMMUNITY INFORMATION SESSIONS IN IERAMUGADU

You're invited to meet, greet and eat with our friendly team in Ieramugadu. We'd like to talk about our Environment Plans with relevant persons whose functions, activities or interests may be affected by our proposed projects.

Stop by to find out more and share your feedback about Woodside's work in the North West, our Environment Plans and our current and proposed projects, including Scarborough and Browse.

---

Visit 39 Roe Street, Roebourne, between **12pm** and **3.30pm**, on:

**Thursday**  
22 June 2023

**Wednesday**  
19 July 2023





## COMMUNITY CONSULTATION

# COMMUNITY INFORMATION SESSIONS IN IERAMUGADU

You're invited to meet, greet and eat with our friendly team in Ieramugadu. We'd like to talk about our Environment Plans with relevant persons whose functions, activities or interests may be affected by our proposed projects.

Stop by to find out more and share your feedback about Woodside's work in the North West, our Environment Plans and our current and proposed projects, including Scarborough and Browse.

---

Visit 39 Roe Street, Roebourne, between **12pm** and **3.30pm**, on:

**Thursday**  
22 June 2023

**Wednesday**  
19 July 2023



5.40 Karratha Community Information Session newspaper advertisement – Pilbara News (28 June 2023)

**Pilbara NEWS**  
Wednesday, June 28, 2023

**NEWS 7**

# Rio reaches \$1b Range milestone

**CHEYANNE ENCISO**

Rio Tinto has spent \$1 billion with WA businesses as it progresses the development of its Western Range joint venture with China Baowu Steel Group.

Simon Trott, iron ore chief executive of Rio Tinto, said the \$1b spend marked a considerable milestone.

"Rio Tinto spends billions of dollars with local suppliers across Western Australia and the Pilbara every year, helping support thriving communities across the State by providing local jobs for local people," he said.

The 25 million tonnes-a-year Western Range project will help sustain production of Rio's flagship Pilbara blend product from its existing Paraburadoo mining hub as the Eastern Range project depletes. China Baowu said it was pleased to see the Western Range project progressing smoothly.

Premier Roger Cook said significant projects such as the Western Range reinforced WA as an attractive and secure destination for business and investment.

"I want to commend Rio Tinto and Baowu on this latest project milestone and acknowledge their efforts in investing in WA to ensure WA businesses and workers benefit most," he said.

Rio in March reported it had spent \$8.6b with more than 2400 WA and Indigenous businesses in 2022 as part of its local buying program.

The figure included \$618m with Pilbara-based businesses, \$394m with Indigenous companies across WA, and \$418m with businesses run by traditional owners.

Rio Tinto iron ore chief executive Simon Trott and China Baowu vice-president Hou Angui.

**We are hiring**

## JOIN THE TEAM!

Here at Pilbara Ports Authority, we are committed to advancing an inclusive and productive workplace where people are valued and respected.

We are proud of the talent and diversity of our workforce. Our people are key to our current and future success. We are seeking individuals, who strive for excellence in all they do and seek out opportunities for growth. In return, we provide generous support for training and professional development.

If this sounds like a workplace you would thrive in, take a look at our current vacancies.

- **Administration Officer – Maintenance – Port Hedland**

Find out more about PPA careers and youth training online via [careers.pilbaraports.com.au](https://careers.pilbaraports.com.au)

**PILBARA PORTS AUTHORITY**

**FIND OUT MORE ABOUT OUR PROPOSED ACTIVITIES**

## WOULD YOU LIKE TO KNOW WHAT WOODSIDE HAS PLANNED ON LAND AND SEA?

We'd like to talk about our Environment Plans with relevant persons whose functions, activities or interests may be affected by our proposed projects.

Drop in to our office to find out more and share your feedback about Woodside's work in the North West, our Environment Plans and our current and proposed activities, including Scarborough.

Thursday, 29 June 2023  
Between 9.00am - 2.00pm  
The Quarter HQ Level 3  
24 Sharpe Avenue  
Karratha WA 6714

You can also access our consultation information and provide feedback by scanning the QR code.

**Woodside Energy**

5.41 Karratha Community Information Session (28 June 2023) Facebook post

## TPA03 Well Intervention Environment Plan

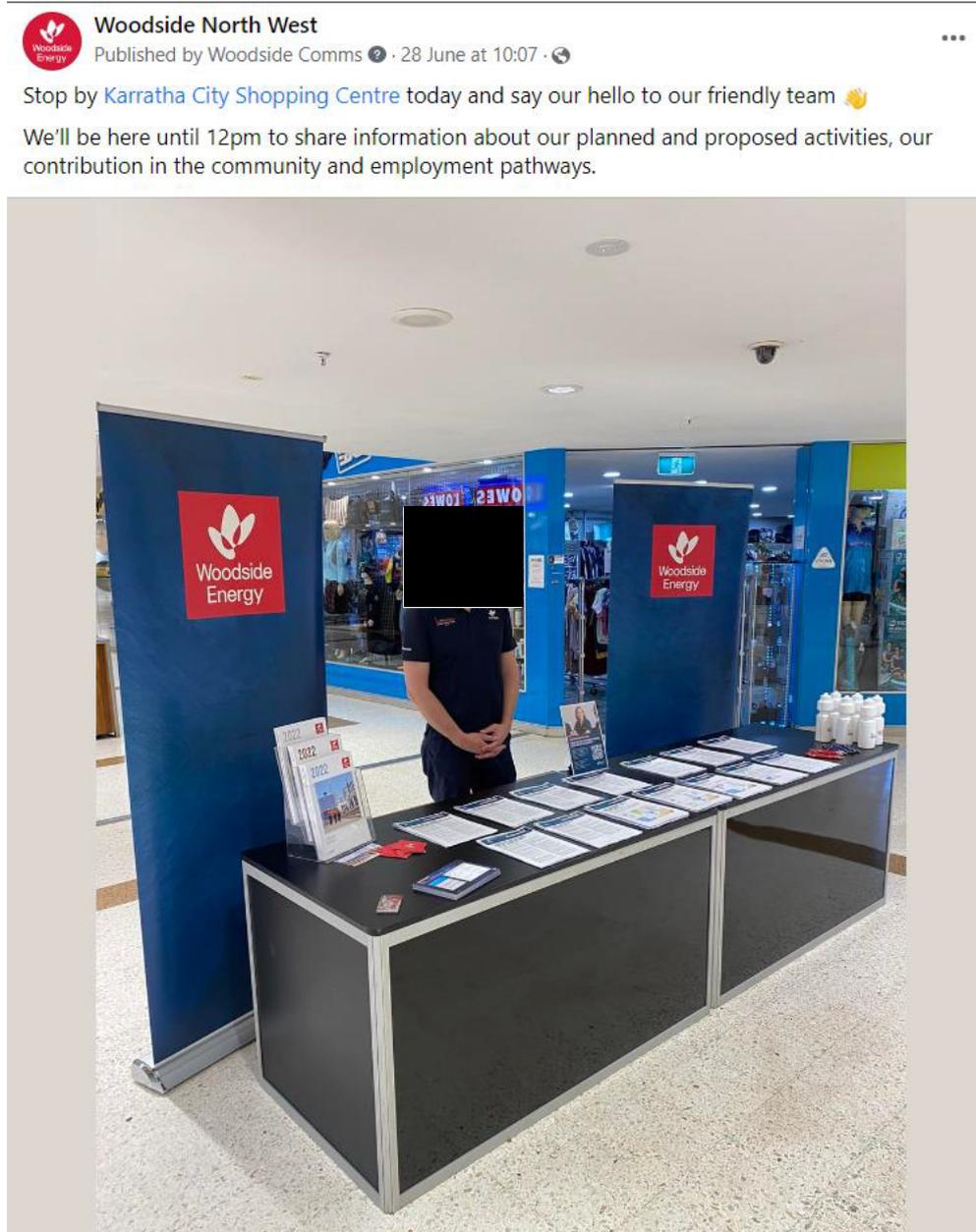
On 28 June 2023, Woodside posted a story on its Woodside North West Facebook account, sharing details of its shopping centre stand where Consultation Information Sheets regarding is planned and proposed activities were available, including the activities proposed under this EP.

Platform/channel: Woodside North West (Facebook)

Date: 28 June 2023

Reach: 1,464 viewers

Impressions: 1,464 views



### 5.42 Karratha Community Information Session (29 June 2023) Geotargeted Social Media Campaign

On 29 June 2023, Woodside held a drop-in session at its Karratha town office. The drop-in session was hosted by one of Woodside's Senior Environmental Advisers and was open for

## TPA03 Well Intervention Environment Plan

all community members to receive information regarding Woodside's Environment Plans and proposed and planned activities.

Dates: 26 June 2023 – 29 June 2023

Geotargeting: 40km radius around Karratha

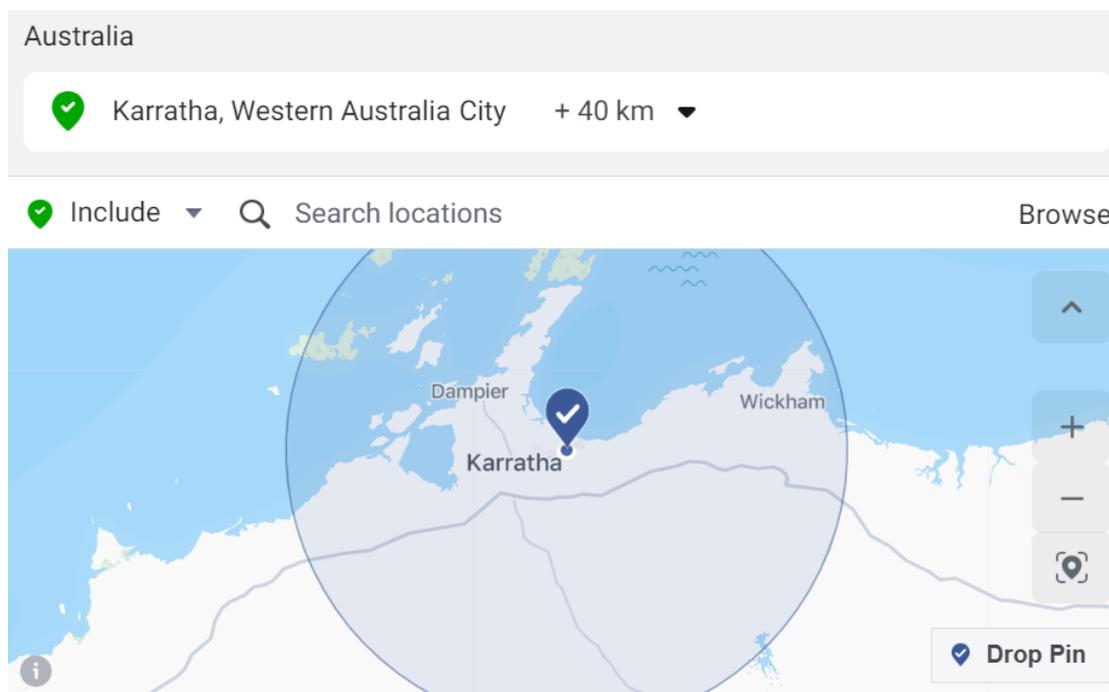
Reach: 19,240 viewers

Impressions: 22,931 views

| Campaign name            | Ad set name | Delivery                    | Reach  | Impressions | Frequency | Attribution setting       | Results      |
|--------------------------|-------------|-----------------------------|--------|-------------|-----------|---------------------------|--------------|
| EP Drop in session - KTA | All         | Recently completed Campaign | 19,240 | 22,931      | 1.19      | 7-day click or 1-day view | 19,240 Reach |

The image displays two screenshots from a Facebook advertising campaign. The left screenshot shows a Facebook Feed post from 'Woodside North West' with the headline 'Would you like to know what Woodside has planned on land and sea?'. The post includes a call to action to visit the Karratha office and provides the date and time: Thursday, 29 June 2023, between 9:00am and 2:00pm at The Quarter HQ Level 3, 24 Sharpe Avenue, Karratha WA 6714. The right screenshot shows a Facebook Story from the same account with the same headline and call to action, also including the office location and contact information. Both screenshots feature the Woodside Energy logo.

TPA03 Well Intervention Environment Plan



On 28 June 2023, Woodside posted a story on its Woodside North West Facebook account, sharing details of its drop-in session.

Reach: 1,366 viewers

Impressions: 22,931 views

Geotargeting: 40 km radius around Karratha

TPA03 Well Intervention Environment Plan







+
Add to Story



+
Add to Story

 Insights  Viewers

---

**1,334 viewers**



1,334 other people viewed this story. As it was shared to Public, people you're not friends with saw it.

 Insights  Viewers

---

**Seen by**

1.3K

Unique accounts

---

**Engagement**

5

Actions taken from this story



Reactions >



5

---

**Navigation**

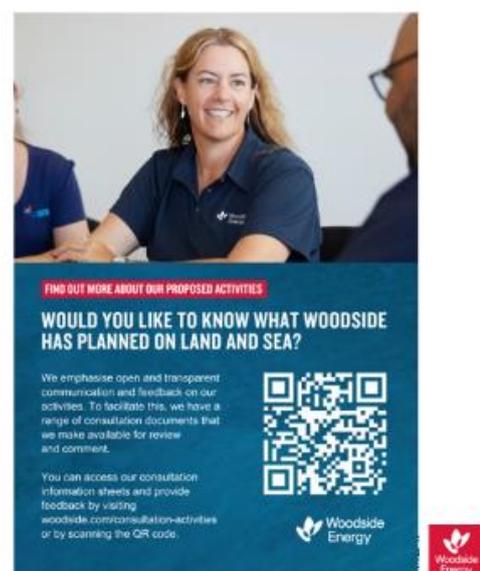
|                |     |
|----------------|-----|
| Forward taps   | 450 |
| Backward taps  | 19  |
| Forward swipes | 309 |
| Exits          | 458 |



### 5.43 Presentation to Karratha Community Liaison Group (29 June 2023)

#### ENVIRONMENT PLAN CONSULTATION

- Changes to Commonwealth Environment Plan (EP) consultation requirements.
- Woodside is now consulting based on the **environment that may be affected (EMBA)** by a proposed petroleum activity rather than within the Operational Area.
- The EMBA is the largest spatial extent where unplanned events, no matter how unlikely, could potentially have an environmental consequence.
- Any person or organisation who does not wish to continue to receive EP consultation materials where they have only been assessed as 'relevant' for unplanned events in the EMBA, under the EP consultation requirements, please advise us in writing and we will not send further information.
- However, you should be aware that this request will need to be recorded in our EP documents and will be publicly available.
- We will be holding a drop-in session after this meeting for anyone in community who would like to know more about any of our EPs.



ENVIRONMENT PLAN CONSULTATION  
**Consultation with Karratha CLG**



**5.44 Roebourne Community Information Session poster (19 July 2023)**

On 19 July 2023, Woodside held a consultation information session at its Roebourne office. The consultation information session was hosted by members from Woodside’s Corporate Affairs and Environment teams and was open for all community members to receive information regarding Woodside’s Environment Plans and proposed and planned activities.

Woodside distributed posters advertising the community information session locally, including:

- Front door and front window of Woodside Roebourne office, with the open sign and fact sheets on display inside
- On the noticeboard at Roebourne Community Resource Centre (inside the Leramugadu Store (NYFL’s Foundation Foods).
- Roebourne CRC
- Pilbara Community Legal Service
- NBAC
- WAPOL
- BP

Woodside staff also visited the following offices to advise of the community information session and provide posters:

- Ngarluma and Yindjibarndi Foundation Ltd (NYFL)
- Yinjaai-Barni Art Group
- Yandi for Change
- NYFL
- WY Program
- Roebourne Library
- Yindjibarndi Ranger office
- Ashburton Aboriginal Corporation
- A poster was also put up at Cossack.

Posters at Woodside's Roebourne Office:



5.45 Community Information Sessions (August 2023)

Pilbara News Advertisement – 2 August 2023



**PROVIDE YOUR FEEDBACK AT FeNaCING FESTIVAL**

Are you interested in what Woodside has planned on land and sea?

Join our friendly team at FeNaCING Festival and find out more about our Environment Plans and projects, including Scarborough and Browse.

We look forward to sharing information about our current and proposed activities and providing the opportunity to discuss your relevant functions, activities or interests and receive your input.

Follow us @woodsideenergy on social media  
www.woodside.com



6 NEWS **Pilbara news**  
Wednesday, August 2, 2023

## Melski's murals brought to life

**DANIEL SPENCE**

Hamilton Primary School has successfully brought to life the murals created by artist Mel Melski, and her sister Leah to create three vibrant murals around the school grounds.

Mel Melski, a local artist, has spent the last few years creating these vibrant murals around the school grounds. She has worked with local businesses and organisations like Bluebird, FMC and Pilbara Road Estate, as well as community organisations like the Pilbara Arts Centre, to bring this art project to life.

Home to nearly 500 students, Hamilton Primary School is a vibrant and busy school. The school's principal, Deborah Collier, said the murals are a fantastic addition to the school grounds and will help to create a positive and welcoming environment for all students.

The artist was brought to the school to create murals. The murals were created by Mel Melski and her sister Leah. The murals are located around the school grounds and are a vibrant and colorful addition to the school's environment.

Throughout the week, students not only participated in the creation of the murals but also enjoyed interactive art sessions in the park, including painting, drawing, coloring and sketching. The murals are a fantastic addition to the school's environment and will help to create a positive and welcoming environment for all students.



Beyond supplying affordable, reliable, ever-cleaner energy – we believe we have an important role to play in helping local communities build a vibrant and prosperous future.

We do this by investing in programs which contribute to areas of health and wellbeing, education, environment and building thriving communities.

**We're calling for applications for the Chevron Community Spirit Fund, offering donations of up to \$15,000 to not-for-profit organisations operating in the following NorthWest locations:**

- Carnarvon
- Coral Bay
- Denham
- Exmouth
- Karratha
- Onslow
- Port Hedland
- Roebourne
- Shark Bay

Applications are open now until 13 August 2023. To apply, head to [australia.chevron.com](https://australia.chevron.com)




**this is your chance to make a change**

Chevron's Community Spirit Fund is offering up to \$15,000 towards local projects.

Story on the Woodside North West Facebook Page – 2 August 2023



**PROVIDE YOUR FEEDBACK AT FeNaCING FESTIVAL**

Are you interested in what Woodside has planned on land and sea?

Join our friendly team at FeNaCING Festival and find out more about our Environment Plans and projects, including Scarborough and Browse.

We look forward to sharing information about our current and proposed activities and providing the opportunity to discuss your relevant functions, activities or interests and receive your input.



Environment Plan Banner

## TPA03 Well Intervention Environment Plan



## 17 August 2023 – Passion of the Pilbara Facebook Post

Passion of the Pilbara  
6d · 🌐

Passion of the Pilbara wouldn't be possible without the help of supporters like Woodside. Do you want the chance to win some amazing prizes. In 2023 we are bringing back the POP Passport, giving you the chance to win an iPad and more!

Visit the Woodside team at their community stall on Saturday to learn about their activities. Make sure you bring along your POP Passport so the Woodside team can stamp it.

Passion of the Pilbara is brought to you by the Shire of Ashburton with the support of our sponsors.



THANK YOU TO OUR SPONSOR:



Jo Mac and 4 others · 2 shares

Like · Comment · Share

## 17 August 2023 – Woodside North West Facebook Page

# TPA03 Well Intervention Environment Plan

**Woodside North West**  
August 17 at 6:32 PM

👉 We can't wait to join in the fun at this year's Passion of the Pilbara 🎉  
Make sure you stop by this Saturday to collect your POP Passport stamp for your chance to win some awesome prizes!



The poster for the Onslow Passion of the Pilbara 2023 event features a vibrant orange and green color scheme. It includes the text 'Onslow Passion of the Pilbara 18-19 August 2023' and 'shire of Ashburton opportunity to community'. A circular graphic contains the words 'fun', 'music', 'art', 'events', and 'entertainment'. The background shows silhouettes of people dancing and musical notes.

**THANK YOU TO OUR SPONSOR:**



The Woodside Energy logo consists of a red square with a white stylized leaf icon to the left of the text 'Woodside Energy' in white.

**Passion of the Pilbara**  
August 17 at 11:00 AM

Passion of the Pilbara wouldn't be possible without the help of supporters like Woodside.  
Do you want the chance to win some amazing prizes, in 2023 we are bri... [See more](#)

Jo Mac, Amanda Fuery and 1 other

👍 Like    💬 Comment    ➦ Share

Write a comment...

## 6. Additional Consultation (October 2023)

### 6.1 Email sent to ABF, AFMA, AMSA – Marine Pollution, DPIRD, DCCEEW / DAFF – Fisheries and Biosecurity, DISR and DMIRS (12 October 2023)

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.2 Email sent to AHO (12 October 2023)

Dear AHO

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.3 Email sent to AMSA – Marine Safety (12 October 2023)

Dear NavSafety Team

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

#### **6.4 Email sent to Department of Defence (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

#### **6.5 Email sent to Department of Transport (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.6 Email sent to Department of Planning, Lands and Heritage (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.7 Email sent to DNP (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.8 Email sent to Ningaloo Coast World Heritage Advisory Committee (NCWHAC) (12 October 2023)**

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

## *TPA03 Well Intervention Environment Plan*

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### **6.9 Email sent to DBCA (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### **6.10 Email sent to North West Slope and Trawl Fishery (4 Licence Holders) (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

**6.11 Email sent to Western Deepwater Trawl Fishery (5 Licence Holders) (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

**6.12 Email sent to Pilbara Line Fishery (9 Licence Holders), Pilbara Trap Fishery (6 Licence Holders) and Pilbara Trawl Fishery (7 Licence Holders) (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

**6.13 Email sent to Exmouth Recreational Marine Users (50 Licence Holders), Karratha Recreational Marine Users (9 Licence Holders) (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

#### **6.14 Email sent to Recfishwest, Marine Tourism WA and WA Game Fishing Association (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

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Kind regards

#### **6.15 Email sent to BP Developments Australia, Chevron Australia / Osaka Gas gorgon / Tokyo Gas gorgon / JERA Gorgon, Lightmark Enterprises, Fugro Exploration, INPEX Alpha, KUFPEC, Kyushu Electric Wheatstone, Exxon Mobil Australia Resources Company, PE Wheatstone, Santos, Sapura OMV Upstream / OMV Australia, Shell Australia, Vermillion Oil and Gas, KATO Energy / KATO Corowa / KATO NWS / KATO Amulet, Carnarvon Energy, ENI Australia, FINDER No 9/10/16/17 (12 October 2023)**

Dear Stakeholder

## *TPA03 Well Intervention Environment Plan*

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### **6.16 Email sent to APPEA (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### **6.17 Email sent to Western Australian Museum (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

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*TPA03 Well Intervention Environment Plan*

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.18 Email sent to Shire of Exmouth (12 October 2023)**

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.19 Email sent to Shire of Ashburton (12 October 2023)**

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.20 Email sent to City of Karratha (12 October 2023)**

## TPA03 Well Intervention Environment Plan

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.21 Email sent to Exmouth Community Reference Group (12 October 2023)

Dear Exmouth Community Reference Group

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.22 Email sent to Onslow CCI (12 October 2023)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.23 Email sent to 350 Australia, Australian Conservation Foundation (ACF), Australian Marine Conservation Society (AMCS), Conservation Council of Western Australia (CCWA), Greenpeace Australia Pacific (GAP), Cape Conservation Group (CCG) and Protect Ningaloo (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

**6.24 Email sent to ABSTIA (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

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The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

### 6.25 Email sent to Tuna Australia (12 October 2023)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

### 6.26 Email sent to Pearl Producers Australia (12 October 2023)

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

### 6.27 Email sent to AIMS (12 October 2023)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

## *TPA03 Well Intervention Environment Plan*

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### **6.28 Email sent to CSIRO (12 October 2023)**

Dear Stakeholder

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### **6.29 Email sent to WAMSI (12 October 2023)**

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

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The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.30 Email sent to UWA (12 October 2023)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.31 Email sent to Karratha Community Liaison Group (12 October 2023)

Dear CLG members

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.32 Email sent to CFA (12 October 2023)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Information Sheet is available on our [website](#). Should you require additional information or feedback on the proposed activity, please let us know by **Wednesday, 25 October 2023**.

Kind regards

### 6.33 Email sent to WAFIC (12 October 2023)

Dear [REDACTED]

Woodside previously consulted you (email below) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hold valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability. There are no other changes to previously provided consultation information, including mitigation and/or management measures.

Please note the following fisheries are in the Environment that May Be Affected (EMBA):

- Mackerel Managed Fishery (Area 2)
- Marine Aquarium Fish Managed Fishery
- West Coast Deep Sea Crustacean Managed Fishery
- Specimen Shell Managed Fishery
- Pilbara Crab Managed Fishery
- Onslow Prawn Managed Fishery (Area 2 and 3)
- Western Australian Sea Cucumber Fishery
- Exmouth Gulf Prawn Managed Fishery
- Nickol Bay Prawn Managed Fishery
- Land Hermit Crab Fishery

The TPA03 Consultation Information Sheet is available on our [website](#). Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback by **Wednesday, 25 October 2023**.

Kind regards

### 6.34 Letter sent to Gascoyne Recreational Marine Users (65 Licence Holders) and Pilbara/Kimberley Recreational Marine Users (95 Licence Holders) (17 February 2023)



Woodside Energy Group Ltd  
ACN 004 898 982  
Mia Yellagonga  
11 Mount Street  
Perth WA 6000  
Australia  
T: +61 8 9348 4000  
[www.woodside.com](http://www.woodside.com)

Please direct all responses/queries to:  
**Woodside Feedback**  
T: 1800 442 977  
E: [Feedback@woodside.com.au](mailto:Feedback@woodside.com.au)

13 October 2023

1

ADDRESS



Dear Stakeholder,

**TPA03 Well intervention Environment Plan**

Woodside previously consulted you (correspondence dated 9 March 2023) on its plans to undertake well intervention activities on the TPA03 production well to remediate a down-hole valve and continue production from the lower reservoir.

Please be advised that the TPA03 activity timing (previously to commence in Q3 2023) has changed and is now expected to commence in H1 2024, with contingency for 2025, subject to Environment Plan acceptance and vessel availability.

There are no other changes to previously provided consultation information, including mitigation and/or management measures.

The TPA03 Consultation Information Sheet is available on our website [www.woodside.com](http://www.woodside.com) and can be accessed through the QR code below:



TPA03

Should you require notification prior to, and on completion of, the proposed activity or have a comment to make about the proposed activity, please provide your feedback to [feedback@woodside.com.au](mailto:feedback@woodside.com.au) by Wednesday, 25 October 2023.

Please let us know if your feedback for this activity is sensitive and we will make this known to NOPSEMA upon submission of the EP in order for this information to remain confidential to NOPSEMA.

Regards,

**Woodside Feedback**



Woodside Energy  
Mia Yellagonga  
Karlak, 11 Mount Street  
Perth WA 6000  
Australia

T: 1800 442 977  
E: [feedback@woodside.com.au](mailto:feedback@woodside.com.au)  
[www.woodside.com](http://www.woodside.com)  
f t in y @

## **APPENDIX G DEPARTMENT OF PLANNING, LAND AND HERITAGE ABORIGINAL HERITAGE INQUIRY SYSTEM RESULTS**

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Controlled Ref No: A1806AF1401779378

Revision: 3

Woodside ID: 1401779378

Page 358 of 360

Uncontrolled when printed. Refer to electronic version for most up to date information.

## List of Registered Aboriginal Sites

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### Search Criteria

No Registered Aboriginal Sites in Shapefile - TPA03\_OA

### Disclaimer

The *Aboriginal Heritage Act 1972* preserves all Aboriginal sites in Western Australia whether or not they are registered. Aboriginal sites exist that are not recorded on the Register of Aboriginal Sites, and some registered sites may no longer exist.

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 email the details to the Department at [AboriginalHeritage@dplh.wa.gov.au](mailto:AboriginalHeritage@dplh.wa.gov.au) and we will make every effort to rectify it as soon as possible.

### Copyright

Copyright in the information contained herein is and shall remain the property of the State of Western Australia. All rights reserved.

### Coordinate Accuracy

Coordinates (Easting/Northing metres) are based on the GDA 94 Datum. Accuracy is shown as a code in brackets following the coordinates.



# Aboriginal Heritage Inquiry System

## List of Registered Aboriginal Sites

### Basemap Copyright

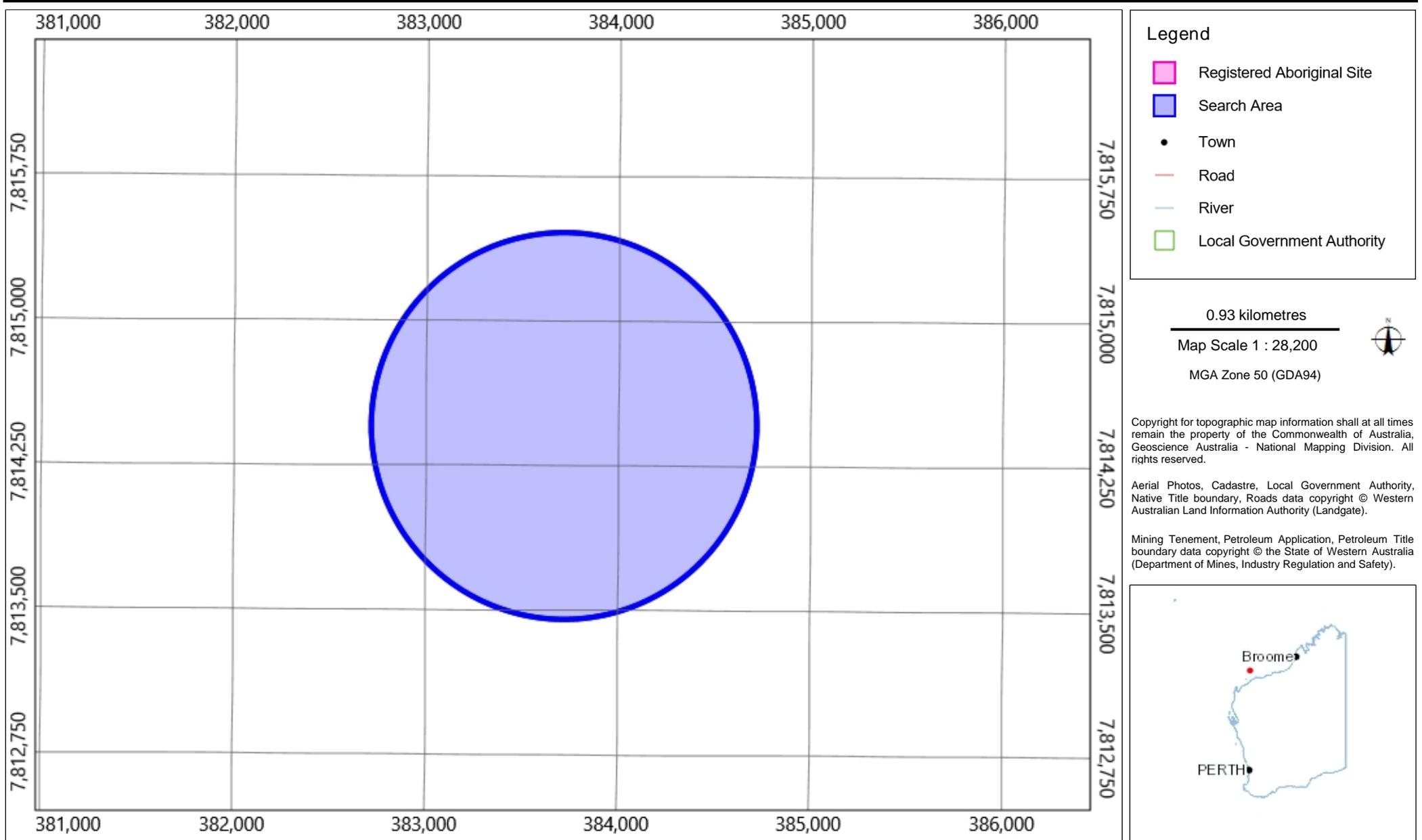
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# Aboriginal Heritage Inquiry System

## Map of Registered Aboriginal Sites



### Search Criteria

No Other Heritage Places in Shapefile - TPA03\_OA

### Disclaimer

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### Coordinate Accuracy

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# Aboriginal Heritage Inquiry System

## List of Other Heritage Places

### Basemap Copyright

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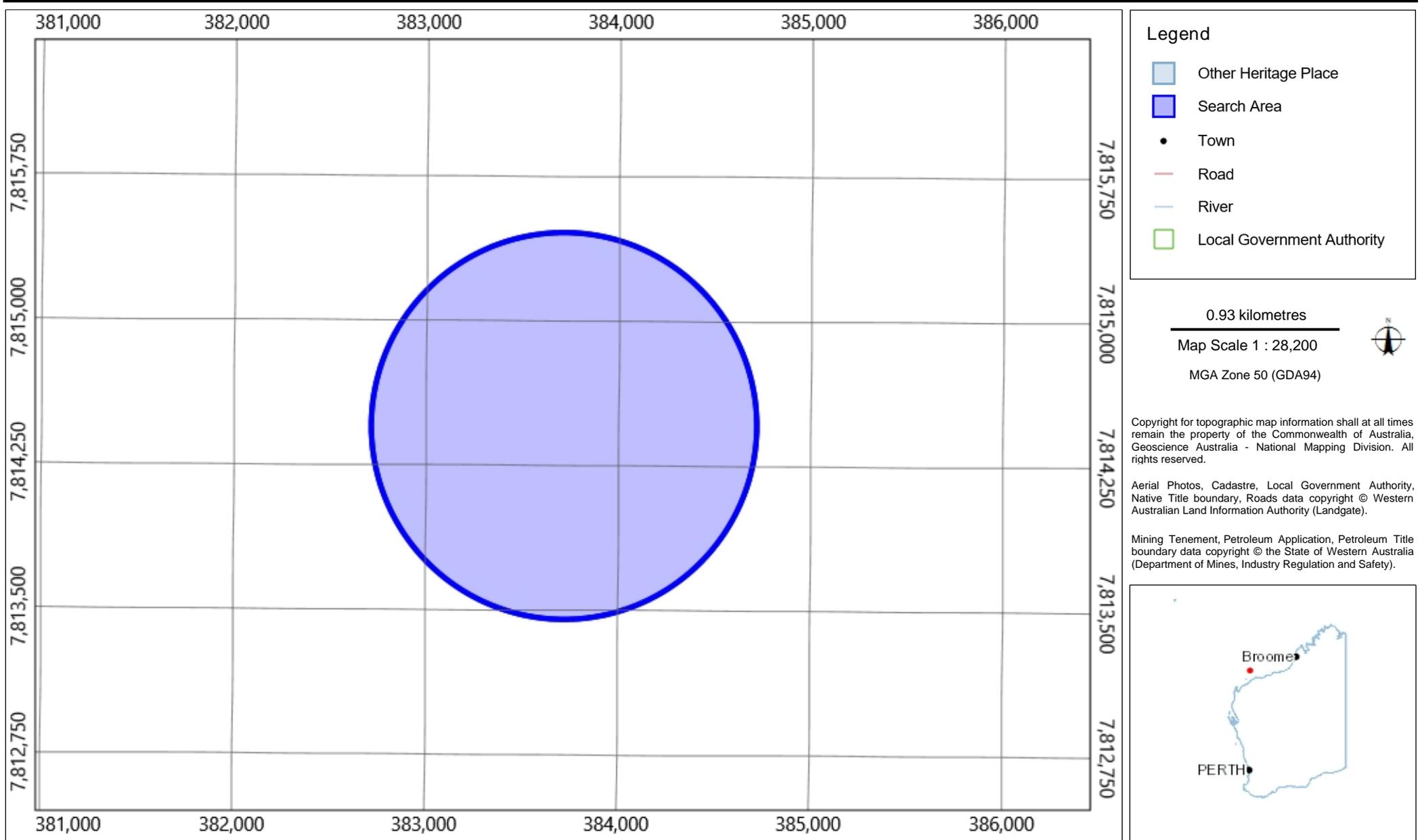
Satellite, Hybrid, Road basemap sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, HERE, DeLorme, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community.

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# Aboriginal Heritage Inquiry System

For further important information on using this information please see the Department of Planning, Lands and Heritage's Disclaimer statement at <https://www.dph.wa.gov.au/about-this-website>

## Map of Other Heritage Places



## List of Registered Aboriginal Sites

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### Search Criteria

No Registered Aboriginal Sites in Shapefile - TPA03\_ConsultationEMBA. Warning: Search area complex so results may be inaccurate. Contact DPLH for assistance.

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### Coordinate Accuracy

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## List of Registered Aboriginal Sites

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### Basemap Copyright

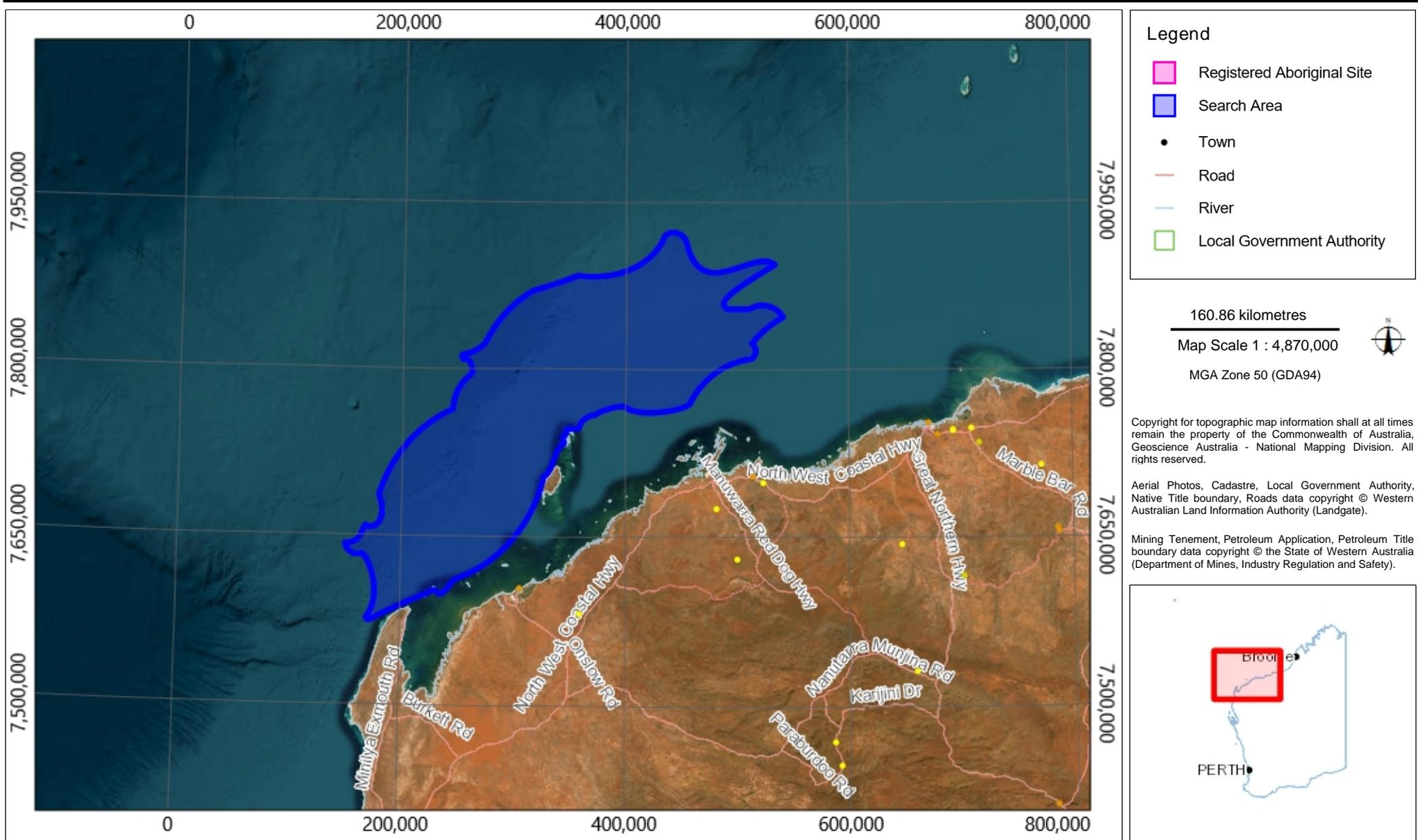
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Topographic basemap sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community.

# Aboriginal Heritage Inquiry System

## Map of Registered Aboriginal Sites



## List of Other Heritage Places

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### Search Criteria

2 Other Heritage Places in Shapefile - TPA03\_ConsultationEMBA

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### Copyright

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### Coordinate Accuracy

Coordinates (Easting/Northing metres) are based on the GDA 94 Datum. Accuracy is shown as a code in brackets following the coordinates.

Terminology (NB that some terminology has varied over the life of the legislation)

Place ID/Site ID: This a unique ID assigned by the Department of Planning, Lands and Heritage to the place.

Status:

- Registered Site: The place has been assessed as meeting Section 5 of the Aboriginal Heritage Act 1972.
- Other Heritage Place which includes:
  - Stored Data / Not a Site: The place has been assessed as not meeting Section 5 of the Aboriginal Heritage Act 1972.
  - Lodged: Information has been received in relation to the place, but an assessment has not been completed at this stage to determine if it meets Section 5 of the Aboriginal Heritage Act 1972.

Access and Restrictions:

- File Restricted = No: Availability of information that the Department of Planning, Lands and Heritage holds in relation to the place is not restricted in any way.
- File Restricted = Yes: Some of the information that the Department of Planning, Lands and Heritage holds in relation to the place is restricted if it is considered culturally sensitive. This information will only be made available if the Department of Planning, Lands and Heritage receives written approval from the informants who provided the information. To request access please contact [AboriginalHeritage@dplh.wa.gov.au](mailto:AboriginalHeritage@dplh.wa.gov.au).
- Boundary Restricted = No: Place location is shown as accurately as the information lodged with the Registrar allows.
- 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 4km<sup>2</sup>) provides a general indication of where the place 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.
- Restrictions:
  - No Restrictions: Anyone can view the information.
  - Male Access Only: Only males can view restricted information.
  - Female Access Only: Only females can view restricted information.

Legacy ID: This is the former unique number that the former Department of Aboriginal Sites assigned to the place. This has been replaced by the Place ID / Site ID.

## List of Other Heritage Places

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### Basemap Copyright

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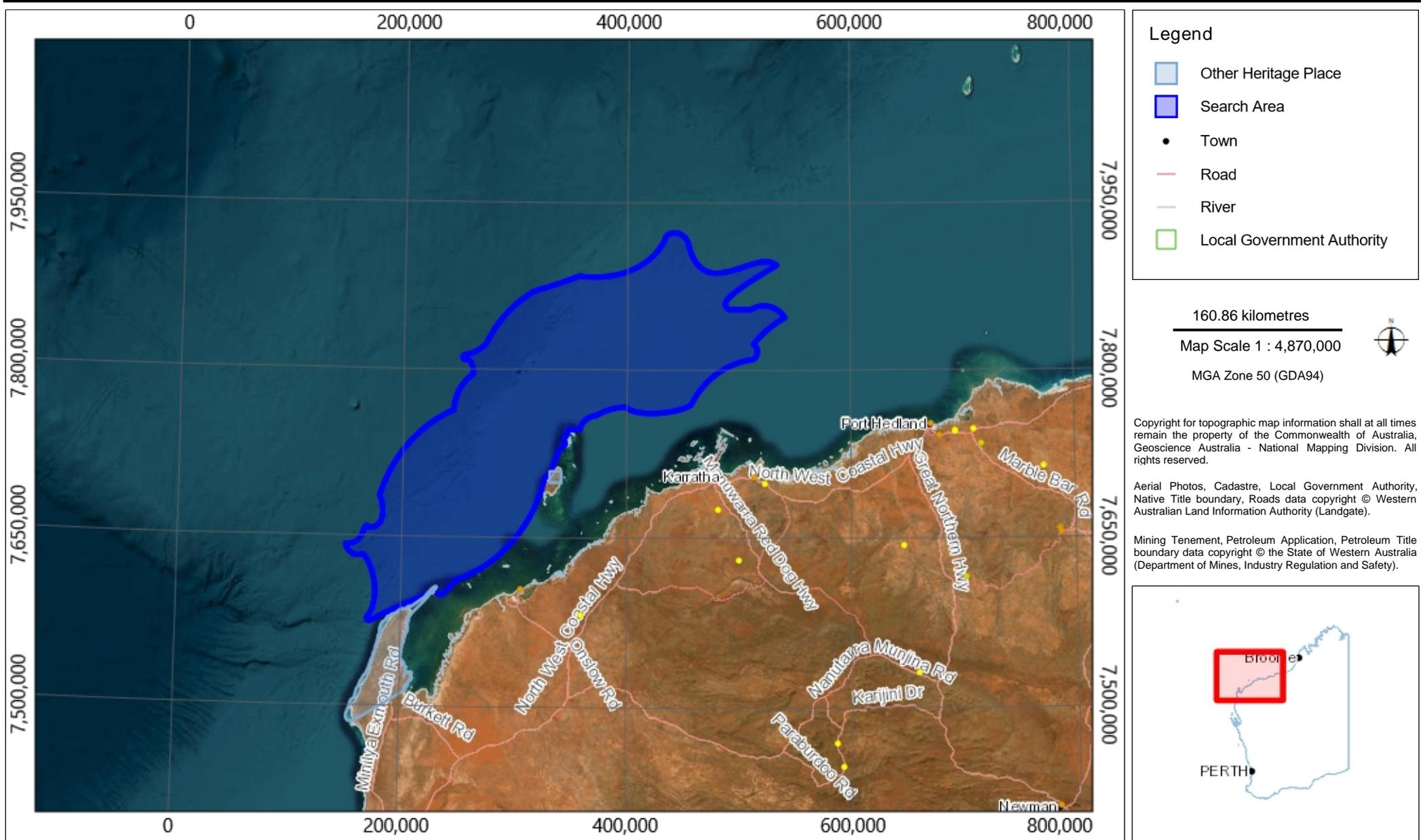
# Aboriginal Heritage Inquiry System

## List of Other Heritage Places

| ID    | Name                                      | File Restricted | Boundary Restricted | Restrictions           | Status                   | Type   | Knowledge Holders                                     | Coordinate                              | Legacy ID |
|-------|---|-----------------|---------------------|------------------------|--------------------------|--|---|---|-----------|
| 8951  | BARROW ISLAND                             | No              | No                  | No Gender Restrictions | Stored Data / Not a Site | Artefacts / Scatter  | *Registered Knowledge Holder names available from DPL | 335137mE 7705156mN Zone 50 [Unreliable] | P03542    |
| 39191 | Warnangura (Cape Range) Cultural Precinct | Yes             | No                  | No Gender Restrictions | Lodged                   | Artefacts / Scatter, Ceremonial, Engraving, Midden / Scatter, Mythological, Rockshelter, Named Place, Water Source | *Registered Knowledge Holder names available from DPL | 804815mE 7536655mN Zone 49 [Reliable]   |           |

# Aboriginal Heritage Inquiry System

## Map of Other Heritage Places



## APPENDIX H FIRST STRIKE PLAN

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Revision: 3

Woodside ID: 1401779378

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Uncontrolled when printed. Refer to electronic version for most up to date information.



# TPA03 Well Intervention – Oil Pollution First Strike Plan

Corporate HSE

Hydrocarbon Spill Preparedness

May 2023

Revision 0a

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## CONTROL AGENCIES AND INCIDENT CONTROLLERS

| Source   | Location            | Level | Control Agency                            | Incident Controller  |
|--|---------------------|-------|---|--|
| <b>Spill from facility including subsea infrastructure</b><br><br>Note: pipe laying and accommodation vessels are considered a "facility" under Australian regulations | Commonwealth waters | 1     | Woodside                                  | Person In Charge (PIC) with support from Onshore Team Leader (OTL) |
|  |                     | 2/3   | Woodside                                  | Corporate Incident Management Team (CIMT) Duty Manager             |
|  | State waters        | 1     | Woodside                                  | CIMT Duty Manager  |
|  |                     | 2/3   | Department of Transport (DoT)             | DoT Incident Controller  |
|  | Within port limits  | 1     | Woodside                                  | CIMT Duty Manager  |
|  |                     | 2/3   | DoT                                       | DoT Incident Controller  |
| <b>Spill from vessel</b><br><br>Note: SOPEP should be implemented in conjunction with this document  | Commonwealth waters | 1     | Australian Marine Safety Authority (AMSA) | Vessel Master  |
|  |                     | 2/3   | AMSA                                      | AMSA (with response assistance from Woodside)                      |
|  | State waters        | 1     | DoT                                       | DoT Incident Controller  |
|  |                     | 2/3   | DoT                                       | DoT Incident Controller  |
|  | Within port limits  | 1     | Port Authority                            | Port Harbour Master  |
|  |                     | 2/3   | Port Authority/ DoT                       | Port Harbour Master/ DoT Incident Controller                       |

## SPILLS IN STATE/PORT WATERS

As detailed in the table above, 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 (DoT). If Woodside is the responsible party for a spill that occurs within port limits, Woodside will notify the Port Authority for all spills, and also notify DoT for Level 2 and 3 spills.

Initially Woodside will be required to make available an appropriate number of suitably qualified persons to work in the DoT IMT ([APPENDIX F – Woodside Liaison Officer Resources to DoT](#)). DoT/PPA's role as the Controlling Agency in State waters/ within port limits does not negate the requirement for Woodside to have appropriate plans and resources in place to adequately respond to a marine hydrocarbon spill incident in State Waters/ within port limits or to commence the initial response actions to a spill prior to DoT establishing incident control in line with DoT *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\\_OffshorePetroleumIncidentGuidance.pdf](https://www.transport.wa.gov.au/mediaFiles/marine/MAC_P_Westplan_MOP_OffshorePetroleumIncidentGuidance.pdf)

Woodside's Incident Management Structure for a hydrocarbon spill, including Woodside Liaison Officer's command structure within DoT 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 <a href="#">APPENDIX A</a>   |  |  |   |   |  |   |   |   |
|---|--|--|---|---|--|---|---|---|
| <b>ALL INCIDENTS</b>  | Notify the Woodside Communication Centre (WCC) on:<br>[REDACTED]   |  |   |   |  |   |   |   |
|   | Incident Controller or delegate to make relevant notifications in <b>Table 1-1</b> of this Oil Pollution First Strike Plan.  |  |   |   |  |   |   |   |
| <b>LEVEL 1</b>  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #0070C0; color: white;">FACILITY INCIDENT</th> <th style="background-color: #C00000; color: white;">VESSEL INCIDENT</th> </tr> </thead> <tbody> <tr> <td style="background-color: #D9E1F2;">Coordinate pre-identified tactics in <b>Table 2-1</b> of this Oil Pollution First Strike Plan.<br/>Remember to download each Operational Plan.</td> <td style="background-color: #F4CCCC;">Notify AMSA or Port Authority (if within port limits) and coordinate pre-identified tactics in <b>Table 2-1</b> of this Oil Pollution First Strike Plan<br/>Remember to download each Operational Plan.</td> </tr> </tbody> </table> | FACILITY INCIDENT  | VESSEL INCIDENT   | Coordinate pre-identified tactics in <b>Table 2-1</b> of this Oil Pollution First Strike Plan.<br>Remember to download each Operational Plan. | Notify AMSA or Port Authority (if within port limits) and coordinate pre-identified tactics in <b>Table 2-1</b> of this Oil Pollution First Strike Plan<br>Remember to download each Operational Plan. |   |   |   |
|   | FACILITY INCIDENT  | VESSEL INCIDENT  |   |   |  |   |   |   |
|   | Coordinate pre-identified tactics in <b>Table 2-1</b> of this Oil Pollution First Strike Plan.<br>Remember to download each Operational Plan.  | Notify AMSA or Port Authority (if within port limits) and coordinate pre-identified tactics in <b>Table 2-1</b> of this Oil Pollution First Strike Plan<br>Remember to download each Operational Plan. |   |   |  |   |   |   |
| If the spill escalates such that the site cannot manage the incident, inform the WCC on:<br>[REDACTED] and escalate to a level 2/3 incident.  |  |  |   |   |  |   |   |   |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #0070C0; color: white;">FACILITY INCIDENT</th> <th style="background-color: #C00000; color: white;">VESSEL INCIDENT</th> </tr> </thead> <tbody> <tr> <td style="background-color: #D9E1F2;">Handover control to CIMT and notify DoT or Port Authority (if within port limits)</td> <td style="background-color: #F4CCCC;">Handover control to AMSA or Port Authority (if within port limits) and stand up CIMT to assist.</td> </tr> <tr> <td style="background-color: #D9E1F2;">Commence quick revalidation of the recommended strategies on <b>Table 2-1</b> taking into consideration seasonal sensitivities and current situational awareness.<br/>Commence validated strategies.</td> <td style="background-color: #F4CCCC;">If requested by AMSA/Port Authority:<br/>Commence quick revalidation of the recommended strategies on <b>Table 2-1</b> taking into consideration seasonal sensitivities and current situational awareness.<br/>Commence validated strategies.</td> </tr> <tr> <td style="background-color: #D9E1F2;">Create an Incident Action Plan (IAP) for all ongoing operational periods<br/>The content of the IAP should reflect the selected response strategies based on current situational awareness.<br/>For the full detailed pre-operational Net Environmental Benefit Analysis (NEBA) see the OSPRMA Appendix A</td> <td style="background-color: #F4CCCC;">If requested by AMSA/Port Authority:<br/>Create an IAP for all ongoing operational periods<br/>The content of the IAP should reflect the selected response strategies based on current situational awareness.<br/>For the full detailed pre-operational NEBA see the OSPRMA Appendix A</td> </tr> </tbody> </table> | FACILITY INCIDENT  | VESSEL INCIDENT  | Handover control to CIMT and notify DoT or Port Authority (if within port limits) | Handover control to AMSA or Port Authority (if within port limits) and stand up CIMT to assist.   | Commence quick revalidation of the recommended strategies on <b>Table 2-1</b> taking into consideration seasonal sensitivities and current situational awareness.<br>Commence validated strategies.    | If requested by AMSA/Port Authority:<br>Commence quick revalidation of the recommended strategies on <b>Table 2-1</b> taking into consideration seasonal sensitivities and current situational awareness.<br>Commence validated strategies. | Create an Incident Action Plan (IAP) for all ongoing operational periods<br>The content of the IAP should reflect the selected response strategies based on current situational awareness.<br>For the full detailed pre-operational Net Environmental Benefit Analysis (NEBA) see the OSPRMA Appendix A | If requested by AMSA/Port Authority:<br>Create an IAP for all ongoing operational periods<br>The content of the IAP should reflect the selected response strategies based on current situational awareness.<br>For the full detailed pre-operational NEBA see the OSPRMA Appendix A |
| FACILITY INCIDENT   | VESSEL INCIDENT  |  |   |   |  |   |   |   |
| Handover control to CIMT and notify DoT or Port Authority (if within port limits)   | Handover control to AMSA or Port Authority (if within port limits) and stand up CIMT to assist.  |  |   |   |  |   |   |   |
| Commence quick revalidation of the recommended strategies on <b>Table 2-1</b> taking into consideration seasonal sensitivities and current situational awareness.<br>Commence validated strategies.   | If requested by AMSA/Port Authority:<br>Commence quick revalidation of the recommended strategies on <b>Table 2-1</b> taking into consideration seasonal sensitivities and current situational awareness.<br>Commence validated strategies.  |  |   |   |  |   |   |   |
| Create an Incident Action Plan (IAP) for all ongoing operational periods<br>The content of the IAP should reflect the selected response strategies based on current situational awareness.<br>For the full detailed pre-operational Net Environmental Benefit Analysis (NEBA) see the OSPRMA Appendix A   | If requested by AMSA/Port Authority:<br>Create an IAP for all ongoing operational periods<br>The content of the IAP should reflect the selected response strategies based on current situational awareness.<br>For the full detailed pre-operational NEBA see the OSPRMA Appendix A  |  |   |   |  |   |   |   |
| <b>LEVEL 2/3</b>  |  |  |   |   |  |   |   |   |
|   |  |  |   |   |  |   |   |   |
|   |  |  |   |   |  |   |   |   |

# 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 WEL representative.**

**Table 1-1: Notifications**

**In the event of an incident between campaign vessels, also activate relevant vessel Emergency Response Plans and/or Bridging Documents**

**In the event of an incident impacting Goodwyn Alpha (GWA) Operations live well infrastructure, also activate GWA Operations Oil Pollution First Strike Plan**

| Timing   | By   | To  | Name   | Contact                                | Instruction  | Form   | Complete? (✓) |
|--|--|---|--|--|--|--------|---------------|
| <b>NOTIFICATIONS FOR ALL LEVELS OF SPILL</b>   |  |   |  |  |  |        |               |
| Immediately  | Offshore Installation Manager (OIM) or Vessel Master   | Woodside Communication Centre (WCC)   | Duty Manager   | ██████████<br>██████████<br>██████████ | Verbally notify WCC of event and estimated volume and hydrocarbon type.  | Verbal |               |
| Within 2 hours   | Woodside Site Rep (WSR), Corporate Incident Management Team Duty Manager (CIMT DM) or Delegate | National Offshore Petroleum Safety Environmental Management Authority (NOPSEMA <sup>1</sup> )       | Incident notification office   | ██████████                             | Verbally notify NOPSEMA for spills >80L.<br>Record notification using Initial Verbal Notification Form or equivalent and send to NOPSEMA as soon as practicable (cc to NOPTA and DMIRS).   | ████   |               |
| Within 3 days  | WSR, CIMT DM or Delegate   |   |  |  | Provide a written NOPSEMA Incident Report Form as soon as practicable (no later than 3 days after notification) (cc to NOPTA and DMIRS)<br>NOPSEMA ██████████<br>NOPTA ██████████<br>DMIRS ██████████  | ████   |               |
| As soon as practicable   | CIMT DM or Delegate  | Woodside  | Environment Duty Manager   | As per roster                          | Verbally notify Duty Environment of event and seek advice on relevant performance standards from EP  | Verbal |               |
| Within 2 hours of becoming aware of a marine oil pollution (MOP) incident that occurs in or may impact state waters                            | CIMT DM or Delegate  | WA Department of Transport (DoT)  | DoT Maritime Environmental Emergency Response Unit (MEER) Duty Officer | ██████████                             | Verbally notify DoT MEER Duty Officer that a spill has occurred and, if required, request use of equipment stored in Karratha.<br>Follow up with a written POLREP as soon as practicable following verbal notification.<br>Additionally, DoT to be notified if spill is likely to extend into WA State waters. Request DoT to provide Liaison to WEL IMT.  | ████   |               |
| As soon as practicable   | CIMT DM or Delegate  | Department of Climate Change, Energy, the Environment and Water (DCCEEW) Director of National Parks | Marine Park Compliance Duty Officer                                    | ██████████                             | 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.<br>This notification should include:<br><ul style="list-style-type: none"> <li>titleholder details</li> <li>time and location of the incident</li> <li>proposed response arrangements and locations as per the OPEP</li> <li>contact details for the response coordinator</li> <li>confirmation of access to relevant monitoring and evaluation reports when available.</li> </ul> | Verbal |               |
| 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 | CIMT DM or Delegate  | WA Department of Biodiversity, Conservation and Attractions (DBCA)                                  | Duty Officer   | ██████████                             | Phone call notification  | Verbal |               |

<sup>1</sup> Notification to NOPSEMA must be from a Woodside Representative.

| Timing  | By                  | To  | Name                               | Contact                  | Instruction   | Form             | Complete? (✓) |
|---|---------------------|---|------------------------------------|--------------------------|---|------------------|---------------|
| Biodiversity, Conservation and Attractions                                  |                     |   |                                    |                          |   |                  |               |
| As soon as practicable  | Public Information  | Relevant persons and organisations          | To be determined                   | To be determined         | Should it be identified that additional persons such as, but not limited to, commercial fishers, tourism operators or 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 TPA03 Well Intervention.<br>Relevant persons and organisations will be re-assessed throughout the response period. | Verbal initially |               |
| <b>ADDITIONAL NOTIFICATIONS TO BE MADE ONLY IF SPILL IS FROM A VESSEL</b>   |                     |   |                                    |                          |   |                  |               |
| Without delay as per Protection of the Sea Act, part II, section 11(1)      | Vessel Master       | Australian Maritime Safety Authority (AMSA) | Response Coordination Centre (RCC) | ██████████<br>██████████ | Verbally notify AMSA RCC of the hydrocarbon spill.<br>Follow up with a written Marine Pollution Report (POLREP) as soon as practicable following verbal notification.   | ████             |               |
| <b>ADDITIONAL LEVEL 2/3 NOTIFICATIONS</b>                                   |                     |   |                                    |                          |   |                  |               |
| As soon as practicable  | CIMT DM or Delegate | AMOSOC                                      | AMOSOC Duty Manager                | ██████████               | Notify AMOSC that a spill has occurred and follow-up with an email from the <b>CIMT Leader/ CIMT Deputy Leader/ IMT IC/ CMT Adviser/ CMT Leader</b> to formally activate AMOSC.<br>Determine what resources are required consistent with the AMOS Plan and detail in a Service Contract that will be sent to Woodside from AMOSC upon activation.   | ████             |               |
| As soon as practicable  | CIMT DM or Delegate | Oil Spill Response Limited (OSRL)           | OSRL Duty Manager                  | ██████████               | Contact OSRL duty manager and request assistance from technical advisor in Perth.<br>Send the completed notification form to OSRL as soon as practicable.   | ████             |               |
|   |                     |   |                                    |                          | For mobilisation of resources, send the Mobilisation Form to OSRL as soon as practicable. The mobilisation form must be signed by a nominated callout authority from Woodside. OSRL can advise the names on the call out authority list, if required.   | ████             |               |
| As soon as practicable if extra personnel are required for incident support | CIMT DM or Delegate | Marine Spill Response Corporation (MSRC)    | MSRC Response Manager              | ██████████<br>██████████ | Activate the contract with MSRC (in full) for the provision of up to 30 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           |               |

## 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  |
|---|----------------------------------|---|-------|---|-----------------------------|---|---|
|   | Vessel – Marine Diesel Oil (MDO) | Loss of well containment (LOWC) – GWF-1 Cond. |       |   |                             |   |   |
| Operational monitoring – tracking buoy (OM02)                               | Yes                              | Yes   | ALL   | If a vessel is on location, consider the need to deploy the oil spill tracking buoy. If no vessel is on location, consider the need to mobilise oil spill tracking buoys from the King Bay Supply Base (KBSB) Stockpile.<br><br>If a surface sheen is visible from the facility, deploy the satellite tracking buoy within two hours. | Operations                  | <b>DAY 1:</b><br>Tracking buoy deployed within 2 hours.   | Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk (OM02) of The Operational Monitoring Operational Plan.<br><br>Deploy tracking buoy in accordance with [REDACTED]                             |
| Operational monitoring – predictive modelling (OM01)                        | Yes                              | Yes   | ALL   | Undertake initial modelling using the <a href="#">Rapid Assessment Oil Spill Tool</a> and weathering fate analysis using Automated Data Inquiry for Oil Spills (ADIOS) or refer to the hydrocarbon information in <b>Appendix A</b> .   | Intelligence or Environment | <b>DAY 1:</b><br>Initial modelling within 6 hours using the Rapid Assessment Tool.  | Predictive Modelling of Hydrocarbons to Assess Resources at Risk (OM01 of The Operational Monitoring Operational Plan).<br><br><i>Planning to download immediately and follow steps</i>                                   |
|   | Yes                              | Yes   | ALL   | Send Oil Spill Trajectory Modelling (OSTM) form ( <a href="#">Appendix B, Form 7</a> ) to RPS Response [REDACTED].  | Intelligence                | <b>DAY 1:</b><br>Detailed modelling within 4 hours of RPS Response receiving information from Woodside.   |   |
| Operational monitoring – aerial surveillance (OM02)                         | Yes                              | Yes   | ALL   | Instruct Aviation Duty Manager to commence aerial observations in daylight hours. Aerial surveillance observer to complete log in <a href="#">Appendix B Form 8</a> .   | Logistics – Aviation        | <b>DAY 1:</b><br>2 trained aerial observers.<br><br>1 aircraft available.<br><br>Report made available to the IMT within 2 hours of landing after each sortie.  | Surveillance and Reconnaissance to Detect Hydrocarbons and Resources at Risk (OM02 of The Operational Monitoring Operational Plan).<br><br><i>Planning to download immediately and follow steps</i>                       |
| Operational monitoring – satellite tracking (OM02)                          | Yes                              | Yes   | ALL   | The Intelligence duty manager should be instructed to stand up Kongsberg Satellite Services (KSAT) to provide satellite imagery of the spill ([REDACTED]).  | Intelligence                | <b>DAY 1:</b><br>Service provider will confirm availability of an initial acquisition within 2 hours.<br><br>Data received to be uploaded into Woodside Common Operating Picture.                     |   |
| Operational monitoring – monitoring hydrocarbons in water (OM03)            | Yes                              | Yes   | ALL   | Consider the need to mobilise resources to undertake water quality monitoring (OM03).   | Planning or Environment     | <b>DAY 3:</b><br>Water quality assessment access and capability<br><br>Daily fluorometry reports will be provided to IMT.   | Detecting and Monitoring for the Presence and Properties of Hydrocarbons in the Marine Environment (OM03 of The Operational Monitoring Operational Plan).<br><br><i>Planning to download immediately and follow steps</i> |
| Operational monitoring – pre-emptive assessment of receptors at risk (OM04) | Yes                              | Yes   | ALL   | Consider the need to mobilise resources to undertake pre-emptive assessment of sensitive receptors at risk (OM04).  | Planning or Environment     | 10 days prior to any predicted impact and in agreement with WA DoT, deployment of 2 specialists for each of the Response Protection Areas (RPA) with predicted impacts.                               | Pre-emptive Assessment of Sensitive Receptors (OM04 of The Operational Monitoring Operational Plan).<br><br><i>Planning to download immediately and follow steps</i>  |
| Operational monitoring – shoreline assessment (OM05)                        | Yes                              | Yes   | ALL   | Consider the need to mobilise resources to undertake shoreline assessment surveys (OM05).   | Planning or Environment     | 10 days prior to any predicted impact and in agreement with WA DoT, deployment of 1 specialist trained in Shoreline Clean-up Assessment Technique (SCAT) for each of the RPAs with predicted impacts. | Shoreline Assessment (OM05 of The Operational Monitoring Operational Plan).<br><br><i>Planning to download immediately and follow steps</i>   |
| Surface dispersant  | No                               | No  | N/A   | This response strategy is not recommended as modelling does not predict any floating oil at   |                             |   |   |

| Technique                                  | Spill type                       |   | Level | Pre- Identified Tactics  | Responsible            | ALARP Commitment Summary | Link to Operational Plans for notification numbers and actions |
|--|----------------------------------|---|-------|--|------------------------|--------------------------|--|
|  | Vessel – Marine Diesel Oil (MDO) | Loss of well containment (LOWC) – GWF-1 Cond. |       |  |                        |                          |  |
|  |                                  |   |       | <p>minimum feasible thresholds (&gt;50 g/m<sup>2</sup>) required for dispersant application for the LOWC scenario.</p> <p>This technique is also not recommended for marine diesel.</p> <p>Dispersant is therefore not considered to have a net environmental benefit.</p>   |                        |                          |  |
| <b>Containment and recovery</b>            | No                               | No  | N/A   | <p>This response strategy is not recommended as modelling does not predict any floating oil at minimum feasible thresholds (&gt;50 g/m<sup>2</sup>) required for containment &amp; recovery for the LOWC scenario.</p> <p>Highly volatile hydrocarbons such as GWF-1 Condensate and MDO are likely to weather, spread and evaporate quickly and lead to unsafe conditions in the vicinity of fresh hydrocarbon.</p> <p>Corralling low flash point substances also poses a safety risk and thus should be avoided. This response technique is therefore not feasible for either scenario.</p> |                        |                          |  |
| <b>Mechanical dispersion</b>               | No                               | No  | N/A   | <p>This technique is not recommended.</p> <p>Although feasible, highly volatile hydrocarbons are likely to weather, spread and evaporate quickly and lead to unsafe conditions in the vicinity of fresh hydrocarbon.</p> <p>Additionally, vessels used for mechanical dispersion would be contaminated by the hydrocarbon and could cause secondary contamination of unimpacted areas.</p>   |                        |                          |  |
| <b>In-situ burning</b>                     | No                               | No  | N/A   | <p>This technique is not recommended.</p> <p>Requires calm sea state conditions which limits its feasibility in the region. Furthermore, modelling predicts that floating oil will not reach response thresholds or slick thickness to required for effective in situ burning operations.</p> <p>There are health and safety risks for response personnel associated with the containment and subsequent burning of hydrocarbons and the residue from attempts to burn would sink, posing a risk to the environment.</p>   |                        |                          |  |
| <b>Shoreline protection and deflection</b> | No                               | No  | N/A   | Modelling does not predict any shoreline contact at response thresholds for either scenario.   |                        |                          |  |
| <b>Shoreline clean-up</b>                  | No                               | No  | N/A   | Modelling does not predict any shoreline contact at response thresholds for either scenario.   |                        |                          |  |
| <b>Oiled wildlife response</b>             | 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   | Logistics and Planning |                          | Oiled Wildlife Response Operational Plan                       |

| Technique                        | Spill type                       |   | Level | Pre- Identified Tactics   | Responsible                      | ALARP Commitment Summary  | Link to Operational Plans for notification numbers and actions   |
|----------------------------------|----------------------------------|---|-------|---|----------------------------------|---|--|
|                                  | Vessel – Marine Diesel Oil (MDO) | Loss of well containment (LOWC) – GWF-1 Cond. |       |   |                                  |   |  |
|                                  |                                  |   |       | relevant Tactical Response Plan for potential wildlife at risk.<br>Mobilise AMOSC Oiled Wildlife Containers.<br>Consider whether additional equipment is required from local suppliers.   |                                  |   |  |
| Scientific monitoring (type II)  | Yes                              | Yes   | ALL   | Notify Woodside science team of spill event.  | Environment                      |   | Oil Spill Scientific Monitoring Programme – Operational Plan   |
| <b>SOURCE CONTROL TECHNIQUES</b> |                                  |   |       |   |                                  |   |  |
| Subsea First Response Toolkit    | No                               | Yes   | L2/3  | Debris clearance equipment may require mobilisation prior to the undertaking of any further source control activities.<br>Source control via ROV intervention using the intervention riser system (IRS) or subsea tree may be feasible.   | Operations – Source Control Unit | <b>DAY 2:</b><br>Remotely Operated Vehicle (ROV) on Mobile Offshore Drilling Unit (MODU) ready for deployment within 48 hours | <ul style="list-style-type: none"> <li>• Source Control Emergency Response Planning Guideline</li> <li>• Tidepole (TPA03) Well Operations Management Plan (WOMP)</li> <li>• Light Well Intervention Vessel (LWIV) Emergency Response Plan</li> </ul> |
| Subsea Dispersant                | No                               | No  | N/A   | This response strategy is not recommended given the limited surface oil, low residue and highly volatile nature of GWF-1 Condensate. Subsea dispersant is therefore not considered to provide a net environmental benefit.  |                                  |   |  |
| Capping Stack                    | No                               | No  | N/A   | Deployment of the capping stack is not feasible with the vertical Xmas Tree and/or light well intervention (LWI) stack in place. In this case the vertical Xmas Tree and/or LWI stack provides a similar functionality to the capping stack, having multiple layers of redundancy. The capping stack could be utilised in specific cases where the vertical Xmas Tree has failed and is no longer connected to the wellhead, which are not considered credible. |                                  |   |  |
| Relief Well                      | No                               | No  | N/A   | Relief well does not reduce risk, given the intervention is carried out through a vertical tree. This means there are additional barriers available to close in the well.<br><br>There are no credible scenarios identified that could permanently compromise all available barriers in the tree and Well Control Package.  |                                  |   |  |

### 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, the sensitive receptors outlined in **Table 3-1** are identified as priority protection areas, as they have the potential to be contacted by hydrocarbon at or above impact threshold levels within 48 hours of a spill.

**Table 3-1: Receptors for Priority Protection with Potential Impact within 48 Hours**

| Receptor and scenario   | Distance and Direction from Operational Area (km) | Minimum time to shoreline contact (above 100 g/m <sup>2</sup> ) in days | Maximum shoreline accumulation (above 100 g/m <sup>2</sup> ) in m <sup>3</sup> | Threshold triggered and recommended strategy | Tactical Response Plans |
|---|---|---|--|--|-------------------------|
| No RPAs are predicted to be contacted at any of the assessed thresholds for either scenario for the duration of the spill |   |   |  |  |                         |

Hydrocarbon spill modelling results indicate that no additional sensitive receptors are predicted to be contacted by hydrocarbons at response thresholds beyond 48 hours of a spill.

Tactical Response plans for other locations can be accessed via the [Oil Spill Portal - Tactical Response Plans](#) 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 TPA03 Well Intervention Operational Area and identifies priority protection areas.

Consideration should be given to other assets and/or stakeholders (including mariners) in the vicinity of the spill location. **Table 3-2** indicates the assets within the vicinity of the TPA03 Well Intervention Operational Area.

**Table 3-2: Assets in the vicinity of the TPA03 Well Intervention Operational Area**

| Asset                | Distance and Direction from Operational Area | Operator |
|----------------------|--|----------|
| Goodwyn Platform     | 12 km north-east                             | Woodside |
| North Rankin Complex | 31 km north-east                             | Woodside |

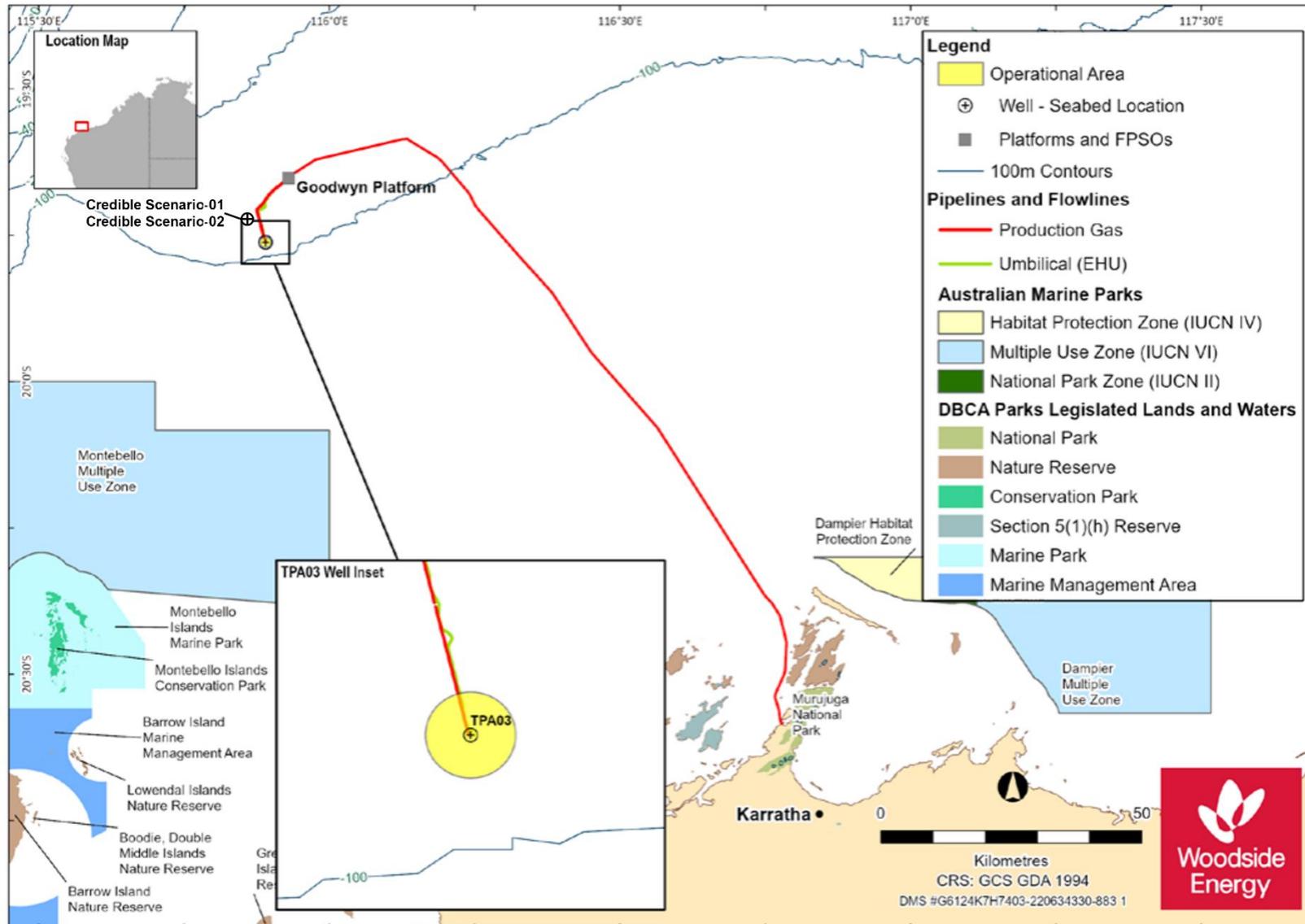


Figure 3-1: Location of Operational Area

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## 4. DISPERSANT APPLICATION

Dispersant is not considered an appropriate response strategy for this activity as described in the TPA03 Well Intervention Environment Plan Appendix D (Woodside's Oil Spill Preparedness and Response Mitigation Assessment).

## APPENDIX A – CREDIBLE SPILL SCENARIOS AND HYDROCARBON INFORMATION

Table A - 1: Credible spill scenarios and hydrocarbon information

| Scenario   | Product          | API gravity | Volume             | Residue                    | Weathering rate                     |       | Suggested ADIOS2 Analogue <sup>2</sup>       |
|--|------------------|-------------|--------------------|----------------------------|-------------------------------------|-------|--|
| <b>CS-01 (WCCS)</b><br>Unplanned hydrocarbon release of condensate – loss of well containment (LOWC) from TPA03 during well intervention | GWF-1 Condensate | 47.5°       | 515 m <sup>3</sup> | 1.4% (7.2 m <sup>3</sup> ) | 12 hours (BP < 180 °C)              | 65.7% | NWS Condensate                               |
|  |                  |             |                    |                            | 24 hours (180 °C < BP < 265 °C)     | 22.8% |  |
|  |                  |             |                    |                            | Several days (265 °C < BP < 380 °C) | 10.2% |  |
| <b>CS-02</b><br>Surface release of MDO after a vessel fuel tank rupture near the well  | MDO              | 37.2°       | 250 m <sup>3</sup> | 5% (12.5 m <sup>3</sup> )  | 12 hours (BP < 180 °C)              | 6%    | Diesel Fuel Oil – Southern USA 1 (API 37.2°) |
|  |                  |             |                    |                            | 24 hours (180 °C < BP < 265 °C)     | 35%   |  |
|  |                  |             |                    |                            | Several days (265 °C < BP < 380 °C) | 54%   |  |

<sup>2</sup> 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.

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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 | ■    |
| 2   | NOPSEMA Incident Report Form                              | ■    |
| 3   | Marine Pollution Report (POLREP – AMSA)                   | ■    |
| 4   | AMOSOC Service Contract                                   | ■    |
| 5   | Marine Pollution Report (POLREP – DoT)                    | ■    |
| 6a  | OSRL Initial Notification Form                            | ■    |
| 6b  | OSRL Mobilisation Activation Form                         | ■    |
| 7   | RPS Response Oil Spill Trajectory Modelling Request       | ■    |
| 8   | Aerial Surveillance Observer Log                          | ■    |
| 9   | Tracking buoy deployment instructions                     | ■    |

**FORM 1 – RECORD OF INITIAL VERBAL NOTIFICATION TO NOPSEMA**

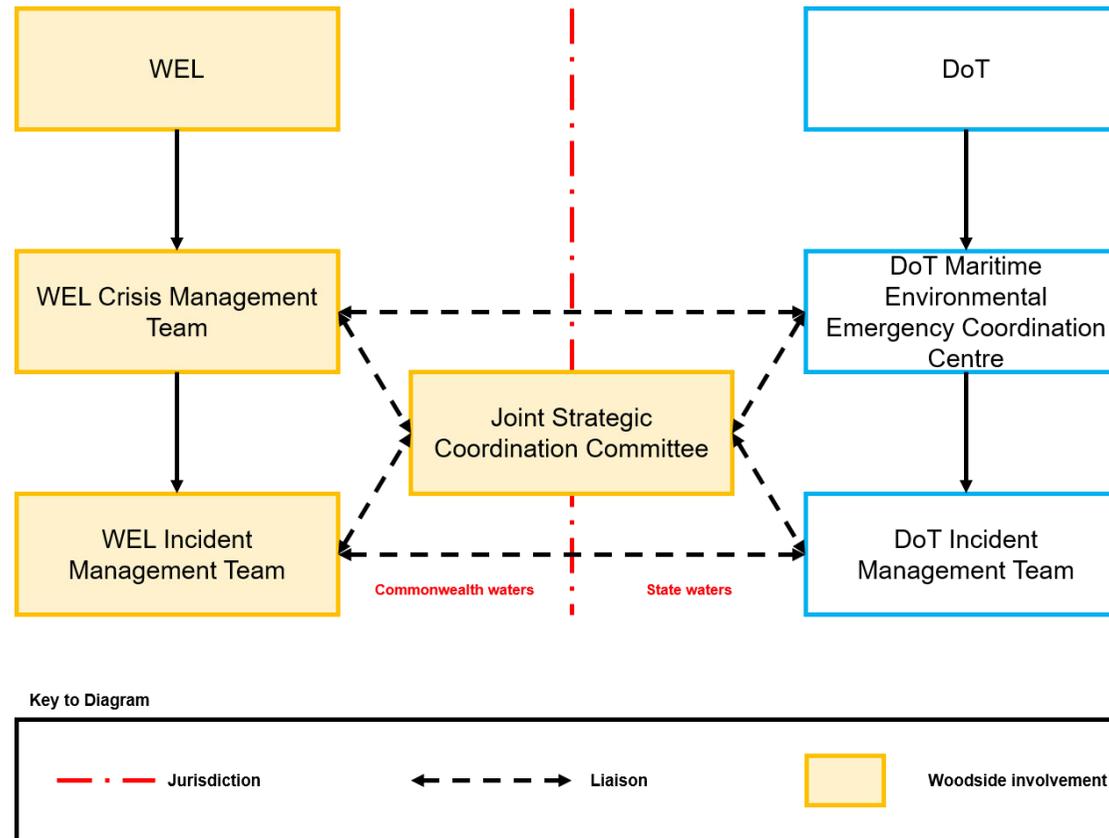


|  |   |   |  |
|--|---|---|--|
| <b>NOPSEMA phone:</b> _____  |   |   |  |
| Date of call   | _____   |   |  |
| Time of call   | _____   |   |  |
| Call made by   | _____   |   |  |
| Call made to   | _____   |   |  |
| <b>Information to be provided to NOPSEMA:</b>  |   |   |  |
| Date and time of incident/ time caller became aware of incident                                      | _____   |   |  |
| Details of incident  | 1. Location                                     | _____   |  |
|  | 2. Title  | _____   |  |
|  | 3. Source                                       | <input type="checkbox"/> Platform             |  |
|  |   | <input type="checkbox"/> Pipeline             |  |
|  |   | <input type="checkbox"/> FPSO                 |  |
|  |   | <input type="checkbox"/> Exploration drilling |  |
|  |   | <input type="checkbox"/> Well                 |  |
|  | <input type="checkbox"/> 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                         | _____   |   |  |
| <b>After the initial call is made to NOPSEMA, please send this record as soon as practicable to:</b> |   |   |  |
| NOPSEMA  | _____   |   |  |
| NOPTA  | _____   |   |  |
| DMIRS  | _____   |   |  |

**APPENDIX C – SPILL ASSESSMENT QUESTIONS**

| <b>What has happened?</b>      |   |                         |
|--------------------------------|---|-------------------------|
| Date/time                      |   |                         |
| Spill source                   |   |                         |
| Spill cause                    |   |                         |
| Safety situation               |   |                         |
| <b>What is it?</b>             |   |                         |
| Oil type and name              |   |                         |
| Oil properties                 | Specific gravity                                |                         |
|                                | Viscosity                                       |                         |
|                                | Pour point                                      |                         |
|                                | Asphaltenes                                     |                         |
|                                | Wax content                                     |                         |
|                                | Boiling point                                   |                         |
| <b>Where is it?</b>            |   |                         |
| Latitude and longitude         |   |                         |
| Distance and bearing           |   |                         |
| Affected area                  | <input type="checkbox"/> Offshore               |                         |
|                                | <input type="checkbox"/> Subsea                 |                         |
|                                | <input type="checkbox"/> Shoreline              |                         |
|                                | <input type="checkbox"/> Estuary                |                         |
|                                | <input type="checkbox"/> Port                   |                         |
|                                | <input type="checkbox"/> Harbour                |                         |
|                                | <input type="checkbox"/> Inland                 |                         |
|                                | <input type="checkbox"/> River                  |                         |
|                                | <input type="checkbox"/> Other (please detail): |                         |
| Water depth                    |   |                         |
| <b>How big is it?</b>          |   |                         |
| Area                           |   |                         |
| Release type                   | <input type="checkbox"/> Instantaneous          | Estimated volume:       |
|                                | <input type="checkbox"/> Continuous release     | Estimated release rate: |
| <b>Where it is going?</b>      |   |                         |
| Metocean conditions            |   |                         |
| Currents and tides             |   |                         |
| <b>What is in the way?</b>     |   |                         |
| Resources at risk              |   |                         |
| Time until resource contact    |   |                         |
| <b>What's happening to it?</b> |   |                         |
| Weathering processes           |   |                         |
| Response actions underway      |   |                         |

## APPENDIX D – COORDINATION STRUCTURE FOR A CONCURRENT HYDROCARBON SPILL IN BOTH COMMONWEALTH AND STATE WATERS/ SHORELINES<sup>3</sup>



The Control Agency for a hydrocarbon spill in Commonwealth waters resulting from an offshore petroleum activity is Woodside (the Petroleum Titleholder).

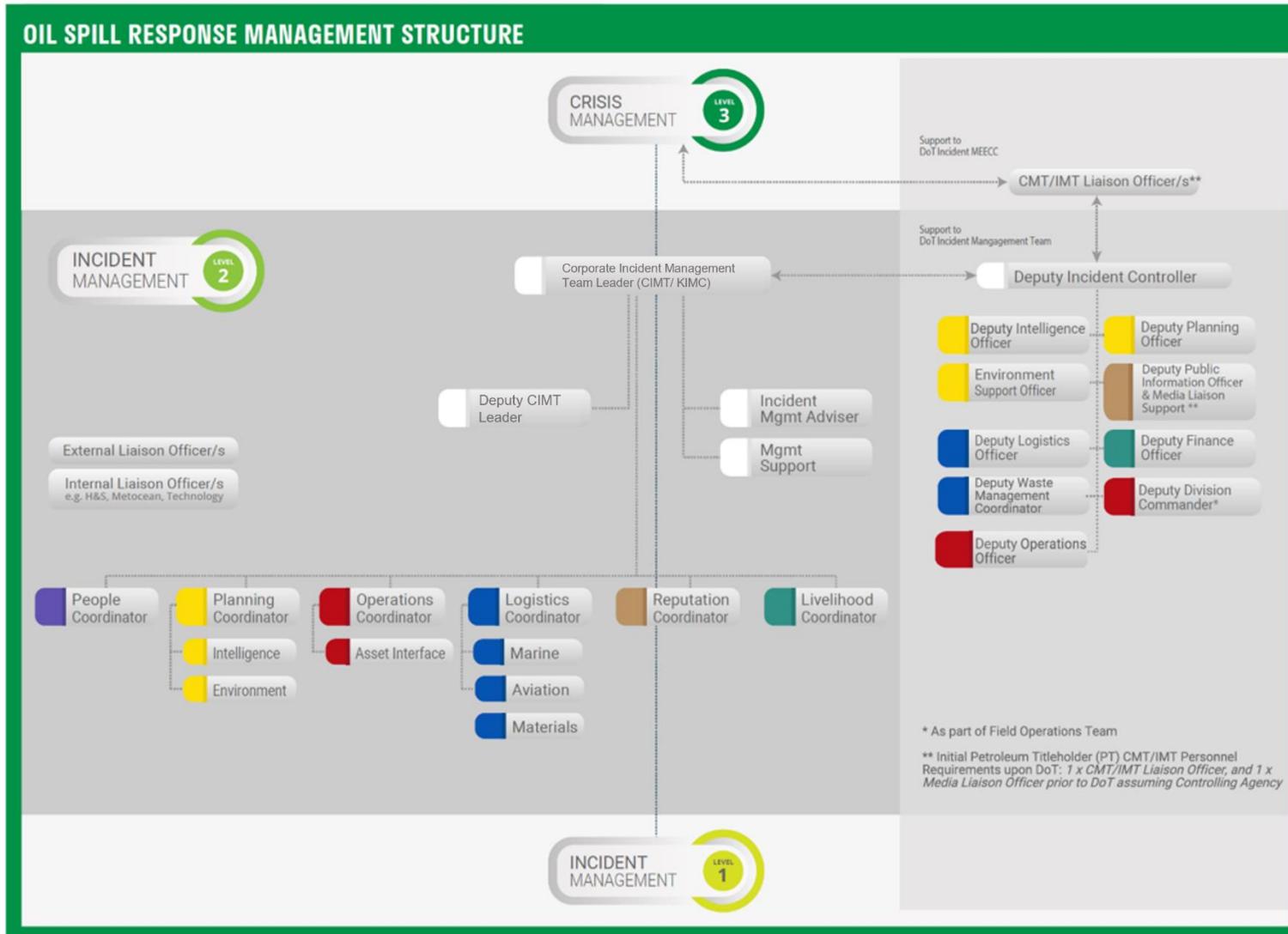
The Control Agency/HMA for a hydrocarbon spill in State waters/shorelines resulting from an offshore petroleum activity is DoT. DoT will appoint an Incident Controller and form a separate IMT to only manage the spill within State waters/shorelines.

<sup>3</sup> Adapted from DoT 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 DoT IMT if required).



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| Area   | WEL Liaison Role  | Personnel Sourced from <sup>4</sup> : | Key Duties  | # |
|--|---|---------------------------------------|---|---|
| DoT IMT Intelligence – Environment                     | Environment Support Officer   | Environment Coordinator Roster        | <ul style="list-style-type: none"> <li>Facilitate the provision of relevant mapping originating from the DoT IMT to the PT IMT.</li> <li>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.</li> <li>Assist in the interpretation of the PT OPEP and relevant TRP plans.</li> <li>Facilitate in requesting, obtaining and interpreting environmental monitoring data originating from the PT IMT.</li> <li>Facilitate the provision of relevant environmental information and advice originating from the DoT IMT to the PT IMT.</li> </ul>   | 1 |
| DoT IMT Planning-Plans/ Resources                      | Deputy Planning Officer   | Planning Coordinator Roster           | <ul style="list-style-type: none"> <li>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.</li> <li>Facilitate the provision of relevant IAP and sub plans from the PT IMT.</li> <li>Assist in the interpretation of the PT OPEP from the PT.</li> <li>Assist in the interpretation of the PT IAP and sub plans from the PT IMT.</li> <li>Facilitate the provision of relevant IAP and sub plans originating from the DoT IMT to the PT IMT.</li> <li>Assist in the interpretation of the PT existing resource plans.</li> <li>Facilitate the provision of relevant components of the resource sub plan originating from the DoT IMT to the PT IMT.</li> </ul> <p><b>(Note this individual must have intimate knowledge of the relevant PT OPEP and planning processes)</b></p> | 1 |
| DoT IMT Public Information-Media/ Community Engagement | Public Information Support and Media Liaison Officer/ Deputy Public Information Officer | Reputation Coordinator Roster         | <ul style="list-style-type: none"> <li>As part of the Public Information Team, provide a direct liaison between the PT Media team and DoT IMT Media team.</li> <li>Facilitate effective communications and coordination between the PT and DoT media teams.</li> <li>Assist in the release of joint media statements and conduct of joint media briefings.</li> <li>Assist in the release of joint information and warnings through the DoT Information and Warnings team.</li> <li>Offer advice to the DoT Media Coordinator on matters pertaining to PT media policies and procedures.</li> <li>Facilitate effective communications and coordination between the PT and DoT Community Liaison teams.</li> </ul>   | 1 |

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| Area   | WEL Liaison Role          | Personnel Sourced from <sup>4</sup> : | Key Duties  | # |
|--|---------------------------|---------------------------------------|---|---|
|  |                           |                                       | <ul style="list-style-type: none"> <li>Assist in the conduct of joint community briefings and events.</li> <li>Offer advice to the DoT Community Liaison Coordinator on matters pertaining to the PT community liaison policies and procedures.</li> <li>Facilitate the effective transfer of relevant information obtained from through the Contact Centre to the PT IMT.</li> </ul>   |   |
| DoT IMT Logistics                              | Deputy Logistic Officer   | Logistics Coordinator Roster          | <ul style="list-style-type: none"> <li>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.</li> <li>Facilitate the acquisition of appropriate supplies through the PTs existing OSRL, AMOSC and private contract arrangements.</li> <li>Collects Request Forms from DoT to action via PT IMT.</li> </ul> <p><b>(Note this individual must have intimate knowledge of the relevant PT logistics processes and contracts)</b></p>   | 1 |
| DoT IMT Finance-Accounts/ Financial Monitoring | Deputy Finance Officer    | Livelihood Coordinator Roster         | <ul style="list-style-type: none"> <li>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.</li> <li>Facilitate the communication of financial monitoring information to the PT to allow them to track the overall cost of the response.</li> <li>Assist the Finance Officer in the tracking of financial commitments through the response, including the supply contracts commissioned directly by DoT and to be charged back to the PT.</li> </ul>  | 1 |
| DoT IMT Operations                             | Deputy Operations Officer | Operations Coordinator Roster         | <ul style="list-style-type: none"> <li>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.</li> <li>Facilitate effective communications and coordination between the PT Operations Section and the DoT Operations Section.</li> <li>Offer advice to the DoT Operations Officer on matters pertaining to PT incident response procedures and requirements.</li> <li>Identify efficiencies and assist to resolve potential conflicts around resource allocation and simultaneous operations of PT and DoT response efforts.</li> </ul> | 1 |

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| Area   | WEL Liaison Role  | Personnel Sourced from <sup>4</sup> :  | Key Duties   | #  |
|--|---|--|--|----|
| DoT IMT Operations – Waste Management                  | Facilities Support Officer/ Deputy Waste Management Coordinator | Logistics Materials Coordinator Roster | <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• Collects Request Forms from DoT to action via PT IMT.</li> </ul>  | 1  |
| DoT FOB Operations Command                             | Deputy On-Scene Commander/ Deputy Division Commander            | CIMT Leader Roster                     | <ul style="list-style-type: none"> <li>• 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.</li> <li>• Provide a direct liaison between the PT FOB and DoT FOB.</li> <li>• Facilitate effective communications and coordination between the PT Division Commander and the DoT Division Commander.</li> <li>• Offer advice to the DoT Division Commander on matters pertaining to PT incident response policies and procedures.</li> <li>• Assist the Safety Coordinator deployed in the FOB in the performance of their duties, particularly as they relate to PT employees or contractors.</li> <li>• Offer advice to the Safety Coordinator deployed in the FOB on matters pertaining to PT safety policies and procedures.</li> </ul> | 1  |
| Total Woodside personnel initially required in DoT IMT |   |  |  | 11 |

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### APPENDIX G – DOT LIAISON OFFICER RESOURCES TO WOODSIDE

Once DoT activates a State waters/shorelines IMT, DoT will make available the following roles to Woodside.

| Area  | DoT Liaison Role  | Personnel Sourced from: | Key Duties  | # |
|---|---|-------------------------|---|---|
| WEL CMT   | DoT Liaison Officer (prior to DoT assuming Controlling Agency) / Deputy Incident Controller – State waters (after DoT assumes Controlling Agency) | DoT                     | <ul style="list-style-type: none"> <li>Facilitate effective communications between DoT’s SMPC/ Incident Controller and the Petroleum Titleholder’s appointed CMT Leader / Incident Controller.</li> <li>Provide enhanced situational awareness to DoT of the incident and the potential impact on State waters.</li> <li>Assist in the provision of support from DoT to the Petroleum Titleholder.</li> <li>Facilitate the provision technical advice from DoT to the Petroleum Titleholder Incident Controller as required.</li> </ul>                                     | 1 |
| WEL Reputation FST (Media Room)/ Public Information – Media | DoT Media Liaison Officer   | DoT                     | <ul style="list-style-type: none"> <li>Provide a direct liaison between the PT Media team and DoT IMT Media team.</li> <li>Facilitate effective communications and coordination between the PT and DoT media teams.</li> <li>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 DoT Information &amp; Warnings team.</li> <li>Offer advice to the PT Media Coordinator on matters pertaining to DoT and wider Government media policies and procedures.</li> </ul> | 1 |
| Total DoT Personnel Initial Requirement to Woodside         |   |                         |   | 2 |

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## **APPENDIX I PROGRAM OF ONGOING ENGAGEMENT WITH TRADITIONAL CUSTODIANS**

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Revision: 3

Woodside ID: 1401779378

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Uncontrolled when printed. Refer to electronic version for most up to date information.

## **Proposed Program of Ongoing Engagement with Traditional Custodians**

This Program of Ongoing Engagement with Traditional Custodians (“Program”) has been developed to demonstrate Woodside’s commitment to ongoing engagement and support of Traditional Custodians’ capacity to care for and manage Country, including Sea Country, and has been directly informed by Traditional Custodians’ feedback regarding their capacity to engage and consult on Environment Plans.

It is a living document designed to evolve with ongoing consultation and feedback from Traditional Custodians and, at a minimum, will be subject to annual review. In addition to this Program, Woodside will continue to participate in, and support collective industry engagement with Traditional Owners on the development of a future, sustainable, industry wide Program. Through the Program, Woodside actively supports Traditional Custodians’ capacity for, and involvement in, ongoing engagement and feedback on environment plans.

The Program has been developed so that Traditional Custodians can, on an ongoing basis, provide Woodside with feedback relating to the possible consequences of an activity to be carried out under an environment plan on their functions, interests and activities as they relate to cultural values. This feedback will be evaluated in conjunction with Traditional Custodians and, where necessary, avoidance or mitigation strategies will be developed in collaboration with Traditional Custodians. How the Program is implemented with specific Traditional Custodians will depend on their stated needs and priorities

The Program is underpinned by Woodside’s First Nations Communities Policy ([woodside.com](http://woodside.com)), the objective of which is to ensure Woodside partners and engages with First Nations communities to create positive economic, social and cultural outcomes that leave a lasting legacy. Woodside does this through building respectful relationships and partnerships with First Nations communities where we are active, in the areas where they are most interested in. We acknowledge the unique connection that First Nations communities have to land, waters and the environment.

The Program will include, as agreed with relevant communities, reasonable commitment to:

### **1. Support for ongoing dialogue and engagement**

Woodside will support the capacity of Traditional Custodians to participate in ongoing dialogue and engagement about the environment plans and to enable the ongoing and future identification of cultural values potentially impacted by Woodside’s activities. Woodside further commits to agreeing consultation protocols with individual Traditional Custodians to ensure the material provided is appropriate in level of detail such that the potential for cultural impact from Woodside activities can be determined and as required measures can be adopted to avoid or minimise impact.

In addition, Woodside will receive feedback on cultural values from an individual person or organisation that identifies as a Traditional Custodian, at any stage during the development and implementation of activities. This feedback will be evaluated, in conjunction with the Traditional Custodian individual or group and if required, control measures will put in place to avoid impacts to cultural values, or where avoidance is not possible, to minimise and mitigate the impacts to an acceptable level.

Where cultural values are identified post activity completion, any controls relevant to value management will be implemented during the next relevant activity.

## **2. Support for the identification and recording of cultural features**

Woodside will support Traditional Custodians to record and articulate their Sea Country values and will invest in cultural assessments codesigned with Traditional Custodians, where required, to inform potential risks to cultural values from our petroleum activities.

This may include supporting cultural mapping by Traditional Custodians to identify and map significant cultural features including archaeological sites and other cultural values. The scoping of the mapping process will be codesigned with Traditional Custodians.

Woodside understands that cultural knowledge remains the intellectual property of Traditional Custodians and will agree with Traditional Custodians at the outset how that information from surveys will be used to feedback into and inform the environment plan's design and implementation.

In addition, Woodside applies the Cultural Heritage Management Procedure 2019, updated in 2023, to the Program which:

- provides a process for the identification, protection, and management of Cultural Heritage taking into account relevant standards, in particular, the United Nations Declaration on the Rights of Indigenous Peoples, the Charter for the Protection and Management of the Archaeological Heritage, the Convention for the Safeguarding of the Intangible Cultural Heritage, and the Convention on the Protection of the Underwater Cultural Heritage;
- applies to underwater cultural heritage and, consistent with current practice, provides for the commissioning of (where appropriate) both archaeological and ethnographic assessments of cultural values over the submerged landscape; and
- the process includes the following:
  - early engagement with relevant Traditional Custodians
  - identification of potential heritage, this could include desktop and field surveys undertaken with the Traditional Custodians.
- the development of cultural management strategies; and, where it is determined cultural heritage may be impacted, the development of Cultural Heritage Management Plans codesigned with Traditional Custodians and implemented by Woodside's First Nations team which:
  - focus on avoidance or minimisation of impacts; and
  - provide regular reviews and for inclusion of new information and further development of the Cultural Heritage Management Plan.

Woodside is committed to continue to receive feedback on cultural values for the life of an environment plan, the inclusion of new information and the development of avoidance or mitigation strategies in collaboration with Traditional Custodians. This information will be recorded via the Woodside Management of Knowledge Process and any potential impacts to the accepted Environment Plan evaluated via the Woodside Management of Change Process.

## **3. Building capacity for the ongoing protection of country**

Woodside will support measures to increase the capability and capacity of the Traditional Custodian groups. This is guided by Woodside's Indigenous Affairs Strategy 2019 ("Strategy"), which is designed to enable the building and maintaining of relationships with Traditional Custodians to leave a lasting legacy, including strengthening of Traditional Custodians' capacity to care for and manage Country, including Sea Country. The Strategy was developed with inputs from Traditional Custodians and contains four pillars that direct Woodside's social investment, policies relating to economic development, procurement and employment, and Woodside's agreement making and implementation of agreements. The pillars are:

1. Culture and Heritage Management: support social outcomes through protection, recognition and respect for culture and heritage;
2. Economic Participation: provide training, jobs, and business opportunities;

3. Capability and capacity: ensure strong corporate governance, leadership development and education initiatives to support self-determination; and
4. Safer and Healthier Communities: partner with Aboriginal people and service providers to maximise safer and healthier community outcomes.

Woodside is committed to an ongoing relationship between Woodside and the Traditional Custodian groups. Through consultation with Traditional Custodians Woodside will continue to:

- establish support for Indigenous ranger programs via social investment;
- establish support for Indigenous oil spill response capability via investigating training models;
- establish support for identification and recording of cultural values and the management of that information by Traditional Custodians;
- establish support for programs identified by the Traditional Custodians as important to them and as agreed by Woodside.

#### **4. Support for capacity and capability in relation to governance**

Pillar 3 of the Indigenous Affairs Strategy 2019 focuses on ensuring strong corporate governance, leadership development and education initiatives to support self-determination. To enable this, Woodside will support measures to increase the capability and capacity of the Traditional Custodian groups, including in relation to governance and management systems.

The nature of this support will be informed by the individual needs of Traditional Custodian groups, but may include:

- funding or other support for community meetings, particularly where consultation with representative bodies lies outside of that body's core business and cultural authority or mandate needs to be secured,
- resourcing internal expertise so that information is managed consistently and internally, including ensuring appropriate record keeping of consultation to provide stakeholders with a lasting record of discussions, and
- development or upgrade of IT systems to manage information.

#### **5. Program Reporting and Review of Effectiveness**

Woodside will undertake an annual review of the Program to assess its effectiveness and adapt the Program accordingly. The annual review will also include an assessment of appropriateness of the methods used to undertake ongoing consultation with Traditional Custodians.

Progress of the Program will be reported annually in line with annual sustainability reporting via the Woodside website.

## 6. Current Status

Following distribution of this proposed Program, Woodside is now participating in a number of specific ongoing consultation activities with Traditional Custodian Relevant Persons. Specific ongoing activities are tabulated below:

| Traditional Custodian Relevant Person                    | Ongoing Consultation Description   | Forward Plan  | Estimated Timeframes  |
|--|--|---|---|
| Buurabalayji Thalanyji Aboriginal Corporation (BTAC)     | BTAC proposed a Collaboration Agreement in May 2023, Woodside agreed in principle, and exchanged correspondence to understand details of the proposal. The Collaboration Agreement would enable support for BTAC to undertake an ethnographic assessment to articulate values, and ensure appropriate cost recovery.   | Woodside and BTAC have executed a Costs Acceptance Letter. Woodside has developed a Collaboration Agreement which is currently under internal Woodside review. Once settled internally it will be put to BTAC for their consideration.  | The draft Collaboration Agreement will be provided to BTAC for consideration in November 2023. Woodside will follow up on a monthly basis for at least six months with BTAC once they are in receipt of the draft proposed Collaboration Agreement from Woodside, or until the Agreement is in place. |
| Yamatji Marlpa Aboriginal Corporation (YMAC)             | In June 2023, YMAC provided Woodside a proposed draft Framework Agreement, and a proposal to fund in-house expertise to support consultation and implement the Collaboration Framework.<br>In July 2023, Woodside agreed in principle to the proposed Collaboration Framework and the funding proposal and requested a meeting to work together on details. Woodside provided the Proposed Program of Ongoing Consultation to complement the proposed Collaboration Framework. | Woodside will continue to communicate with YMAC, seeking to collaborate and reach agreement on the proposed Collaboration Framework and funding agreement. At the point of EP submission, Woodside is seeking a meeting with YMAC at YMAC's earliest convenience.   | Woodside will follow up with YMAC on a monthly basis for at least six months, seeking to progress the Collaboration Framework and funding agreement.  |
| Wirrawandi Aboriginal Corporation (WAC)                  | In August 2023, WAC proposed a Framework Agreement with Woodside to provide a streamlined, formalised approach to consultation between WAC and Woodside. Woodside has confirmed receipt of the proposed framework from WAC.  | Woodside is in contact with the WAC CEO and is currently developing a response to the proposed Framework Agreement put forward by WAC. WAC do not object to Woodside progressing environmental plans on the proviso that both parties enter into an Agreement suitable to each party. WAC have suggested a timeframe to settle the Agreement over the next 2-3 months. Woodside will be aiming to reach agreement within a shorter timeframe. | Ongoing Framework Agreement settled in 2023.  |
| Ngarluma Aboriginal Corporation (NAC)                    | In September 2023, NAC proposed a Joint Working Group to practically manage consultation processes. It was proposed that the group would meet monthly for 2023 and quarterly thereafter, meetings would include NAC CEO and NAC Directors and potentially independent SME/s, the proposal was that Woodside draft a Framework Agreement, and included a request for funding for this approach. Woodside provided in-principle support for the proposal.                        | Woodside has provided in-principle support for NAC's proposal and is currently developing a draft Framework Agreement which once settled internally will be sent to NAC for their response.   | In accordance with NAC's proposed timeframe, Woodside aims to prepare a draft Framework Agreement, settle internally and then meet to discuss in 2023.  |
| Nganhurra Thanardi Garrbu Aboriginal Corporation (NTGAC) | In a meeting during August 2023, NTGAC proposed a Framework Agreement. This included terms for ongoing   | Woodside and NTGAC/YMAC have agreed in writing to develop a Framework Agreement. Woodside have been responding to queries from NTGAC who have passed  | Woodside will follow up with NTGAC on a monthly basis for at least six months, seeking to   |

|  |   |  |  |
|--|---|--|--|
|  | <p>engagement such as frequency of consultation, participation, and content. NTGAC has also requested Woodside provide funding for an in-house environmental scientist to review material. Woodside agreed in principle to this approach, and has requested a first draft of the Framework Agreement for consideration. Woodside have agreed to pay for YMAC's in-house scientist to attend NTGAC meetings to advise NTGAC.</p> | <p>information provided by Woodside onto their Environmental Scientist. Woodside are awaiting a proposed draft of a Framework Agreement and general report. YMAC's preference is to prepare the drafts, Woodside have offered to assist with drafting and remain ready to respond on receipt of documents.</p>   | <p>progress the Framework Agreement and General report.</p>  |
| Yinggarda Aboriginal Corporation (YAC)           | <p>In August 2023, YAC requested Woodside provide a draft Framework Agreement for their consideration. Woodside has provided a draft Framework Agreement to YAC for review.</p>   | <p>Woodside's Proposal suggests meeting with YAC every 3 months to progress matters. The Proposal suggests committing to work continuing between meetings with each party nominating focal points. A Scope of Work and schedule of rates is included to re-imburse the cost of ongoing consultation. Woodside's Proposal includes timeframes for anticipated milestones and has suggested the Proposal be in place for an initial 2-year period. Woodside has provided the draft Framework Agreement to YAC; they have advised that they will seek direction from the YAC Board on the proposal.</p> | <p>Woodside will continue following up with YAC on a monthly basis for at least six months, seeking to progress the Framework Agreement.</p> |
| Robe River Kuruma Aboriginal Corporation (RRKAC) | <p>RRKAC have noted that they are insufficiently resourced to engage further and respond to Woodside regarding EPs. Woodside assesses that a Framework Agreement could address this.</p>  | <p>Woodside has on several occasions written to RRKAC offering to fund consultation meetings. Woodside will offer RRKAC a Framework Agreement which will propose funding, scope of work and timeframes to assist with consultation and ongoing consultation. If RRKAC are open to the proposal, it is intended to put forward a draft Framework Agreement to RRKAC within the next 2 months.</p>   | <p>Woodside will follow up with RRKAC monthly for at least six months, seeking to progress a Framework Agreement.</p>                        |
| Ngarluma Yindjibarndi Foundation Limited (NYFL)  | <p>NYFL and Woodside have an existing Agreement in place which enables quarterly communication about Woodside activities. NYFL has said they are working with other First Nations organisation and representative Bodies developing a Framework Agreement.</p>  | <p>Woodside has not yet seen a draft of the Framework Agreement. Woodside's expectation is that it will outline principles of engagement, details of resourcing, timeframes to meet agreed outcomes etc. Woodside look forward to receiving a draft Agreement and will engage with NYFL to settle on the details of any proposal.</p>  | <p>Woodside will continue to follow up monthly with NYFL for at least six months, seeking to progress a Framework Agreement.</p>             |
| Kariyarra Aboriginal Corporation (KAC)           | <p>In September 2023 KAC proposed an agreement which would include meeting arrangements, ongoing consultations, specialist advice and contact protocols.</p>  | <p>Woodside support funding request that are reasonable and will seek to reach agreement on a funding proposal put forward by KAC. Woodside agrees that a Framework Agreement is a sound tool to set out ongoing consultation with KAC, funding arrangements and social investment opportunities that KAC would want explored. Woodside will propose a first draft of an agreement and put to KAC in the first instance. Woodside will prepare a draft agreement within the next two months to for KAC's consideration.</p>  | <p>Woodside will continue to follow up monthly with KAC for at least six months, seeking to progress a Framework Agreement.</p>              |