



Scarborough Trunkline Installation (State waters) Environment Plan Summary

February 2023

Revision 3

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1. INTRODUCTION

1.1 Overview

Woodside Energy Ltd, on behalf of the Scarborough Joint Venture (JV), is nominated operator under the Petroleum (Submerged Lands) (Environment) Regulations 2012 (referred to as the Environment Regulations), for the construction and installation of the Scarborough Trunkline TPL/26 (trunkline) from the Mean Low Water Mark (MLWM) at KP 0.04 to the Coastal Waters boundary (3NM; ~ KP 32.04). The scope of this Environment Plan (EP) is limited to the following activities:

- Seabed intervention activities associated with installation of the trunkline including, temporary groyne construction, dredging of a trench, disposal at existing spoil grounds and pre-lay span rectification works.
- Pipelay activities including shore pull and pre-commissioning testing.
- Backfilling of the trench with sand, placement of rock to protect and stabilise the trunkline and post-lay span rectification works.
- Survey activities to support seabed intervention activities and trunkline installation.
- Shore crossing site reinstatement.

These activities will hereafter be referred to as the Petroleum Activities Program and form the scope of the Environment Plan (EP). A summary of the activities is provided in **Section 2**. Where required, the upstream (> KP 32.04) / downstream (MLWM; < KP 0.04) scopes are described for context and to enable adequate review of impacts and risks, however these are outside the scope of this EP.

1.2 Contact details

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2. DESCRIPTION OF THE ACTIVITY

2.1 Location and Operational Area

The Petroleum Activities Program includes installation of the 36 inch Scarborough trunkline in State waters in Western Australia. The full trunkline will be approximately 435 km in length and will transport dry gas from a floating production unit, located in Commonwealth waters close to the Scarborough Field, to the onshore Pluto LNG Facility on the Burrup Peninsula, Western Australia. A Cathodic protection system is installed as part of the trunkline, with anodes directly bonded to the pipe. The Operational Area for the EP is restricted to the State waters component of the Scarborough trunkline which will extend from the Mean Low Water Mark (MLWM) at KP 0.04 to the Coastal Waters boundary (3NM; ~ KP 32.04). It also includes the Spoil Ground Project Areas. The spatial boundaries of the individual Project Areas that make up the Operational Area are detailed in **Table 2-1**, with the Operational Area illustrated in Figure 2-1.

Table 2-1: Operational Area

Project Area	Description
Trunkline Project Area	<ul style="list-style-type: none"> Full pipeline length from shore crossing (MLWM at ~KP0.04) to the Coastal Waters boundary (approximately Kilometre Point (KP) 32 along the pipeline route). An area of 1500 m either side of the trunkline centreline, including the defined development envelope (750 m either side) under Ministerial Statement No. 1172, to allow for vessel manoeuvring.
Spoil Ground Project Area	<ul style="list-style-type: none"> Existing Spoil Ground A/B (restricted to backhoe dredge works) Existing Spoil Ground 2B.

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

Construction and operation of the trunkline from the MLWM to the pig receiver at the Pluto LNG Facility are outside the scope of this EP. In addition, activities that extend beyond the Coastal Waters boundary, into Commonwealth Waters will be executed under a different Environment Plan, to be accepted by National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA). Commissioning and operation of the Scarborough trunkline is also outside the scope of the EP and will be the subject of a separate EP.

2.2 Timing

The proposed Petroleum Activities Program is planned to commence Q1 2023 and continue intermittently for approximately 24 months, executed over several different campaigns. For the purposes of the risk assessment in this EP it has been assumed that trunkline installation activities could occur at any time throughout the year (all seasons) to provide operational flexibility for schedule changes, as well as vessel availability.

Approximate timing and scheduling of activities are summarised in **Table 2-2** and are largely sequential in nature, temporary and intermittent. They will occur 24 hours/day, seven days a week.

Table 2-2: Timing and Scheduling of the Petroleum Activities Program

Activity	Earliest start of activity	Estimated duration
Pre, during and post lay surveys	Q1 2023	Intermittent as required, over 24 months
Shore crossing activities (pre and post)	Q2 2023	Nine months (intermittent)
Pre-lay trenching and spoil disposal	Q2 2023	Three months
Trunkline installation, including shore pull	Q3 2023	Three months
Post-lay backfill	Q3 2023	Three months
Rock placement	Q3 2023	Four months
Pre-commissioning	Q2 2024	Three months*

Note: Durations are indicative and subject to operational conditions and delays.

* Timing of the pre-commissioning scope is dependent on which option is executed (dry base case vs. full Flood, Clean, Gauge and Test (FCGT))

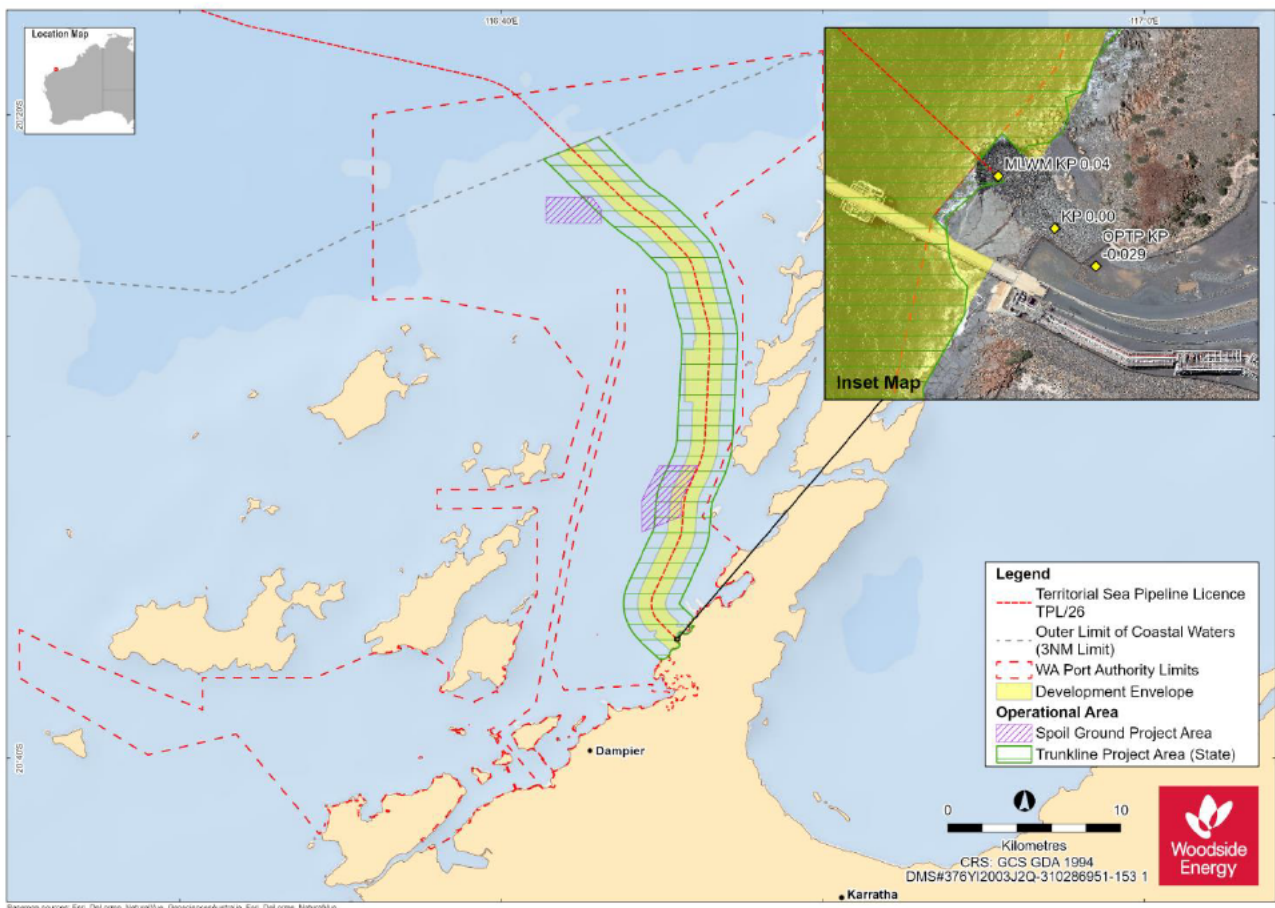


Figure 2-1: Location of the Petroleum Activities Program

2.3 Key activities

An overview of the Petroleum Activities Program is provided in **Table 2-3**. A summary of key vessels and equipment that will be required to support the installation of the trunkline is also included.

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In the EP Summary the term Primary Installation Vessel (PIV) is used to collectively refer to TSHD, BHD, RIV, PV and SWLB.

Table 2-3: Petroleum Activities Program overview

Shore Crossing (up to Mean Low Water Mark)	
Key Equipment	<ul style="list-style-type: none"> • Long Reach Excavator
Key Activities	<ul style="list-style-type: none"> • Construction of a temporary rock platform / groyne on the shoreline between the pre-excavated trench and the Pluto LNG Jetty • Pre-lay excavation activities including trenching comprising rock removal to create trench, transportation of materials and installation of a bedding layer in the trench. • Pull of pipeline from Shallow Water Lay Barge (SWLB), located about 800 m from the shore. • Post-lay rock installation & re-instatement
Seabed Intervention	
Key Vessels	<ul style="list-style-type: none"> • Trailing suction hopper dredge (TSHD) • Backhoe dredge (BHD) • Split hopper barge (SHB) and support tugs • Rock installation vessel (RIV) • Construction support vessel • Survey vessels • Support vessels (including Flat top barge (FTB))
Key activities	<ul style="list-style-type: none"> • Geophysical (including hydrographic surveys) and geotechnical investigation • Pre-, progress and post construction survey (visual and multibeam echo sounder) • TSHD trenching along the trunkline route with material disposal at existing Spoil Ground 2B • BHD trenching along the trunkline route with sediment placed in support SHB for disposal in Spoil Ground A/B (restricted to BHD activities) and Spoil Ground 2B • Sand backfill along the trunkline by TSHD • Rock placement along the trunkline for pipeline protection/stabilisation • Trunkline pre- and post-lay span rectification, including installation of concrete mattresses, grout bags or rock berms. • Contingent seabed intervention activities including maintenance dredging/excavation of resettled material in the trench prior to pipelay, post lay dredging, grout bags and rock placement
Trunkline Installation	
Key Vessels	<ul style="list-style-type: none"> • Shallow Water Lay Barge (SWLB) • Anchor handling vessels/tugs • Pipelay Vessel (PV) • Pipe supply vessels • Construction support vessel • Survey vessels • Fuel bunkering vessels
Key activities	<ul style="list-style-type: none"> • Surveys: <ul style="list-style-type: none"> – Pre-lay survey of the trunkline route prior to commencement of pipelay (visual & multibeam echo sounder) – Post-lay as-built survey of the completed trunkline (visual and multibeam echo sounder) • Installation of the trunkline by a SWLB in the shallow water section of the route where the DP PV is not able to access due to water depth restrictions. • Installation of the trunkline by a PV near the Coastal Waters boundary

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	<ul style="list-style-type: none"> • Setting of SWLB anchors with anchor handling vessels/tugs. • Continuous delivery of pipe to the SWLB and PV by pipe supply vessels. • Dry pre-commissioning of the trunkline by a construction vessel. • Contingent activities including wet buckle recovery and Flood, Clean, Gauge and Test (FCGT).
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2.4 Support Operations

Table 2-4 provides a summary of support operations required by seabed intervention and trunkline installation activities.

Table 2-4: Support operations

Item	Description
Vessel Refuelling	<ul style="list-style-type: none"> • Via support vessels or with a dedicated bunker vessel for PV • May occur within the Operational Area • Other fuel transfers may include refuelling of cranes or other equipment
Helicopter operations	<ul style="list-style-type: none"> • Seabed intervention activity: Potential for crew changes for vessels with helideck. • Trunkline installation: Crew transfers to and from SWLB and PV up to six days per week.
ROV operations	<ul style="list-style-type: none"> • Visual observations of seabed during activities • Monitoring of trunkline touchdown point • Pre and post lay surveys as required
Air diving	<ul style="list-style-type: none"> • May occur from SWLB or standalone vessel • May be used for: <ul style="list-style-type: none"> – Abandonment and recovery wire disconnection from trunkline during lay-down operations – Trunkline lift clamp installation and connection/disconnection of davit wires – Trunkline buoyance installation and removal – Close inspection and obstacle removal from the pipeline trench.
Underwater acoustic positioning	<ul style="list-style-type: none"> • Used for accurate positioning of mattresses, rock berms, the trunkline and other structures on the seabed. • Ultra-Short Baseline (USBL) mounted on ROV or other structure • Long Baseline (LBL) array of three or more transponders deployed at known locations and removed at end of petroleum activities. • Transmission consists of short 'chirps'. For general positioning, one chirp every 5 seconds for up to 4 hours. For precise positioning, one chirp every second for up to 2 hours.

3. DESCRIPTION OF THE EXISTING ENVIRONMENT

3.1 Overview

The key existing environment characteristics of the activity are described in terms of the Operational Area, and the environment that may be affected (EMBA). The Operational Area encompasses the key existing environment characteristics and receptors that may be affected by planned aspects of the Petroleum Activities Program. The EMBA encompasses all environmental characteristics and receptors with the potential to be impacted by unplanned activities. The EP also refers to a Zone of Influence (Zoi) associated with seabed disturbance from seabed intervention activities and is located within the EMBA.

Woodside recognises that surface hydrocarbons may be present at low concentrations that may be visible but are not expected to cause ecological impacts. An additional socio-cultural EMBA has therefore been defined for surface hydrocarbons, which encompasses the spatial extent within which social-cultural impacts may potentially 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.

For the EP, the socio-cultural EMBA for surface hydrocarbons encompasses an area fully within the boundaries of the EMBA for ecological impacts (which includes the spatial extent of entrained and dissolved hydrocarbons in addition to the surface slick). The EMBA is shown in **Figure 3-1**.

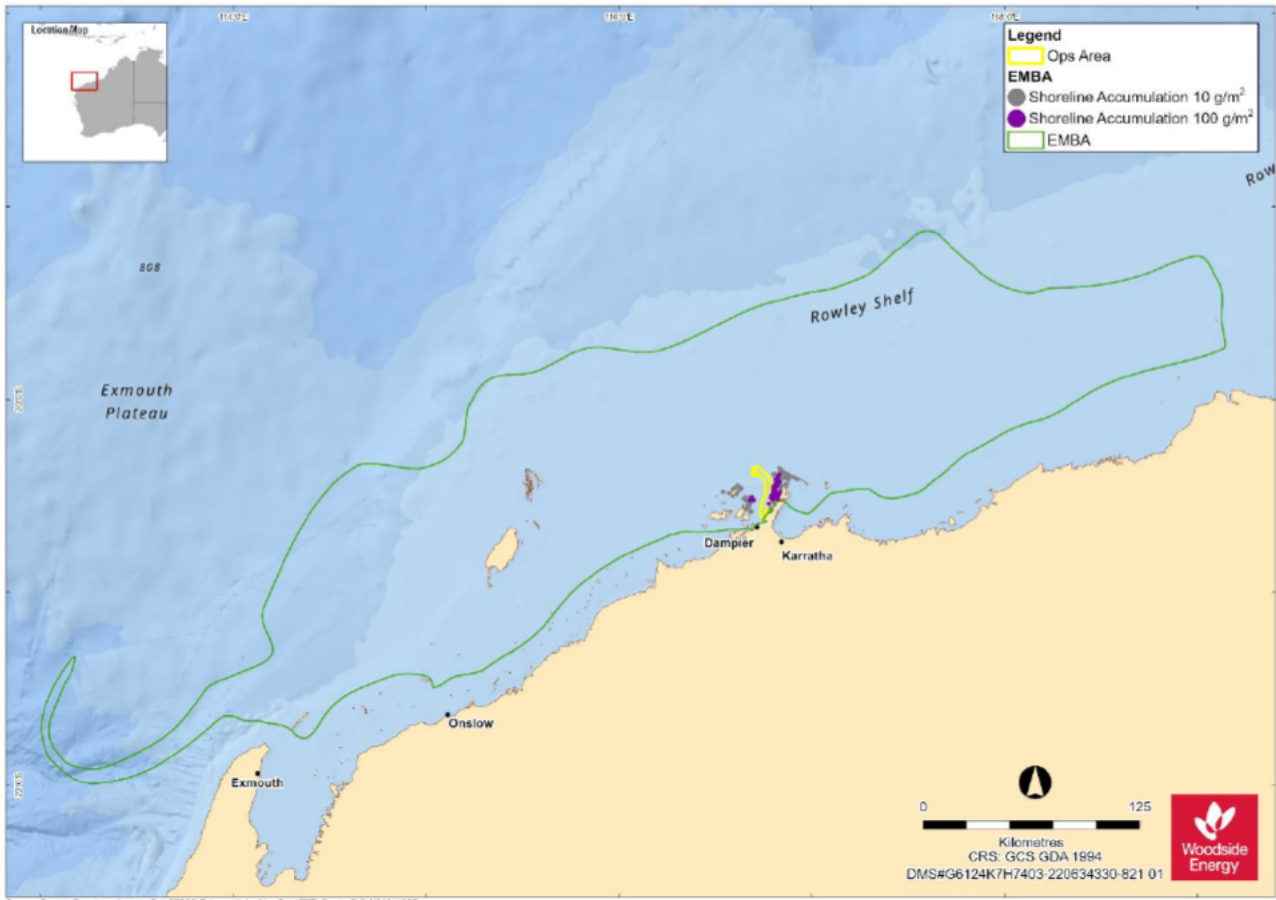


Figure 3-1: Environment that may be affected by the Petroleum Activities Program

3.2 Physical Environment

Table 3-1 provides a summary of the physical environment of the Operational Area and EMBA in the context of the wider NWMR.

Table 3-1: Physical environment receptors and characteristics

Receptor	Description
Climate and meteorology	
Seasonal patterns	The climate within the region is dry tropical, exhibiting a hot summer season from October to April and a milder winter season between May and September (Bureau of Meteorology (BoM), 2019).
Temperature and rainfall	At Karratha aerodrome, maximum temperatures during summer reach an average of 36.2 °C in March, falling to an average maximum of 26.3 °C in July (BoM, 2019). Rainfall in the region is typically at its highest during late summer (BoM, 2019). This is often associated with passing tropical low-pressure systems and cyclones (Pearce et al., 2003). Rainfall outside this period is typically low.
Wind	Winds vary seasonally, with a tendency for winds from the south-west quadrant during summer and the south-east quadrant in winter (Pearce et al., 2003).
Tropical cyclones	Tropical cyclone activity can occur between November and April and is most frequent in the area during January to March, with an annual average of about one storm per month. Cyclones are less frequent in the area in the months of November, December and April.

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Receptor	Description
Oceanography	
Currents and tides	<p>The large-scale ocean circulation is primarily influenced by the Indonesian Through Flow (ITF) and the Leeuwin Current. Both currents are significant drivers of the region's ecosystems.</p> <p>Currents in the Dampier Archipelago are driven by tides, local winds, large scale ocean circulation, and strongly influenced by the local topography. Flow is complex around the islands. Currents are generally weak in Mermaid Sound and stronger in seaward entrances to the Archipelago and interisland water passages (Pearce et al., 2003).</p>
Waves	<p>Waves are predominantly from a south-west direction, with swell height averaging 1 to 2 m and rising to 3 m during June to August. Waves in the Dampier Archipelago are driven by westerly winds in summer, while the western shores of the Burrup Peninsula and the islands to its north are protected from the persistent winter easterlies (Woodside, 1998). During cyclone season, intense low-pressure systems and extreme winds can generate swells higher than 8 m.</p>
Bathymetry	
Bathymetry	<p>Gently sloping seabed where the 10 m bathymetric contour is generally between 1 and 2 NM offshore. The Operational Area is located on the continental shelf, in depths of 0 m to 40 m at the intersection of the state and Commonwealth waters boundary. The portion of the Operational Area within the Dampier Archipelago has a relatively consistent gradient, with depths less than 15 m. The gradient increases towards the northern end of the Operational Area, sloping north-west to depths of about 40 m.</p>
Other physical attributes	
Air quality	<p>Air quality in nearshore and offshore waters of the Pilbara area is considered high given remote setting. Previous monitoring (e.g., DEP, 2002; CSIRO, 2008) around the Burrup Peninsula suggest that concentrations of measured air quality parameters remain low (ERM, 2012). Air quality on the Burrup Peninsula has been monitored by Woodside from 2008 to 2015 and results concluded that both NO_x and O₃ were below the relevant National Environment Protection Ambient Air Quality standard (Woodside, 2019; NEPC, 2016).</p>
Ambient light	<p>Light in the waters of the Operational Area is expected to be limited to vessels traversing through the area. At the southern end of the Operational Area, anthropogenic light will be increased due to the proximity to industrial activity. Heavy vessel traffic exists within the Port of Dampier area.</p>
Ambient marine noise	<p>Physical (wind and waves), biological (vocalisations of marine species) and anthropogenic (vessels and other industrial activity) processes contribute to ambient marine noise. The Operational Area overlaps with the Port of Dampier and heavy vessel traffic exists within the defined shipping fairways which will contribute to background noise levels.</p>
Marine water quality and characteristics	
Water temperature and salinity	<p>These nearshore waters are semi-enclosed from the offshore waters by the islands of the Archipelago, resulting in warmer temperatures in summer and cooler temperatures in winter. Mean temperature of the nearshore waters of the Dampier Archipelago ranges from 22.5 °C in July/August to 30.4 °C in February (Pearce et al., 2003).</p> <p>Within the Dampier Archipelago salinity is generally vertically stratified, wedging seaward beneath the open waters of the continental shelf. Though typically the nearshore waters are more saline, surface water salinity is diluted during periods of cyclonic activity and heavy rainfall within the Archipelago. Salinity in offshore waters typically remains uniform.</p>
Turbidity and suspended solids	<p>The waters in the inner Archipelago are characterised as having naturally higher levels of turbidity than the clearer offshore environment, related to the continual resuspension of fine sediment material through natural inputs such as winds, tidal currents and wave energy, which is exacerbated in shallow areas where strong tidal flows exist (such as through Flying Foam Passage) or where a high volume of vessel movements occur (such as shipping channel and berthage areas). Periodic events, such as major sediment transport associated with tropical cyclones, may influence turbidity on a regional scale (CSIRO, 2007).</p>
Trace metals and organics	<p>A study measuring trace metals and organics, found water quality in the Dampier Archipelago met the guidelines for a 'very high' level of ecological protection (99% species protection) based on the recommended guidelines and approaches in ANZECC/ARMCANZ</p>

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Receptor	Description
	(2000) (Wenziker et al., 2006). The study (Wenziker et al., 2006) found no detectable levels of organics in the waters of the Dampier Archipelago.
Nutrients	In the Dampier region, intertidal blue-green algal mats have been observed that have the potential to increase nutrient levels in the sediments (Wells and Walker, 2003). The distribution of algal mats is controlled by tidal height, tidal current, sediment influx and sediment drainage (Wells and Walker, 2003). The nutrients from the algal mats provide a significant source of nutrient input to mangrove communities in the region (Paling and McComb, 1994). These mats are present in intertidal and mangrove community areas which will not be disturbed as part of the dredging for this proposal.
Marine sediment quality and characteristics	
Contaminants	<p>Information about sediment quality directly related to the trenching footprint has been assessed as part of a detailed Sampling and Analysis Plan (SAP) for the Project. Samples were collected from 36 locations along the proposed trunkline route. Total metal concentrations were very low and below the limits of reporting (LOR) for many analytes. Concentrations of organotin compounds were also very low and below the LOR for all locations tested. All results from the Scarborough Project SAP implementation were below the National Assessment Guideline for Dredging (NAGD) screening levels and found the sediments are free from any form of anthropogenic contamination.</p> <p>Regionally, past studies have rarely found contaminants in sediments of the Dampier Archipelago. This is considered attributable to the lack of riverine inputs and controls on discharges associated with low levels of industrial development (MScience, 2004). Historically, sediments in Mermaid Sound have been generally clean (in that they were below screening levels of National Ocean Disposal Guidelines for Dredged Material) with tributyltin, which has been used as an anti-foulant on ships, the only contaminant of concern (Woodside, 2006; DEC, 2006) and only found in the upper sediment layer, in areas used by the shipping industry (IRCE, 2003a; 2003b).</p> <p>More recent studies performed throughout the Archipelago, within Port limits, have indicated surficial sediments (upper 1 m of sediment) were still considered generally clean. From recent sampling (Advisian 2019; O2 Marine 2021), no hydrocarbons were detected above the respective screening level (ANZG 2018: total TPH 280 mg/kgb, NAGD 2009: total PAH 10,000 mg/kg). Recent studies (Advisian 2019; Advisian, 2017; Jacobs, 2015; GHD, 2016) found that the only analytes to exceed NAGD screening levels were nickel and arsenic (only in a subset of studies), and only at a small subset of sampling locations. These elevated levels were considered attributable to the natural geology of the region, which accords with the findings of previous studies (DEC, 2006; Woodside, 2006). Stoddart et al. (2019), found that natural concentrations of nickel routinely occur in sediments off the Pilbara coast at levels above the NAGD (low) screening levels. The GHD study also determined locations with the smallest particle grain size had higher adsorption potential and generally had higher concentrations of metals, metalloids and total organic carbon (GHD, 2016). The good spatial coverage and sampling of recently deposited fine sediments suggests that sediments within the port continue to exhibit low levels of contamination.</p>
Grain size	<p>Seabed sediment grain size in the Dampier Archipelago region is highly variable, due to the presence of strong tidal currents, periodic cyclones, protected embayments and sediment producing organisms such as coral reefs (Talbot et al., 1985). Analysis of particle size distribution sediment survey for the Pluto LNG Foundation project dredging footprint in January 2006, found sediments adjacent to Holden Point to be predominantly sand (particle size of 0.06 to 2.0 mm). Further offshore, within the navigation channel, the sediments were comprised of sand (particle size of 0.06 to 2.0 mm); silt (0.002 to 0.06 mm) and clay (\leq 0.002 mm) (Woodside, 2006). Similarly, most sites sampled by Jacobs (2015) within Mermaid Sound were dominated by silt and clay.</p> <p>Particle size diameter (PSD) data within the proposed dredge footprint was collected as part of the Scarborough Project SAP Implementation Study (Appendix G). Sand was the dominant fraction of sediments at all sites within the nearshore zone KP0 to KP3.6. Levels of silt varied a little across sites, though generally comprised <30% of sediments and small fractions of clay were at nine of the 19 sites. Very small amounts of gravel were present at most sites. Between KP3.6 and KP4.6 sediments were much coarser, with higher percentages of gravel and sand and less than 21% silt. Between KP11 and KP15, particle sizes were similar to those observed between KP0 to KP3.6, but with a slightly lower proportion of silt (<25%).</p>

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Receptor	Description
	<p>PSD data was also collected from a geotechnical survey of the trunkline route (Fugro, 2019). Between KP15 and KP21.3, increasing proportions of clay and coarse sand were observed (on average around 7% clay, 23% silts, 70% sand), trending towards higher proportions of larger particle sizes between KP23 and KP38 (on average around 9% clay, 16% silts, 75% sand), and KP38 and KP50 (on average around 3% clay, 10% silts, 87% sand) (Fugro, 2019).</p> <p>Data was also collected at the proposed offshore borrow ground, which consists of sand with minimal fines (Fugro, 2019). On average, the material consists of 94% coarse sand and <4% clay and silt.</p>

3.3 Biological Environment

Table 3-2 provides a summary of the biological environment of the Operational Area and EMBA.

Table 3-2: Biological environment receptors and characteristics

Receptor	Description
Marine Habitats and Communities	
Critical Habitats or Threatened Ecological Communities	<p>No marine Critical Habitats or TECs as listed under the EPBC Act or Biodiversity Conservation Act are known to occur within the Operational Area or EMBA.</p> <p>The Burrup Peninsula rock pool communities have been identified as a Priority 1 priority PEC for containing calcareous tufa deposits and interesting aquatic snails (DBCA, 2020).</p>
Soft sediments and sandy beaches	<p>Dominant subtidal habitat in Mermaid Sound consists of soft sediment composed of sand and silt. Likely broad areas of low or no benthic communities and habitats. Sedimentary infauna associated with unconsolidated soft sediments likely to be widespread and well represented.</p> <p>Sandy habitat may overlay reef platforms and interspersed with seasonal or permanent areas of seagrass, macroalgae or other invertebrate fauna.</p> <p>Silty subtidal habitats in sheltered areas typically support a rich variety of infauna (e.g., polychaete worms, crustaceans and molluscs).</p> <p>Intertidal mudflats in the EMBA support significant arid-zone mangrove communities and associated avifauna.</p> <p>Subtidal soft-bottom communities are recognised as important to traditional custodians for their support of invertebrate diversity (MAC, 2021).</p>
Rocky shores	<p>Dominant shoreline habitat in the Dampier Archipelago. Intertidal fauna consists of sponges, molluscs, crustaceans etc., becoming increasingly diverse in the lower intertidal and featuring benthic algae and a range of sessile and motile invertebrates.</p> <p>Rocky shores are recognised as important to Traditional Custodians as habitats for intertidal organisms and feeding sites for shorebirds (MAC, 2021).</p>
Reef habitat	<p>Hard bottom subtidal environment, supporting a range of coral, macroalgae and mixed biota communities. Some areas, such as Madeleine Shoals, feature soft corals and gorgonians in shallow areas as well as siltier sediments and sea whips in deeper water depths.</p>
Mixed communities	<p>Soft corals and sponges are assigned to the mixed community classification. The Pilbara region has a very high diversity of marine sponges (Fromont et al., 2016); 275 sponge species have been recorded within the Dampier Archipelago. About 20% of these species are presently known to be limited to WA and are likely to be endemic (Fromont, 2003).</p> <p>Surveys conducted by Fromont (2004) found the highest diversity of sponges in the Dampier Archipelago occurred in sponge communities that were either low relief or pavement habitats, often with a sediment layer with strong tidal currents.</p>
Coral	<p>Coral communities occur in narrow linear features, fringing the shorelines of islands and Burrup Peninsula between 2m – 10 m. Coverage ranges from 5.7% to 56.7% throughout Mermaid Sound. Mass coral spawning generally occurs between February to April.</p> <p>Corals are recognised as important to Traditional Custodians for attracting fish and other marine organisms, the potential for symbiotic relationships between fish and corals, and for their aesthetic values (MAC, 2021).</p>

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Receptor	Description
Seagrass	<p>Seagrasses in the Dampier Archipelago, occur in low abundance on shallow sandy sediments in sheltered areas and interspersed with other benthic communities and habitats (BCH) (Department of Conservation and Land Management (CALM), 2005; Jones, 2004; MScience, 2014). The species composition and temporal patterns of abundance and distribution of seagrasses in northwest Australia are highly dynamic and highly variable, often seasonal, dying off over certain periods of the year and subsequently re-establishing (Vanderkliff et al. 2017).</p> <p>Seagrasses are recognised as important to Traditional Custodians as refuges for small marine fauna and foraging habitat for dugongs (MAC, 2021).</p>
Macroalgae and microphytobenthos	<p>Macroalgal assemblages in the Pilbara region display an ephemeral growth pattern and may not be present year-round, despite the presence of hard substrate, sufficient light and water clarity. The most abundant group of algae in the region is brown algae.</p> <p>In the Dampier region, many areas of the otherwise bare substrate contain intertidal blue-green algal mats (Wells and Walker, 2003).</p> <p>Macroalgal communities are recognised as important to traditional custodians as primary production sites, habitats and food sources (MAC, 2021).</p>
Mangroves	<p>Six species of mangrove occur in the Dampier region, and most communities contain many species, and a variety of structures of zonation persist, dependent on the underlying sediment type, tidal height and wave and current action (Semenuk & Wurm, 1987). Regionally significant areas of mangroves that occur in the Dampier Archipelago include communities at West Intercourse Island, Enderby Island Complex and Searipple Passage/Conzinc Bay (EPA, 2001). The nearest mangrove community to the Operational Area occurs in No Name Bay and has been studied as part of the long-term Chemical and Ecological Monitoring Program of Mermaid Sounds.</p> <p>Traditional custodians also report mangrove populations in Flying Foam Passage and the north-east bay of West Lewis Island, which are important for shelter, crab and shellfish resources and possible turtle nurseries (MAC, 2021).</p>
Pelagic and demersal fish communities	<p>Fish fauna in the Pilbara region is considered diverse (Sainsbury et al., 1985) and shows a trend of decreasing species richness as depth increases (Last et al., 2005). Fish species richness has been shown to correlate with habitat complexity, with more complex habitat supporting greater species richness and abundance than bare areas (Gratwicke and Speight, 2005).</p> <p>Species found within the Dampier Archipelago include coral reef fishes and mangrove and silty bottom dwellers. Coastal waters support schools of baitfish, and offshore, pelagic species include marlin, sailfish, sharks and trevally.</p> <p>Fish are reported by traditional custodians as culturally important species in Mermaid Sound and surrounds, with Thalu ceremonies associated with increasing fish stocks. Further fish traps in Conzinc Bay, and others would have/do exist in coastal areas of islands (e.g., Angel and Gidley Islands), as well as harvesting of squid from the ocean around Conzinc Island are also important aspects of the marine environment to traditional custodians (MAC, 2021).</p>
Planktonic communities	<p>In the NWMR, productivity is typically greater during the wet season when the weakening of surface currents allows for increased upwelling (DEWHA, 2008a; Brewer et al., 2007). Productivity is greater in shallow nearshore environments within State waters than in the offshore waters. During the warmer months, algal blooms occur on a regional scale, including within the Dampier Archipelago however its role in the trophic system and the nutrient cycle is not well understood.</p>

3.3.1 Species

A total of 91 *EPBC Act* and *BC Act* listed species considered to be MNES were identified in the PMST and NatureMap searches as potentially occurring within the EMBA, of which a subset of 62 species were identified as potentially occurring within the Operational Area (**Figure 3-2**). The full list of species identified from the PMST and NatureMap report is provided in **Appendix A**, including several MNES that are not considered to be credibly impacted by the Petroleum Activity Program. Two conservation dependent marine species have also been identified with a potential to occur

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within the Operational Area and EMBA. Species identified as potentially occurring within the Operational Area are summarised in **Table 3-3**.

Table 3-3: Threatened and migratory marine and terrestrial species under the EPBC Act potentially occurring within both the Operational Area and EMBA.

Receptor	Description
<p>Cetaceans and dugongs</p>	<ul style="list-style-type: none"> Seven cetacean species were identified that may occur including the Blue whale, Humpback whale, Bryde's whale, Killer whale, the Spotted bottlenose dolphin, the Australian humpback dolphin, and the Dugong. These species may transverse the Operational Area at certain times of the year, but the likelihood of their occurrence is low. Other cetacean species are likely to occur at low densities and may traverse through the Operational Area infrequently through the year. Dugongs may transit within the Operational Area. Biologically Important Areas (BIAs) overlap the EMBA, for breeding, calving and foraging in the Exmouth Gulf to the south-west. A humpback whale migration corridor (north and south) BIA overlaps the Operational Area and the majority of the EMBA; occurrence is expected between May and November. A pygmy blue whale general distribution BIA overlaps the EMBA; may occur from April to November. Whales and dolphins are recognised as important to traditional custodians as totems (MAC, 2021). Humpback whales are recognised as culturally significant to traditional custodians (MAC, 2021).
<p>Marine reptiles</p>	<ul style="list-style-type: none"> Five marine turtle species were identified that may occur including the loggerhead turtle, green turtle, hawksbill turtle, flatback turtle and leatherback turtle Nesting and internesting Habitat Critical to the Survival of a Species have been identified as overlapping the Operational Area for green turtles, flatback turtles, and hawksbill turtles. Dampier Archipelago is a BIA for hawksbill turtle (foraging, mating, nesting and internesting), loggerhead turtle (internesting), green turtle (foraging, mating, nesting and internesting), and flatback turtle (foraging, mating, nesting and internesting) (Figure 3-2). Nesting periods are November to March for green turtles, October to March for flatback turtles, October to February for hawksbill turtles, and December to January for loggerhead turtles. Hatching periods are January to May for green turtles, February to March for flatback turtles, all year for hawksbill turtles, with combined peak hatchling emergence period from December to March. The habitat critical to the survival of a species and the BIAs listed above overlap the majority of the EMBA. Internesting buffers are about 60 km for flatback turtles and 20 km for hawksbill turtles, green turtles, and loggerhead turtles. Two species of seasnake may also occur in the Operational Area; the short-nosed sea snake and the leaf-scaled seasnake The short-nosed sea snake is a species endemic to WA and has been recorded from the Exmouth Gulf to the reefs of the Sahul Shelf. Seasnakes and turtles are reported by traditional custodians as culturally important species, with a turtle songline reaching Withnell Bay from Fortescue (MAC, 2021).
<p>Fish</p>	<ul style="list-style-type: none"> Five shark species were identified that may occur within the Operational Area, including the whale shark, white shark, grey nurse shark, oceanic whitetip shark and scalloped hammerhead. A whale shark foraging BIA overlaps the EMBA, 10km north of the Operational Area. Three species of sawfish were identified including the green sawfish, dwarf sawfish and narrow sawfish. Southern bluefin tuna, reef manta rays and giant manta rays may also be present in the Operational Area and wider EMBA.
<p>Seabirds and Shorebirds</p>	<ul style="list-style-type: none"> Sixteen species of seabird were identified as potentially occurring within the Operational Area and wider EMBA. Twenty shorebird species were identified as potentially occurring.

Receptor	Description
	<ul style="list-style-type: none"> The Dampier Archipelago is a breeding and foraging BIA for a number of seabirds and shorebirds. Five BIAs overlap the Operational Area for Australian fairy terns (breeding), roseate terns (breeding/foraging), wedge-tailed shearwaters (breeding/foraging). Breeding periods occur from August to May (wedge-tailed shearwaters), March to July (roseate tern), June to September (Australian fairy tern) and March to October (Caspian tern).

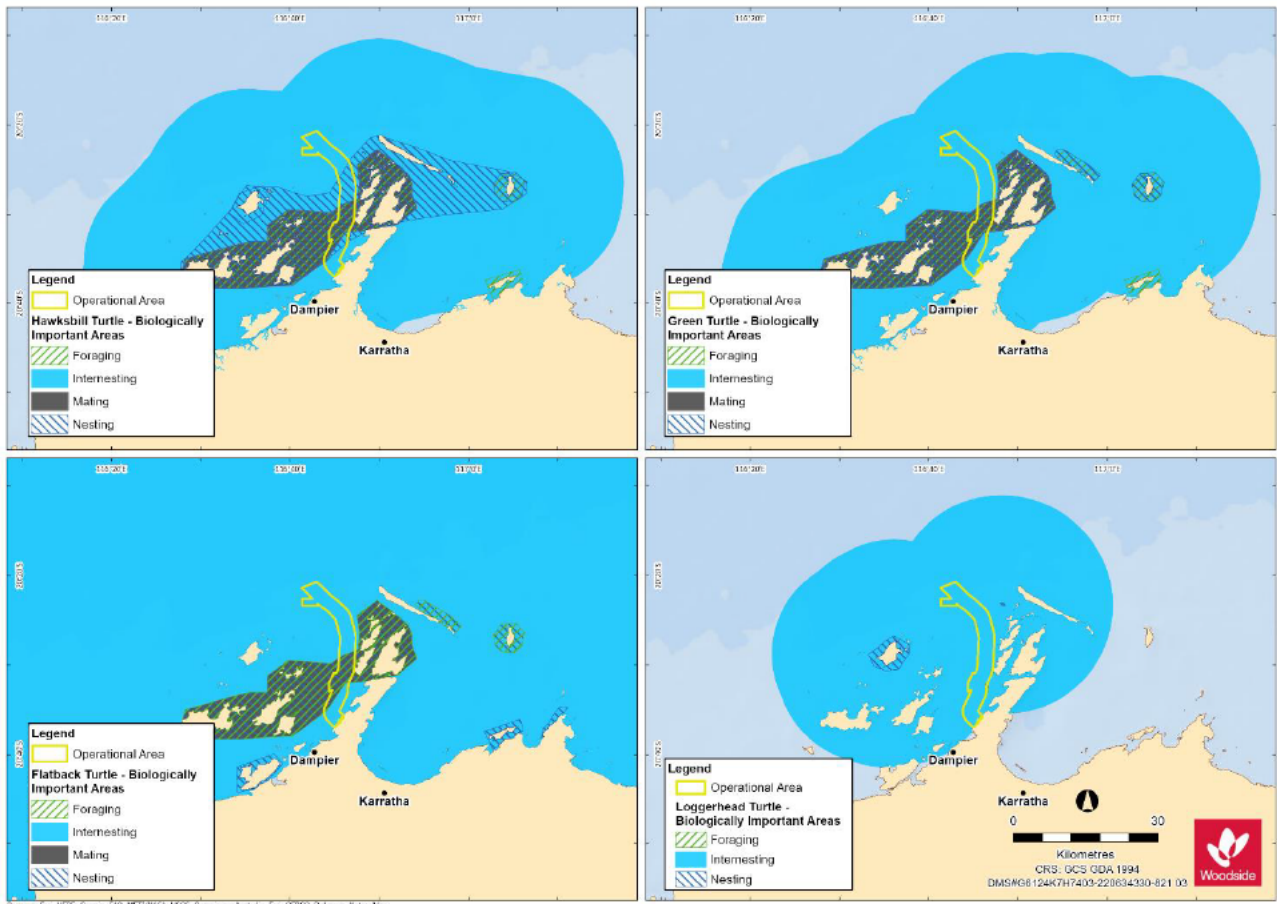


Figure 3-2: Marine Turtle BIAs

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3.4 Socio-Economic Environment

3.4.1 Tangible and Intangible Cultural Values

Communal cultural connection exists between Indigenous groups and land and waters. It is understood 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 Murujuga (Dampier Archipelago and Burrup Peninsula) contains a large and diverse range of Indigenous heritage sites and objects. Indigenous heritage represented in the region includes rock art sites, ethnographic sites, standing stones, shell middens, artefact scatters, quarries, and grinding patches (EPA, 2020). It has been estimated that the Dampier Archipelago, including the Burrup Peninsula, may contain up to one million petroglyphs (Vinnicombe, 2002) at a density of between 17 and 76 heritage sites per square kilometre (Bird and Hallam, 2006). In 2007 the Dampier Archipelago (including Burrup Peninsula) was added to Australia's National Heritage list. The Murujuga Aboriginal Corporation (MAC) and the State Government have begun the process to nominate the Burrup Peninsula for World Heritage Listing.

For the activity in this EP, there are two non-dismissed native title claims overlapping the Operational Area (Ngarluma/Yindjibarndi and Yaburara and Mardudhunera People). Ngarluma Aboriginal Corporation (NAC) and Wirrawandi Aboriginal Corporation (WAC) are the Prescribed Bodies Corporate for the relevant claims. Both claims have been assessed and native title was not determined to exist in areas overlapping the Operational Area or EMBA. Murujuga Aboriginal Corporation (MAC) is the approved body corporate under the Burrup and Maitland Industrial Estates Agreement (BMIEA) which underpins land access for the onshore component of the Scarborough project. MAC was established to represent the members of the then 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.

Ancient Landscape

It is understood that 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. The Ancient Coastline KEF at 125 m depth contour represents the lowest sea level during Indigenous occupation (O'Leary et al 2020; see also Williams et al 2018; UWA 2021). It is understood that traditional knowledge retains a memory, stories and intangible heritage information about the inundation of the ancient landscape in some places, including at Murujuga (McDonald and Phillips, 2021), and recent archaeological discoveries offer support for claims that the now submerged landscape was occupied and inhabited (Benjamin et al, 2020; see Ward et al 2021 for an opposing view).

For this EP, Integrated Heritage Services (IHS) was engaged by Woodside to conduct an Indigenous heritage desktop investigation and initial ethnographic consultations with Traditional Custodian representatives, for the offshore and landfall component of the project (Mott, 2019). Following the recommendations of Mott (2019), Woodside engaged with the Deep History of Sea Country (DHSC) project from mid-2019.

Through the DHSC project, researchers undertook a systematic and hierarchical approach to underwater investigation of the submerged landscapes at Murujuga (Dampier Archipelago). The researchers looked at the previously recorded Indigenous heritage sites from terrestrial surveys and used principles of geological, geomorphological and environmental associations to extrapolate to submerged landscapes. These results were then confirmed through direct inspection with divers which led to the discovery of two locations with Indigenous underwater cultural heritage (Benjamin

et al., 2020) approximately 5 km east of the proposed Scarborough development envelope. This conclusively demonstrated the potential for underwater cultural heritage (UCH) to exist on the NW Shelf and highlighted the need to assess the potential impacts of offshore developments on submerged heritage landscapes (UWA, 2021).

Woodside engaged researchers from the then-concluded DHSC project based at the University of Western Australia (UWA) to assess the prospectivity for archaeological sites along the Scarborough pipeline route and its development envelope beginning at the Burrup Peninsula and ending at the edge of the continental shelf in consultation with MAC (UWA, 2021).

The UWA Indigenous UCH assessment along the proposed Scarborough trunkline route developed a predictive model for the potential for UCH to be located within the submerged landscapes along the Scarborough trunkline route (UWA, 2021). Four submerged barrier formations crossed by the trunkline corridor were of particular interest for their potential to have formed after artefact deposition and preserve these materials in situ. However, the ages (i.e., formed prior to 65,000 years BP) of the four submerged barrier formations crossed by the pipeline corridor in Mermaid Sound pre-date the earliest credible evidence of human occupation of Australia, ruling out this particular theory of site formation. The route intersects no other identified prospective submerged features (paleochannels, waterholes, clay pan features or igneous rock outcrops) which have been observed in other parts of the Dampier Archipelago. The study concluded that the Scarborough trunkline development will have “nil or very low impact” on archaeological heritage values within the inner shelf (including the Dampier Archipelago).

In November 2021 MAC provided Woodside with a report on the assessment of submerged archaeology for the Scarborough Project. Following advice provided by MAC, Woodside engaged an external consultant to review existing side scan sonar data to confirm whether UCH, including fish traps and stone structures, might be detected.

This review identified possible catch points--areas where Aboriginal artefacts could have been trapped in situ or redeposited during erosion of ridgeline habitation sites and advised that:

“If such deposits are present, they are expected to be contained in older sediments near the base of such catchments. Therefore, consideration should be given to minimising the depth of such disturbance to avoid the lower half of any catchment area.” (Nutley 2022).

Woodside confirmed that trenching depth in proximity to these locations is approximately 2.1 m, which would not reach these potential catch points that are at a depth of some 5 m. The report concluded that other than these catch points and some natural features:

“Apart from the Pluto pipeline, no other anomalies of potential cultural origin were detected in the SSS data. No indication of stone structures such as fish traps, or hut foundations could be detected in the inner reef, middle shelf or outer shelf areas. In the middle shelf and outer shelf there were no indicators of former riverbeds, creek lines or lakes with which such feature may be associated.” (Nutley 2022)

Indigenous Sites of Significance

A search of the Department of Planning, Lands and Heritage (DPLH) Aboriginal Heritage Inquiry System (AHIS) was undertaken for the shoreline within the Operational Area and EMBA. The search indicated that the boundary of several known sites of Indigenous cultural or heritage significance overlap the Operational Area. Based on the studies undertaken above, desktop archaeological assessment (Mott 2019), and the observation that no sites have been recorded in sub-tidal areas other than the discoveries reported in Benjamin et al., (2020), it is concluded that none of these overlapping sites are within the Operational Area and within the intertidal areas at the shore crossing boundary.

The registered sites within the EMBA included middens, burial, ceremonial, artefacts, rock shelters, mythological, engraving sites and man-made structures. The exact location, access and traditional

practices for a number of these sites are not disclosed and, if required such as in a major hydrocarbon release, would involve prioritising further consultation with key contacts within DPLH and local Indigenous communities.

Marine Ecosystems

In a report by MAC on the spiritual and cultural values of Mermaid Sound—an area identified by MAC as a habitat for culturally significant flora and fauna—Elders were clear that all living things in Mermaid Sound are connected and important and 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).

Ethnographic Heritage Assessment

Woodside conducted ethnographic surveys to support the management of cultural values across the Scarborough Project, including the operational area for this EP (Mott 2019, McDonald and Phillips 2021). The first survey was conducted with members of all five Traditional Custodian groups (Mardudhunera, Ngarluma, Wong-Goo-Tt-Oo, Yaburara and Yindjibarndi) of Murujuga invited through Prescribed Bodies Corporate for Ngarda Ngarli people and MAC who met on country with heritage consultants to identify and describe the cultural values that may be impacted by the project (Mott 2019). The second ethnographic survey was conducted in 2020 by MAC. MAC appointed their preferred heritage consultants to meet on Country with the MAC Circle of Elders to discuss the project and identify any cultural values (McDonald and Phillips 2021). The resulting report is owned by MAC and was approved by the Circle of Elders prior to being provided to Woodside. Representatives from the Mardudhunera, Ngarluma, Yaburara, Yindjibarndi and Wong-Goo-Tt-Oo Peoples—all five Indigenous groups represented by MAC (MAC 2022)—participated in this survey (McDonald and Phillips 2021). These surveys have found no ethnographic values within the Operational Area. This work did identify ethnographic sites onshore outside the Operational Area. Sites were identified at Withnell Bay and Eaglehawk Island within the EMBA, but are not expected to be impacted by any planned activities (Mott 2019, McDonald and Phillips 2021).

Woodside remains committed to further ethnographic surveys planned for the Scarborough project which go beyond industry standards, and is ready to progress these additional surveys at MAC's earliest availability. The results of further surveys will be addressed through a Heritage Management Committee. On the advice of MAC, the Heritage Management Committee will only be convened following agreed triggers, and in all other cases notification and consultation with MAC should be conducted through established mechanisms or mechanisms to be designed.

3.4.2 Maritime Cultural Heritage Sites

A search of the Australian National Shipwreck Database (DAWE, 2021c), which records all known Maritime Cultural Heritage (shipwrecks, aircraft, relics and other underwater cultural heritage) in Australian waters, indicated that there are no Underwater Cultural Heritage sites within the Operational Area (see **Section 3.4.1** for submerged indigenous heritage sites). Thirty-five sites were identified within the EMBA.

3.4.3 World, National and Commonwealth Heritage Listed Places

One World, National or Commonwealth heritage listed place within the Operational Area is the Dampier Archipelago (including Burrup Peninsula), classified as an Indigenous class feature on the National Heritage List (**Section 3.4.1**). The Murujuga Cultural Landscape, which has no boundary yet defined but also relates to the Indigenous heritage values of Murujuga, was included on Australia's World Heritage Tentative List in 2020. Several other World, National and Commonwealth heritage listed places occur within the EMBA including:

- The Ningaloo Coast (World Heritage Property (WHP)).
- The Ningaloo Coast (natural) (National Heritage Place (NHP)).
- Ningaloo Marine Area – Commonwealth waters (Commonwealth Heritage Place).

3.4.4 State Heritage Listed Places/Items

The Dampier Archipelago (including Burrup Peninsula) is also listed as a heritage place on the City of Karratha Municipal Inventory. Values of the Dampier Archipelago (including Burrup Peninsula) are listed above in **Section 3.4.1**. The next closest place is Sam's Island seven kilometres to the south-west of the shore crossing site.

3.4.5 Ramsar Wetlands

No Ramsar wetlands overlap the Operational Area or the wider EMBA. The nearest Ramsar wetland is Eighty Mile Beach, over 300 km east of the Operational Area.

3.4.6 Fisheries – Commercial

A number of Commonwealth and State fisheries designated management areas overlap the Operational Area, however only the following fisheries have the potential to interact with the Operational Area

- Western Australian Mackerel Managed Fishery (near surface trolling, jig)
- Pilbara Line Fishery (line)
- Pilbara Trap Managed Fishery (trap)
- West Australian Sea Cucumber Fishery (diving/wading)
- Marine Aquarium Fish Managed Fishery (dive based)
- Specimen Shell Managed Fishery (hand collected)
- Nickol Bay Prawn Managed Fishery (trawl)
- Pilbara Crab Managed Fishery (trap).

3.4.7 Fisheries – Traditional

The Indigenous communities who are traditionally from the Burrup Peninsula are understood to have strong connections and uses for the sea, which includes the coastal areas adjacent to the Operational Area.

The Indigenous community continue to use the marine environment for a diverse range of traditional fishing methods, including hunting (dugongs, turtles, egg collecting (turtles, seabirds), capturing fish (spearing, reef trapping, herding, line fishing, collecting in stone fish traps, poisoning), and gathering shellfish and other marine sources.

3.4.8 Tourism and Recreational Fishing

Recreational fishing is expected to occur throughout the Operational Area and EMBA. The Dampier Archipelago and Montebello Islands are particularly popular for marine nature-based tourist activities. Tourism in the region typically peaks in winter when significant numbers of metropolitan and interstate tourists travel through the area and visit the Pilbara. Licenced fishing tours in the region are also a popular tourist attraction.

3.4.9 Industrial Development and Shipping

The Operational Area is located within the Pilbara region, with the state waters component in the Port of Dampier limits, managed by the Pilbara Port Authority (PPA). Dampier Port is a major industrial port in the northwest of Western Australia. The coastal waters of the region support significant commercial shipping activity, mostly associated with mining and oil and gas.

The Operational Area abuts the Burrup Peninsula, which is an area of established oil and gas operations including the Karratha Gas Plant (operated by Woodside), King Bay Supply Base and Dampier Port. Subsea infrastructure in the area includes the Pluto and NWS trunklines.

3.4.10 Defence

There are designated defence practice areas in the offshore marine waters off Ningaloo and North West Cape, beyond the Operational Area. A Royal Australian Air Force base at Learmonth, on North West Cape, is about 330 km from the Operational Area.

3.4.11 Oil and Gas

There are a number of petroleum titles held by various title holders within the EMBA. The proposed pipeline route crosses the Woodside channel which contains pipelines associated with existing oil and gas infrastructure. Subsea infrastructure in the area includes oil and gas trunklines including Woodside's Pluto and North Rankin (1TL and 2TL) trunklines. The onshore Karratha Gas Plant and Pluto LNG are located adjacent to the shore crossing site as outlined in **Section 3.4.9**. The trunkline will follow the route of the existing Pluto trunkline, with a separation distance of approximately 100 m to the south.

3.5 Values and Sensitivities

The environment of the NWMR contains high value or sensitive environmental assets (such as habitat and species) including offshore waters and coastal waters and habitats.

Many sensitive receptor locations are protected as part of Commonwealth and State managed areas and have been allocated conservation objectives (International Union for Conservation of Nature (IUCN) Protected Area Category) based on the Australian IUCN reserve management principles in Schedule 8 of the EPBC Regulations 2000. **Table 3-4** summarises the established and proposed Marine Protected Areas (MPAs) and other sensitive areas within 100 km of the Operational Area.

Table 3-4: Summary of established and proposed protected places and other sensitive areas within 100 km of the Operational Area.

	Distance from Operational Area to protected place or sensitive area (km)	IUCN category* or relevant park zone overlapping the Operational Area and/or EMBA
Australian Marine Parks (AMPs)		
NWMR		
Dampier AMP	34	Multiple Use Zone (IUCN VI)
	26	National Park Zone (IUCN II)
	12	Habitat Protection Zone (IUCN IV)
Montebello AMP	56	Multiple Use Zone (IUCN VI)
State Marine Parks and Nature Reserves		
Fish Habitat Protection Areas		
None overlapping the Operational Area or EMBA	N/A	N/A

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	Distance from Operational Area to protected place or sensitive area (km)	IUCN category* or relevant park zone overlapping the Operational Area and/or EMBA
National Parks		
Murujuga National Park	4	II
Nature Reserves		
Enderby, Goodwin, Rosemary, Malus, Angel, Gidley and Dolphin islands.	0 – 16	Ia
Delambre Island	29	Ia
Great Sandy Island	48	Ia
5(1)(h) reserves		
West Lewis Island	5	II
East Lewis Island	5	Ia
Cultural heritage areas		
National Heritage Places		
Dampier Archipelago (including Burrup Peninsula)	0	N/A
Key Ecological Features (KEFs)		
Glomar Shoal	62	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.

4. STAKEHOLDER CONSULTATION

Woodside consults stakeholders (relevant authorities and interested persons and organisations) in the course of preparing an EP. Woodside does this to ensure that authorities, persons or organisations that are potentially affected by proposed activities are consulted and their input is considered in the development of the EP, including assisting Woodside in the identification of measures that could be applied to mitigate potential adverse environmental effects that the proposed activity may otherwise cause.

Woodside seeks to carry out consultation in a manner that:

- is consistent with the principles of ecologically sustainable development (ESD).
- is intended to reduce the environmental impacts and risks from the activity to as low as reasonably practical.
- seeks to ensure that the environmental impacts and risks of the activity will be of an acceptable level.
- ensures that relevant persons are identified and consulted in the course of developing the EP.
- is part of a record of all engagements.
- provides opportunities for relevant persons to provide feedback during the life of the EP through its ongoing consultation process

The purpose of consultation is to enable Woodside to better understand how others, with an objective stake in the environment where it proposes to undertake the activity, perceive the potential environmental impacts and risks, and to provide those relevant persons with an opportunity to provide feedback. Woodside notes that consultation is voluntary and does not carry with it any obligation either to seek or to reach agreement on issues of difference. Woodside acknowledges that this process provides the opportunity to acquire information that may improve the overall environmental outcome or refine or change the control measures it proposes to address those risks and impacts. Woodside also recognises that this information is designed to provide a basis for DMIRS' considerations of the control measures, if any, that Woodside proposes to take or has taken to lessen or avoid the effect of its proposed activity on the environment.

4.1 Identification of Relevant Persons for Consultation

In developing its method for consultation to identify relevant persons to consult with on our proposed activity, Woodside's methodology assesses relevance based on overlap with the planned activities the subject of the EP (see **Section 2**). Due to the highly unlikely and unplanned nature of a worst-case hydrocarbon release, the resulting EMBA for this PAP is used to inform the government departments or agencies involved in the response or with a regulatory or decision-making role in response planning to minimise associated risks and impacts to ALARP and acceptable levels.

4.2 Assessment of Additional Persons

To assist Woodside to identify relevant persons, Woodside places an advertisement in a local, state and national newspaper to enable relevant authorities and interested persons and organisations who may be impacted by the proposed activity to be aware of Woodside's consultation for its EPs and to provide them an opportunity to give comments and feedback in accordance with the intended outcome of consultation

The methodology also allows for additional persons to be identified:

- as part of monitoring and review
- by additional persons contacting Woodside and self-identifying

- by third parties, regulators or industry providing relevant information to Woodside.

4.3 Persons or organisations Woodside chooses to contact

In addition to consultation undertaken with relevant persons in accordance with Regulation 15(11) and 17(1)(b), Woodside may also, at its discretion, choose to seek feedback, advice or provide information to authorities, persons or organisations it has assessed as not relevant.

4.4 Ongoing Consultation

As per Woodside's ongoing consultation approach 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 above).

4.5 Identification of Relevant Persons for this EP

The relevant inquiry for determining relevant authorities, and other interested persons or organisations "relevant persons" (within the description of Regulations 15(11), 17(1)(b) of the Environment Regulations) is whether the planned activities to be carried out under the EP may be relevant to one of the government departments or agencies in those regulations or interested persons or organisations.

Woodside's methodology for identifying relevant persons under these categories considers the following, but is not limited to:

- the defined responsibilities of the departments and agencies (relevant authorities) and determines whether those responsibilities overlap with the planned activities within the Operational Area, as applicable.
- applying a category-by-category approach to interested persons or organisations and determining whether those interests overlap with the planned activities within the Operational Area.

This assessment is both activity and location based, will include applying professional judgement, knowledge and current literature and will vary depending on the type of person or organisation.

The result of Woodside's assessment of stakeholder relevance and additional persons during the development of the EP are outlined at **Table 4-1**.

4.6 Consultation for this EP

The following is a summary of the consultation undertaken for this EP:

- A Stakeholder Consultation Information Sheet was provided to relevant persons which included details such as an activity overview, maps, a summary of key risks and/or impacts and management measures.
- Since the commencement of the consultation period (13 March 2022), the Stakeholder Consultation Information Sheet has also been available on Woodside's website - it includes 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, relevant Titleholders, 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.

- Where appropriate, Woodside conducted phone calls, meetings and community information sessions 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 30-day 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.
- Woodside hosted community reference group information sessions, including the Karratha Community Liaison Group quarterly meeting and the Woodside Heritage quarterly meeting.
- Woodside advertised the planned activities proposed for this EP in a national, state and local newspaper (The Australian, The West Australian and the Pilbara News. No comments or feedback were received from the advertisements.
- Additional persons, including self-identified stakeholders (refer to Table 5-3), were assessed.

Table 4-1 Assessment of Relevant Persons and Additional Persons for the Proposed Activity

Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Commonwealth and WA State Government Departments or Agencies – Marine			
Australian Border Force (ABF)	Responsible for coordinating maritime security.	Woodside has applied its methodology for 'Government departments / agencies – marine' under Regulations 15(11) and 17(1)(b) – Relevant authorities. 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 Regulations 15(11) and 17(1)(b) – Relevant authorities. No Commonwealth fisheries have been assessed as relevant for the proposed activity. Woodside chose to contact AFMA at its discretion in line with Section 4.3.	No
Australian Hydrographic Office (AHO)	Responsible for maritime safety and Notices to Mariners.	Woodside has applied its methodology for 'Government departments / agencies – marine' under Regulations 15(11) and 17(1)(b) – Relevant authorities. 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 Regulations 15(11) and 17(1)(b) – Relevant authorities. 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 Regulations 15(11) and 17(1)(b) – Relevant authorities. 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 Regulations 15(11) and 17(1)(b) – Relevant authorities. No Commonwealth fisheries have been assessed as relevant for the proposed activity. Woodside chose to contact DAFF – Fisheries (formerly DAWE) at its discretion in line with Section 4.3.	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Department of Defence (DoD)	Responsible for defending Australia and its national interests.	Woodside has applied its methodology for 'Government departments / agencies – marine' under Regulations 15(11) and 17(1)(b) – Relevant authorities. The Operational Area does not overlap a defence training area.	No
Department of Primary Industries and Regional Development (DPIRD)	Responsible for managing State fisheries.	Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulations 15(11) and 17(1)(b) – Relevant authorities. Marine Aquarium Fishery, Mackerel Managed Fishery (Area 2), Pilbara Crab Managed Fishery, Specimen Shell Managed Fishery, Nickol Bay Prawn Managed Fishery, West Australian Sea Cucumber Fishery, Pilbara Trap Fishery and Pilbara Line Fishery have been assessed as relevant for the proposed activity. DPIRD's functions may be relevant to the activity as State fisheries are active in the Operational Area.	Yes
Department of Transport (DoT)	Legislated responsibility for oil pollution response in State waters.	Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulations 15(11) and 17(1)(b) – Relevant authorities. The proposed activity has a hydrocarbon spill risk, which may require DoT response in State waters.	Yes
Pilbara Ports Authority (PPA) – including the Dampier Technical Advisory and Consultative Committee (TACC)	Responsible for the operation of the Port of Dampier and Controlling Agency for a hydrocarbon spill in Pilbara port limits.	Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulations 15(11) and 17(1)(b) – Relevant authorities. The proposed activity will take place within port limits. The proposed activity also has a hydrocarbon spill risk that is predicted to occur within or enter port limits in the unlikely event that this occurs, which may require Pilbara Ports Authority response as Controlling Agency within port limits.	Yes
Department of Planning, Lands and Heritage (DPLH)	Responsible for state level land use planning and management, and oversight of Aboriginal cultural heritage and built heritage matters.	Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulations 15(11) and 17(1)(b) – Relevant authorities. There are no known Maritime Cultural Heritage sites overlapping the Operational Area.	No
Commonwealth and WA State Government Departments or Agencies – Environment			
Department of Agriculture, Fisheries and Forestry (DAFF) – Biosecurity (marine pests, vessels, aircraft and personnel) (formerly DAWE)	DCCEEW administers, implements and enforces the Biosecurity Act 2015. The Department requests to be consulted where an activity has the potential to transfer marine pests. DCCEEW also has inspection and reporting requirements to ensure that all conveyances	Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulations 15(11) and 17(1)(b) – Relevant authorities. DAFF – Biosecurity's (formerly DAWE) functions may be relevant to the activity in the prevention of introduced marine species.	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
	<p>(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>		
<p>Department of Climate Change, Energy, the Environment and Water Agriculture (DCCEEW) (formerly DAWE)</p>	<p>Responsible for implementing Commonwealth policies and programs to support climate change, sustainable energy use, water resources, the environment and our heritage.</p> <p>Responsible for managing Maritime Cultural Heritage in Commonwealth waters.</p>	<p>Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulations 15(11) and 17(1)(b) – Relevant authorities. DCCEEW's (formerly DAWE) functions may be relevant to the activity as there are potential environmental impacts from the proposed activity.</p> <p>There are no known Maritime Cultural Heritage sites overlapping the Operational Area.</p>	Yes
<p>Director of National Parks (DNP)</p>	<p>Responsible for the management of Commonwealth parks and conservation zones.</p>	<p>Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulation 15(11) – Relevant authorities.</p> <p>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).</p>	Yes
<p>Department of Biodiversity, Conservation and Attractions (DBCA)</p>	<p>Responsible for managing WA's parks, forests and reserves to achieve wildlife conservation and provide sustainable recreation and tourism opportunities.</p>	<p>Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulation 15(11) – Relevant authorities.</p> <p>The Operational Area overlaps some of the Dampier Archipelago Nature Reserves which is managed by DBCA.</p>	Yes
<p>Commonwealth and State Government Departments or Agencies – Industry</p>			
<p>Department of Industry, Science and Resources (DISR) (formerly DISER)</p>	<p>Department of relevant Commonwealth Minister.</p>	<p>Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulation 15(11) – Relevant authorities.</p> <p>DISR's (formerly DISER) functions may be relevant to the activity as the Department of relevant Commonwealth Minister.</p>	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Department of Mines, Industry Regulation and Safety (DMIRS)	Department of relevant State Minister.	Woodside has applied its methodology for 'Government departments / agencies – environment' under Regulation 15(11) – Relevant authorities. DMIRS's functions are relevant to the activity as the Department of relevant State Minister and as the Regulator for this EP.	Yes
Commonwealth Commercial fisheries and representative bodies			
Southern Bluefin Tuna Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Although the fishery overlaps the Operational Area, it has not been active in the Operational Area within the last 5 years. Woodside does not consider that the proposed activity will present a risk to licence holders, 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). In addition, interactions are not expected given the species' pelagic distribution. Woodside has provided information to the fishery's representative body – Australian Southern Bluefin Tuna Industry Association (ASBTIA) – at its discretion in line with Section 4.3 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.	No
Western Skipjack Fishery	Commonwealth commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Although the fishery overlaps the Operational Area, it has not been active in the Operational Area 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. In addition, interactions are not expected given the species' pelagic distribution. The fishery is not currently active and no fishing has occurred since 2009 (Patterson et al., 2021). Woodside has provided information to the fishery's representative body – Australian Southern Bluefin Tuna Industry Association (ASBTIA) and Commonwealth Fisheries Association (CFA) – at its discretion in line with	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
		Section 4.3 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.	
Western Tuna and Billfish Fishery	Commonwealth commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Although the fishery overlaps the Operational Area, it has not been active in the Operational Area 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. In addition, interactions are not expected given the species' pelagic distribution. The current distribution of fishing effort is concentrated south-west of the Operational Area from Exmouth to Augusta.</p> <p>Woodside has provided information to the fishery's representative body – Tuna Australia – at its discretion in line with Section 4.3 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
Commonwealth Fisheries Association (CFA)	Represents the interests of commercial fishers with licences in Commonwealth waters.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>No Commonwealth fisheries have been assessed as relevant for the proposed activity. As the peak representative body for commonwealth fisheries, CFA has also been assessed as not relevant.</p> <p>Woodside chose to contact CFA at its discretion in line with Section 4.3.</p>	No
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 Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</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 chose to contact the ASBTIA at its discretion in line with Section 4.3.</p>	No
Tuna Australia	Represents the interests of the Western Tuna and Billfish Fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
		<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 chose to contact the Tuna Australia at its discretion in line with Section 4.3</p>	
<p>Pearl Producers Association (PPA)</p>	<p>Peak representative organisation of The Australian South Sea Pearling Industry, with members in Western Australia and the Northern Territory.</p>	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</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>PPA has requested to be informed of Woodside's planned activities. Woodside chose to contact PPA at its discretion in line with Section 4.3.</p>	<p>No</p>
<p>State Commercial fisheries and representative bodies</p>			
<p>Marine Aquarium Managed Fishery</p>	<p>State commercial fishery.</p>	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.</p>	<p>Yes</p>
<p>South West Coast Managed Fishery</p>	<p>State commercial fishery.</p>	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Although the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area within the last 5 years.</p> <p>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). The fishery operates in the West Coast bioregion, over 950 km south of the Operational Area (WAFIC, n.d.).</p>	<p>No</p>
<p>Mackerel Managed Fishery (Area 2)</p>	<p>State commercial fishery.</p>	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.</p>	<p>Yes</p>

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Pilbara Crab Managed Fishery	State commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.</p>	Yes
West Coast Deep Sea Crustacean Managed Fishery	State commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Although the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area within the last 5 years.</p> <p>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. The West Coast Deep Sea Crustacean Managed Fishery operates in the West Coast and Gascoyne Bioregions, outside of the Operational Area (How et al. 2015; DPIRD, 2021).</p>	No
Abalone Managed Fishery	State commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Although the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area within the last 5 years.</p> <p>Further, DPIRD data indicates no fishing effort has occurred north of Moore River since 2011-2012. Shark Bay is considered the northern range limit for the commercial abalone species (DoF, 2004) and therefore the fishery operates outside the Operational Area.</p>	No
Onslow Prawn Managed Fishery	State commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Although the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area within the last 5 years.</p> <p>Only 28 days (308 hours) of fishing effort was undertaken by one boat in 2019 (Kangas et al. 2020a), and there have been no active vessels within the CAES blocks that overlap the Operational Area from 2011- 2020, inclusive (DPIRD, 2021). Woodside therefore does not consider there to be potential for interaction with the fishery.</p>	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Specimen Shell Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. The fishery overlaps the Operational Area and the fishery has been active in the Operational Area 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 Regulations 15(11) and 17(1)(b) – Interested persons or organisations. The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.	Yes
West Australian Sea Cucumber Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.	Yes
Pearl Oyster Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Although the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area within the last 5 years. 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).	No
WA North Coast Shark Managed Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. The fishery overlaps the Operational Area but it has not been active since 2008/09 (DPIRD). In 2008, the WA North Coast Shark Fishery's Wildlife Trade Operation approval under the EPBC Act was revoked because a formal management plan had not been finalised (Patterson et al., 2019).	No
Demersal Scalefish Fishery: Pilbara Trawl Fishery	State commercial fishery.	Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.	No

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Pilbara Trap Fishery		<p>Although the fishery overlaps the Operational Area, the fishery has not been active in the Operational Area within the last 5 years.</p> <p>The Operational Area is located within an area of the fishery that is closed to trawling. The closest area where trawl fishing is permitted is located approximately 15 km north of the Operational Area. Woodside therefore does not consider there to be potential for interaction with the fishery.</p>	
Pilbara Line Fishery	State commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.</p>	Yes
Pilbara Line Fishery	State commercial fishery.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The fishery overlaps the Operational Area and the fishery has been active in the Operational Area within the last 5 years.</p>	Yes
Western Australian Fishing Industry Council (WAFIC)	Represents the interests of commercial fishers with licences in State waters.	<p>Woodside has applied its methodology for 'Commercial fisheries (Commonwealth and State) and peak representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Marine Aquarium Fishery, Mackerel Managed Fishery (Area 2), Pilbara Crab Managed Fishery, Specimen Shell Managed Fishery, Nickol Bay Prawn Managed Fishery, West Australian Sea Cucumber Fishery, Pilbara Trap Fishery and Pilbara Line Fishery have been assessed as relevant for the proposed activity.</p> <p>As the peak representative body for commercial fishers with licences in State waters, WAFIC has also been assessed as not relevant.</p>	Yes
Recreational marine users and representative bodies			
Recreational marine users <ul style="list-style-type: none"> • Nickol Bay Sport Fishing Club • King Bay Game Fishing Club • Hampton Harbour Boat and Sailing Club 	Karratha-based dive, tourism and charter operators.	<p>Woodside has applied its methodology for 'Recreational marine users and representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Activities have the potential to impact Karratha-based dive, tourism and charter operator's due to the location of activities and there has been recorded charter effort in the Operational Area in the past 5 years.</p>	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
<ul style="list-style-type: none"> • Marine Rescue Dampier • West Pilbara Volunteer Sea Search and Rescue Group • Reef Seeker Charters • Archipelago Adventures • Port Walcott Volunteer Marine Rescue • Port Walcott Yacht Club 			
Recfishwest	Represents the interests of recreational fishers in WA.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Activities have the potential to impact recreational fishers' functions due to the location offshore and there has been recorded charter effort in the Operational Area in the past 5 years.	Yes
Marine Tourism WA	Represents the interests of marine tourism in WA.	Woodside has applied its methodology for 'Recreational marine users and representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Activities have the potential to impact recreational fishers' function due to the location offshore and there has been recorded charter effort in the Operational Area 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 Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Activities have the potential to impact game fishers' function due to the location offshore and there has been recorded charter effort in the Operational Area in the past 5 years.	Yes
Titleholders and Operators			
Rio Tinto	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. No other Titleholder or Operator permit areas overlap the Operational Area. Rio Tinto's permit area does not overlap the Operational Area but it adjacent to the Operational Area.	No

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		Woodside has provided information to Rio Tinto at its discretion in line with Section 4.3.	
Yara Pilbara	Titleholder or Operator.	Woodside has applied its methodology for 'Titleholders and Operators' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. No other Titleholder or Operator permit areas overlap the Operational Area. Yara Pilbara's permit area does not overlap the Operational Area but it adjacent to the Operational Area. Woodside has provided information to Yara Pilbara at its discretion in line with Section 4.3.	No
Peak Industry Representative bodies			
APPEA	Represents the interests of oil and gas explorers and producers in Australia.	Woodside has applied its methodology for 'Peak Industry Representative bodies' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. APPEA's responsibilities are identified as having an intersect with Woodside's planned activities in the Operational Area.	Yes
Traditional Custodians			
Murujuga Aboriginal Corporation (MAC)	Representative Aboriginal Corporation.	Woodside has applied its methodology for 'Traditional Custodians' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. The Operational Area overlaps the Ngarluma/Yindjibarndi and Yaburara & Mardudhunera People native title claims. Ngarluma Aboriginal Corporation (NAC) and Wirrawandi Aboriginal Corporation (WAC) are the Prescribed Bodies Corporate for the relevant claims. Both claims have been assessed and native title was not determined to exist in areas overlapping the Operational Area. The Operational Area overlaps the Kuruma Marthudunera and Yaburara and Coastal Mardudhunera ILUA and the KM & YM ILUA 2018. The Wirrawandi Aboriginal Corporation (WAC) is the Prescribed Body Corporate for these ILUA's and holds native title claim for the area overlapping the Operational Area. The Operational Area does not overlap any marine park management plans. Woodside has consulted with MAC with regards to the Scarborough project area generally since 2018 and MAC has been involved in ethnographic surveys that included the planned activities of this EP. MAC is the approved body corporate under the Burrup and Maitland Industrial Estates Agreement (BMIEA)	Yes

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		<p>which underpins land access for the onshore component of the Scarborough project. 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. 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>Woodside has applied the principles of self-determination in line with UNDRIP by ensuring we consult through the Representative Aboriginal Corporation.</p> <p>As a further step, Woodside, at its discretion, chose to seek guidance from YMAC, as the Native Title Representative Body for the Yamatji and Pilbara regions of Western Australia, to confirm the best approach to confirm additional cultural values (if any) for the nearshore component of the Scarborough Project, the scope of which included the proposed activity for this EP, and chose at its discretion to extend this to the broader Scarborough Project area. YMAC advised that the most appropriate stakeholders for the Scarborough project generally are MAC and NAC, who are not represented by YMAC.</p>	
Ngarluma Aboriginal Corporation (NAC)	Representative Aboriginal Corporation.	<p>Woodside has applied its methodology for 'Traditional Custodians' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The Operational Area overlaps the Ngarluma/Yindjibarndi and Yaburara & Mardudhunera People native title claims. Ngarluma Aboriginal Corporation (NAC) and Wirrawandi Aboriginal Corporation (WAC) are the Prescribed Bodies Corporate for the relevant claims. Both claims have been assessed and native title was not determined to exist in areas overlapping the Operational Area.</p> <p>The Operational Area overlaps the Kuruma Marthudunera and Yaburara and Coastal Mardudhunera ILUA and the KM & YM ILUA 2018. The Wirrawandi Aboriginal Corporation (WAC) is the Prescribed Body Corporate for these ILUA's and holds native title claim for the area overlapping the Operational Area.</p> <p>The Operational Area does not overlap any marine park management plans.</p> <p>Woodside has applied the principles of self-determination in line with UNDRIP by ensuring we consulted through the Representative Aboriginal Corporation (NAC).</p>	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
		As a further step, Woodside, at its discretion, chose to seek guidance from YMAC, as the Native Title Representative Body for the Yamatji and Pilbara regions of Western Australia to confirm the best approach to confirm additional cultural values (if any) for the broader Scarborough Project, the scope of which included the proposed activity for this EP. YMAC advised that the most appropriate stakeholders for the Scarborough project generally are MAC and NAC, who are not represented by YMAC.	
Wirrawandi Aboriginal Corporation (WAC)	Representative Aboriginal Corporation.	<p>Woodside has applied its methodology for 'Traditional Custodians' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The Operational Area overlaps the Ngarluma/Yindjibarndi and Yaburara & Mardudhunera People native title claims. Ngarluma Aboriginal Corporation (NAC) and Wirrawandi Aboriginal Corporation (WAC) are the Prescribed Bodies Corporate for the relevant claims. Both claims have been assessed and native title was not determined to exist in areas overlapping the Operational Area.</p> <p>The Operational Area overlaps the Kuruma Marthudunera and Yaburara and Coastal Mardudhunera ILUA and the KM & YM ILUA 2018. Wirrawandi Aboriginal Corporation (WAC) and Robe River Kuruma Aboriginal Corporation (RRKAC) are parties to the ILUA's. However, WAC is the Traditional Custodian group whose native title claim (the Yaburara & Mardudhunera People native title claim) overlaps the Operational Area and is therefore appropriate cultural authority for these coastal areas.</p> <p>The Operational Area does not overlap any marine park management plans.</p> <p>Woodside has applied the principles of self-determination in line with UNDRIP by ensuring we consulted through the Representative Aboriginal Corporation.</p>	Yes
Ngarluma Yindjibarndi Foundation Ltd. (NYFL)	<p>Aboriginal organisation receiving benefits under the NWS Agreement 1998 and delivering social and economic outcomes for its members and the broader Roebourne community.</p> <p>The NWS Agreement was signed prior to resolution of native title claims. Since signing, both the Ngarluma and Yindjibarndi claims were resolved and now NAC and YAC are the Representative Aboriginal Corporations for their respective groups and lands. However, for the purposes of lands falling within the BMIEA and</p>	<p>Woodside has applied its methodology for 'Traditional Custodians' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The Operational Area overlaps the Ngarluma/Yindjibarndi and Yaburara & Mardudhunera People native title claims. Ngarluma Aboriginal Corporation (NAC) and Wirrawandi Aboriginal Corporation (WAC) are the Prescribed Bodies Corporate for the relevant claims. Both claims have been assessed and native title was not determined to exist in areas overlapping the Operational Area.</p> <p>The Operational Area overlaps the Kuruma Marthudunera and Yaburara and Coastal Mardudhunera ILUA and the KM & YM ILUA 2018. Wirrawandi Aboriginal Corporation (WAC) and Robe River Kuruma Aboriginal Corporation (RRKAC) are parties to the ILUA's. However, WAC is the Traditional Custodian group whose native title claim (the Yaburara & Mardudhunera People native</p>	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
	Murujuga, MAC is the Representative Aboriginal Corporation for all five language groups.	title claim) overlaps the Operational Area and is therefore appropriate cultural authority for these coastal areas. The Operational Area does not overlap any marine park management plans. Woodside has applied the principles of self-determination in line with UNDRIP by ensuring we consulted through the Representative Aboriginal Corporation. Woodside has provided information to NYFL at its discretion in line with Section 4.3.	
YMAC	Native Title Representative Body.	Woodside has applied its methodology for 'Traditional Custodians' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. 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 rights and interests of an Indigenous Community, but exist to assist native title claimants and holders. YMAC is identified in the North-west Marine Parks Network Management Plan 2018 (DNP, 2018) as the Native Title Representative Body for six marine parks, noting no marine parks overlap the Operational Area. Woodside, at its discretion, chose to seek guidance from YMAC to confirm the best approach to confirm additional cultural values (if any) for the broader Scarborough Project, the scope of which included the proposed activity for this EP. YMAC advised that the most appropriate stakeholders for the Scarborough project generally are MAC and NAC, who are not represented by YMAC.	No
Historical heritage groups or organisations			
Western Australian Museum	Responsible for managing 200 shipwreck sites of the 1500 known to be located off the WA coast and manages eight Aboriginal land reserves.	Woodside has applied its methodology for 'Historical cultural heritage groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. There are no known Maritime Cultural Heritage sites overlapping the Operational Area.	No
Local government and recognised local community reference/liaison groups or organisations			
City of Karratha	Local government governed by the Local Government Act 1995 representing the Dampier ward, Karratha ward and Wickham/Point Samson/Roebourne/Cossack/Pastoral ward.	Woodside has applied its methodology for 'Local government and community representative groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. The City of Karratha's area of responsibility overlaps the Operational Area.	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
<p>Karratha Community Liaison Group (CLG)</p> <ul style="list-style-type: none"> • WA Police • Karratha Health Care • Development WA • 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 • Department of Local Government, Sport and Cultural Industries 	<p>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.</p>	<p>Woodside has applied its methodology for 'Local government and community representative groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>The KLG's area of responsibility under its terms of reference does not overlap the Operational Area.</p> <p>Woodside, at its discretion, chose to assess the KLG as a relevant person in line with the City of Karratha's area of responsibility.</p>	<p>Yes</p>
Other Non-government groups or organisations			
<p>350 Australia (350A)</p>	<p>Non-government organisation.</p>	<p>During the course of preparing the EP, 350A self-identified, provided comment on the broader Scarborough development and requested to be consulted on Scarborough EPs. Woodside has applied its methodology for 'Additional persons' and 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>Woodside has assessed that 350A's public website material and feedback demonstrates an interest with the potential risks and impacts associated with</p>	<p>Yes</p>

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
		planned activities in accordance with the intended outcome of consultation (as set out above).	
Australasian Centre for Corporate Responsibility (ACCR)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' to determine ACCR's relevance for the proposed activity under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Woodside has assessed that ACCR'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 above).	No
Australian Conservation Foundation (ACF)	Non-government organisation.	During the course of preparing the EP, ACF self-identified, provided comment on the broader Scarborough development and requested to be consulted on Scarborough EPs. Woodside has applied its methodology for 'Additional persons' and 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Woodside has assessed that ACF's public website material and feedback demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).	Yes
Australian Marine Conservation Society (AMCS)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' to determine ACCR's relevance for the proposed activity under Regulations 15(11) and 17(1)(b) – Interested persons or organisations. Woodside has assessed that AMCS's public website material demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).	Yes
Climate Council	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine Climate Council's relevance for the proposed activity. Woodside has assessed that Climate Council'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 above).	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Conservation Council of Western Australia (CCWA)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine CCWA's relevance for the proposed activity. Woodside has assessed that CCWA's public website material demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).	Yes
Doctors for the Environment Australia (DEA)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine DEA's relevance for the proposed activity. Woodside has assessed that DEA'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 above).	No
Extinction Rebellion WA (XRWA)	Non-government group.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine XRWA's relevance for the proposed activity. Woodside has assessed that XRWA'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 above).	No
Friends of Australian Rock Art. Inc (FARA)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine FARA's relevance for the proposed activity. Woodside has assessed that FARA'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 above).	No
Greenpeace Australia Pacific (GAP)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine GAP's relevance for the proposed activity. Woodside has assessed that GAP's public website material and feedback demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
International Fund for Animal Welfare (IFAW)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine IFAW's relevance for the proposed activity. Woodside has assessed that IFAW'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 above).	No
Lock The Gate Alliance (LTGA)	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine LTGA's relevance for the proposed activity. Woodside has assessed that LTGA'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 above).	No
Market Forces	Non-government organisation.	Woodside has applied its methodology for 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine Market Forces' relevance for the proposed activity. Woodside has assessed that Market Forces' 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 above).	No
Say No to Scarborough Gas (SNTSG)	Non-government group.	Woodside has applied its methodology for 'Additional persons' and 'Other non-government groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine SNTSG' relevance for the proposed activity. Woodside has assessed that SNTSG's public website material demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).	Yes
Sea Shepherd Australia (SSA)	Non-government organisation.	Woodside has applied its methodology for 'Additional persons' and 'Other non-government groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine SSA's relevance for the proposed activity. Woodside has assessed that SSA's public website material demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).	Yes

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
The Wilderness Society (TWS)	Non-government organisation.	<p>Woodside applied its methodology for 'Additional persons' and 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine The Wilderness Society's relevance for the proposed activity.</p> <p>Woodside has assessed that TWS's public website material demonstrates an interest with the potential risks and impacts associated with planned activities in accordance with the intended outcome of consultation (as set out above).</p>	Yes
World Wildlife Fund (WWF) Australia	Non-government organisation.	<p>Woodside applied its methodology for 'Additional persons' and 'Other non-government groups or organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine WWF's relevance for the proposed activity.</p> <p>Woodside has assessed that WWF'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 above).</p>	No
Research institutes and local conservation groups or organisations			
University of Western Australia (UWA)	Research institute.	<p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine UWA relevance for the proposed activity.</p> <p>There is known research being undertaken by the UWA within the Operational Area.</p>	Yes
Murdoch University	Research institute.	<p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine Murdoch University's relevance for the proposed activity.</p> <p>There is no known research being undertaken by Murdoch within the Operational Area.</p>	No
Curtin University	Research institute.	<p>Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine Curtin University relevance for the proposed activity.</p> <p>There is no known research being undertaken by Curtin University within the Operational Area.</p>	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
Western Australian Marine Science Institution (WAMSI)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine WAMSI's relevance for the proposed activity. There is no known research being undertaken by WAMSI within the Operational Area.	No
Edith Cowan University (ECU)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine ECU's relevance for the proposed activity. There is no known research being undertaken by ECU's within the Operational Area.	No
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine CSIRO's relevance for the proposed activity. There is no known research being undertaken by CSIRO within the Operational Area. Woodside has provided information to CSIRO at its discretion in line with Section 4.3.	No
Australian Institute of Marine Science (AIMS)	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine AIMS's relevance for the proposed activity. There is no known research being undertaken by AIMS within the Operational Area. Woodside has provided information to AIMS at its discretion in line with Section 4.3.	No
Geoscience Australia	Research institute.	Woodside has applied its methodology for 'Research institutes and local conservation groups or organisations' Regulations 15(11) and 17(1)(b) – Interested persons or organisations to determine Geoscience Australia's relevance for the proposed activity. There is no known research being undertaken by Geoscience Australia within the Operational Area.	No

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
<i>Other</i>			
<p>Save Our Songlines (SOS) and/ or ██████████ and/ or ██████████</p>	<p>Representatives from Kuruma/ Marthudunera language group and Mardudhunera language group.</p>	<p>Woodside has applied its methodology for 'Additional persons', 'Traditional Custodians' and 'Non-Government Organisations' under Regulations 15(11) and 17(1)(b) – Interested persons or organisations.</p> <p>During the course of preparing the EP, Save Our Songlines and/ or ██████████ and/ or ██████████ self-identified and requested to be consulted on Scarborough EPs.</p> <p>The Operational Area overlaps the Ngarluma/Yindjibarndi and Yaburara & Mardudhunera People native title claims. Ngarluma Aboriginal Corporation (NAC) and Wirrawandi Aboriginal Corporation (WAC) are the Prescribed Bodies Corporate for the relevant claims. Both claims have been assessed and native title was not determined to exist in areas overlapping the Operational Area.</p> <p>The Operational Area overlaps the Kuruma Marthudunera and Yaburara and Coastal Mardudhunera ILUA and the KM & YM ILUA 2018. The Operational Area overlaps the Kuruma Marthudunera and Yaburara and Coastal Mardudhunera ILUA and the KM & YM ILUA 2018. The Wirrawandi Aboriginal Corporation (WAC) is the Prescribed Body Corporate for these ILUA's and holds native title claim for the area overlapping the Operational Area.</p> <p>The Operational Area does not overlap any marine park management plans.</p> <p>Woodside acknowledges and respects that Traditional Custodians' traditional rights are held as group and communal rights. Legal recognition of Traditional Custodian rights in land and waters occurs through the Native Title Act 1993 (Cth) which was enacted in response to the High Court's Mabo decision 1992. That decision held that rights and interests in land and waters "are possessed under the traditional laws acknowledged by and the traditional customs observed by the indigenous inhabitants". Traditional laws and customs are held by the Indigenous group (society) as a whole. In certain instances, an individual or individuals may hold particular rights and interests in relation to a site or area that are distinct from that of the broader group, however, these rights and interests must be derived from the traditional laws and customs of, and must be recognised by, the broader group.</p> <p>Throughout our consultations, Woodside has not received advice or direction from SOS that suggests that SOS representatives hold rights or interests distinct from the Mardudhunera or the broader Ngarda Ngarli group. Woodside has applied the principles of self-determination in line with UNDRIP by ensuring we consulted through the Representative Aboriginal Corporation. The</p>	<p>Yes</p>

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Stakeholder	Responsibility of relevant authority or relevant interested person or organisation	Assessment of relevance	Relevant person
		<p>Mardudhunera language group is represented on Murujuga by MAC (see above).</p> <p>YMAC is the Native Title Representative Body for the Yamatji and Pilbara regions of Western Australia. Woodside, at its discretion, chose to seek guidance from YMAC to confirm the best approach to confirm additional cultural values (if any) for the broader Scarborough Project, the scope of which included the proposed activity for this EP. YMAC advised that the most appropriate stakeholders for the Scarborough project generally are MAC and NAC, who are not represented by YMAC.</p> <p>Woodside has made multiple attempts to engage SOS and/ or ██████████ and/ or ██████████ to understand and assess how their interests may be affected by the planned activities to be carried out under the EP, but engagement attempts to date have been unsuccessful. Woodside has an ongoing consultation approach (refer to Section 4.4), whereby feedback and comments received continue to be assessed and responded to, as required, in accordance with the intended outcome of consultation (as set out above).</p> <p>Notwithstanding this, Woodside has assessed that Save Our Songlines and/ or ██████████ and/ or ██████████ may be an interested person or organisation.</p>	
Woodside Come Clean	Campaign website	<p>Woodside Come Clean is not a registered organisation (i.e. no Australian Business Number (ABN)) and has no contact details publicly available. As this is not a group or organisation, but rather a campaign website, it would not be reasonable for Woodside to consider relevance for the proposed activity, nor attempt to consult.</p> <p>Irrespective, Woodside has reviewed Woodside Come Clean's public website material and assessed that it 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 above).</p>	No

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5. ENVIRONMENTAL IMPACT AND RISK ASSESSMENT, PERFORMANCE OBJECTIVES, STANDARDS AND MEASUREMENT CRITERIA

Woodside undertook an environmental risk and impact assessment to understand the potential environmental impacts associated with the Petroleum Activities Program, and used Woodside standards and methods to ensure they are reduced to As Low As Reasonably Practicable (ALARP) and will be of an acceptable level. Control measures described below will be implemented to ensure risks and impacts are reduced to ALARP and an acceptable level.

Table 5-1 summarises the environmental impact assessment and relevant control measures for risks deemed credible to the Petroleum Activities Program.

Cumulative Impacts

Woodside has assessed the cumulative impacts of the Petroleum Activities Program in relation to other relevant petroleum activities which could realistically result in overlapping temporal and spatial extents (refer to **Section 3.4.9** and **3.4.11**). It is noted that other petroleum activities overlapping the Operational Area are operated by Woodside and will be managed under a SIMOPS plan.

In the EP, cumulative impact assessment has been carried out for:

- Routine acoustic emissions.
- Routine light emissions.
- Physical Presence (Unplanned) – Interaction with Marine Fauna.

Table 5-1: Environmental impact analysis summary of Activities.

Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
Planned Activities in State Waters (Routine and Non-routine)			
Physical Presence: Seabed Disturbance - Trenching, Spoil Disposal and Trunkline Backfill	<ul style="list-style-type: none"> Pre-lay trenching and spoil disposal Sand backfill and rock installation 	Physical removal and irreversible loss of subtidal benthic communities and habitat; temporary alteration of existing hydrodynamic regime; addition of new hard substrate through rock placement; reduced light penetration and inhibited feeding and breathing apparatus via elevated suspended sediments and sedimentation.	<ul style="list-style-type: none"> Implement a water quality monitoring program and Tiered Monitoring and Management Framework. Dredges and RIV are positioned within approved footprints using direct GPS prior to and during activities. Compliance with in-force Sea Dumping Permit (No. SD2019/3982 or amended). Manage turbidity generating activities during confirmed coral spawning windows in Mermaid Sound. BHD spuds positioned within trunkline corridor, where practical. Spoil ground A/B limited to BHD dredged spoil TSHD hopper door seals to be inspected prior to mobilisation. TSHD overflow fitted with 'green valves', with overflow pipes to be raised prior to transport. Activities (including test rock placements) to be limited to disturbance footprint. Heritage Management Committee established with representative from MAC to address new, relevant heritage information. Further analysis of side scan sonar to identify any new archaeological values Additional control measures will apply during coral spawning windows.
Physical Presence: Seabed Disturbance - Trunkline Installation	<ul style="list-style-type: none"> Trunkline installation in pre-excavated trench 	Temporary and localised displacement of surface sediments within existing footprint; provision of new hard substrate (trunkline); temporary seabed disturbance from anchor mooring systems; temporary alteration of existing hydrographic	<ul style="list-style-type: none"> Infrastructure placed on seabed within design footprint using positioning technology

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Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
and Nearshore Construction	<ul style="list-style-type: none"> Span rectification (e.g. installation of concrete mattresses, grout bags) Other construction activities (e.g. temporary groyne construction, trench bedding layer installation) Geotechnical surveys, ROV inspections & underwater acoustic positioning. 	regime (groyne); temporary change to water quality where geotechnical surveys and ROV activities occur close to seabed.	<ul style="list-style-type: none"> Anchoring procedure developed and implemented for the SWLB, including placement of anchors within defined development envelope. Wet parked items placed in development envelope, tracked and removed from seabed at activity completion. Heritage Management Committee established with representative from MAC to address new, relevant heritage information. Further analysis of side scan sonar to identify any new archaeological values.
Physical Presence – Displacement of Other Users	<ul style="list-style-type: none"> Interaction with other marine users – vessel operations Interaction with other users – helicopters 	Displacement of third-party vessels by the establishment of temporary exclusion zones; navigational hazard.	<ul style="list-style-type: none"> Vessels to adhere to the navigation safety requirements including the <i>Navigation Act 2012</i> and any subsequent Marine Orders, including surface buoys associated with the SWLB. Designation of applicable temporary exclusion zones around PIVs where applicable, which are communicated to marine users. Compliance with relevant requirement in the Port of Dampier Handbook. Activity notifications to relevant parties. Final trunkline alignment provided to relevant agencies and added to nautical charts. SIMOPs plan implemented
Routine Underwater Acoustic Emissions	<ul style="list-style-type: none"> Vessel operations Seabed intervention and construction and trunkline installation activities Geophysical sources during surveys (SBES, MBES, SSS) Positioning equipment (transponders) 	Direct physical effects on hearing and other organs of marine fauna (temporary or permanent); masking or interfering with other biologically important sounds such as vocal communication, echolocation, and signals and sounds made by predator or prey; causing disturbance leading to behavioural changes or displacement from BIAs.	<ul style="list-style-type: none"> Compliance with EPBC Regulations 2000 Part 8.1: Interacting with cetaceans (vessels) and Interacting with cetaceans (helicopters) Speed limits and approach limits in place for whale sharks. Maintenance regime for noise generating equipment, and PV thrusters, to ensure optimal performance.

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Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
Routine Vessel Light Emissions	<ul style="list-style-type: none"> Helicopters Light emissions from project vessels and equipment 	Increased light emissions at night can affect fauna behaviour and orientation. Artificial lighting has the potential to create a constant level of light at night that can behaviourally affect marine fauna by overriding natural levels and cycles. For species such as marine turtles and birds the artificial light may override natural cues, leading to disorientation.	<ul style="list-style-type: none"> Lighting limited to minimum required for navigational and safety requirements, with the exception of emergency events. Modification of activities (including lighting turned off when not in use or redirected) during peak turtle hatchling emergence periods. PIVs to use block-out blinds / curtains on accommodation windows at night when undertaking activities during peak turtle hatchling emergence periods (Dec to Mar). On the TSHD and RIV substitute or filter fluorescent lights with turtle friendly options to ALARP if activities are carried out during peak turtle hatchling emergence period (Dec to Mar). SWLB and BHD target to complete activities in the Operational Area outside of peak turtle hatchling emergence period (Dec to Mar).
Routine Atmospheric and Greenhouse Emissions – Offshore	<ul style="list-style-type: none"> Internal combustion engines and incinerators on project vessels 	Decline in local air quality, including odour and aesthetic value; contribution to global concentrations of GHG emissions.	<ul style="list-style-type: none"> Vessel compliance with Marine Order 97 (Marine Pollution Prevention – Air Pollution) Fuel consumption minimised where practicable. Project vessels will not use heavy fuel oil (HFO) or intermediate fuel oil (IFO) Identify, track and review GHG emissions reduction opportunities throughout Petroleum Activities Program.
Routine and Non-routine Discharges: Trunkline Dewatering (Wet Buckle Contingency)	<ul style="list-style-type: none"> Non-routine discharge to the marine environment 	Toxicological effects from discharged chemicals, ranging from the inhibition of key biological processes (e.g., reproduction) to mortality; highly localised change in water quality.	<ul style="list-style-type: none"> Chemicals selected with the lowest practicable environmental impacts and risk subject to technical constraints. <ul style="list-style-type: none"> All chemicals used to treat wet buckle water will be Hazard Quotient Colour Band 'Gold' (or OCNS Grouping E) with no substitution or product warnings

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Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
			<ul style="list-style-type: none"> • Development and implementation of pipeline contingency dewatering procedures. • Alarm and detection systems in place during pipelay installation. • If water treatment chemicals for contingent wet bucket activities differ to those outlined within the EP, new chemicals selected will meet a certain criteria
Routine and Non-Routine Discharges: Grey Water, Brine and Cooling Water	Routine and non-routine discharge to the marine environment of: <ul style="list-style-type: none"> • Grey water • Bilge water • Cooling water and brine 	Temporary and highly localised changes to marine water quality.	<ul style="list-style-type: none"> • Vessels comply with relevant Marine Orders including: <ul style="list-style-type: none"> – Marine Order 95 – pollution prevention – garbage (as appropriate to vessel class) – Marine Order 96 – pollution prevention – sewerage (as appropriate to vessel class) – Marine Order 91 – oil (ass appropriate to vessel class) • Compliance with relevant vessel discharge requirements in the Port of Dampier Handbook
Shore Crossing Land Disturbance	<ul style="list-style-type: none"> • Construction of a temporary groyne • Shore crossing excavation • Post lay activities, including backfill of the trench 	Habitat disturbance in a pre-disturbed industrial area (Pluto LNG Facility)	Petroleum activities will be limited to the trunkline Project Area The impact assessment determined that, in its current state, land disturbance from the shore crossing represent a negligible impact and is considered to be broadly acceptable in its current state. Therefore, Woodside considers standard operations appropriate to manage the impacts of land disturbance at the shore crossing to a level that is broadly acceptable

Unplanned Events in State Waters (Accidents/Incidents)

Accidental hydrocarbon release – vessel collision or grounding	Loss of hydrocarbons to marine environment due to vessel collision	Potential significant impacts to intertidal and subtidal marine environment such as physical impacts (adverse health impacts, mortality) to marine fauna and avifauna; oiling of breeding and	<ul style="list-style-type: none"> • Vessel compliance with relevant Marine Orders including: <ul style="list-style-type: none"> – Marine Order 30 – prevention of collisions
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Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
		nesting BIAs affecting wider population viability; impacts and long term recovery of marine primary producers; localised changes to community structure of shoreline habitats; changes to marine water quality.	<ul style="list-style-type: none"> - Marine Order 21 – safety and emergency arrangements - Marine Order 27 – safety of navigation and radio equipment • Development, testing, and implementation of the OSCP • Notification to relevant authorities prior to activity • Designation of temporary exclusion zones
Accidental hydrocarbon release – vessel bunkering	Loss of hydrocarbons to marine environment from vessel bunkering/refuelling	Minor physical impacts to benthic communities and habitats, megafauna, plankton and fish populations; localised medium term contact with shoreline habitats; limited access for tourism.	<ul style="list-style-type: none"> • Vessel compliance with relevant Marine Orders including: <ul style="list-style-type: none"> - Marine Order 91 – marine pollution prevention – oil • Bunkering equipment controls in place • Implementation of required contractor procedures for risk management during bunkering/refuelling • In the event of a spill as a result of vessel bunkering emergency response activities implemented in accordance with the OSCP as directed by the Control Agency
Unplanned Discharge: Chemicals and minor hydrocarbon spills (deck and subsea spills)	Accidental discharge to the ocean of other hydrocarbons/chemicals from project vessel deck activities and equipment (e.g. ROV), including subsea spills	Localised decreased water quality; physical impacts to marine fauna; temporary changes in behaviour.	<ul style="list-style-type: none"> • Vessel compliance with relevant Marine Orders including: <ul style="list-style-type: none"> - Marine Order 91 – marine pollution prevention - oil • Liquid chemical and fuel storage banded correctly and below deck where practicable • Chemicals selected with the lower practicable environmental impacts and risks subject to technical constraints • Spills kits positioned in high risk areas
Unplanned Discharge: Loss of Solid Hazardous and Non-hazardous	<ul style="list-style-type: none"> • Accidental loss of solid non-hazardous or hazardous 	Localised contamination of the marine environment including changes to marine water quality; physical	<ul style="list-style-type: none"> • Vessel compliance with relevant Marine Orders including:

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Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
Wastes/Equipment and Liquid Waste	wastes/equipment to the marine environment <ul style="list-style-type: none"> Accidental release of sewerage to the marine environment during backloading from the SWLB to a supply vessel 	impacts to marine fauna; temporary changes in behaviour.	<ul style="list-style-type: none"> Marine Order 95 – marine pollution prevention – garbage (as appropriate to vessel class) Marine Order 94 – packaged harmful substances (as appropriate to vessel class) Implementation of waste management procedures Use of ROV, crane or support vessel to attempt to recover lost solid wastes/equipment
Physical Presence – Unplanned Seabed Disturbance	<ul style="list-style-type: none"> Dredging, spoil disposal and backfill outside designated areas Dropped objects Excessive anchor drag Vessel grounding resulting in seabed disturbance 	Localised physical impacts to benthic communities; changes to water and sediment quality; changes to visual amenity of impacted area.	<ul style="list-style-type: none"> Vessel compliance with relevant Marine Orders including: <ul style="list-style-type: none"> Marine Order 30 – prevention of collisions Comply with in-force Sea Dumping Permit (No. SD2019/3982 or amended) Project vessels equipped with depth sounder Development and implementation of work procedures for lifts, bulk transfers and cargo loading. Recovery of dropped objects where safe and practicable to do so Use of positioning technology to ensure infrastructure placed within design footprint, and dredges and RIVs operate within approved footprints. Designated alarms on dredge vessels installed SWLB anchoring procedures developed and implemented Monitoring of trunkline touchdown point
Physical Presence: Interaction with Marine Fauna	<ul style="list-style-type: none"> Accidental collision between project vessels and protected marine fauna Accidental entrainment of marine fauna during pre-lay trenching 	Physical injury or mortality, or changes in behaviour of marine fauna.	<ul style="list-style-type: none"> Compliance with EPBC Regulations 2000 – Part 8 Division 8.1 Interacting with cetaceans Speed limits and approach limits in place for whale sharks

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Aspect	Source of Environmental Risk	Key Potential Environmental Impact	Summary of Control Measures
	<ul style="list-style-type: none"> Accidental smothering/burial of marine fauna from spoil disposal and backfill activities Accidental entrainment of marine fauna in seawater intakes for FCGT spread 		<ul style="list-style-type: none"> Compliance of marine species observations set out in in force Sea Dumping Permit (No. SD2019/3982 or amended). Adhesion to defined observation and exclusion zones for the TSHD trenching and spoil disposal activities. TSHD drag head fitted with turtle deflection chains, and dredge pumps stop as soon as practicable after drag head lifted from sea floor at tend of run.
Introduction of invasive marine species (IMS)	<ul style="list-style-type: none"> Introduction and establishment of IMS to the Operational Area through Project vessel biofouling and ballast water exchange. 	Potential introduction and establishment of invasive marine species resulting in alteration of the localised environment	<ul style="list-style-type: none"> Compliance with Australian Ballast Water Management Requirements. Implementation of Woodside's Invasive Marine Species risk assessment process which identifies potential risks and additional controls to minimise the likelihood of introducing IMS. DPIRD Vessel check to be completed for all applicable internationally sourced project vessels Internationally sourced TSHD and BHD to be dry docked prior to first mobilisation to the Project.

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6. IMPLEMENTATION STRATEGY

6.1 Systems, Practice and Procedures

Operational activities are planned and carried out in accordance with relevant legislation and standards, management measures (i.e., controls) identified in the EP and internal environment standards and procedures (**Section 5**).

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 the EP are drawn from the WMS documentation, which comprises the following four elements:

- **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.

Management of Change

Woodside's Change Management Procedure describes Woodside's requirements for change management at Woodside owned or controlled operations. Changes relevant to the EP will be managed in accordance with the Change Management Procedure. Such changes may concern activity description, including review of advances in technology, new equipment selected, changes in understanding of the environment, and potential new advice from external stakeholders.

In the event of a change to Woodside's nominated liaison person, or a change to the contact details for the titleholder or the nominated liaison person, Woodside will notify DMIRS of the change in writing as soon as practicable.

6.2 Roles and Responsibilities

Key roles and responsibilities for Woodside and Contractor personnel in implementing, managing and reviewing the EP are described in **Table 6-1**.

Table 6-1: Roles and Responsibilities

Title (role)	Environmental Responsibilities Related to the EP
Office-based Personnel	
Woodside Project Manager (or delegate/s)	<ul style="list-style-type: none"> • Monitor and manage the activity so it is undertaken as per the relevant standards and commitments in this EP. • Notify the Woodside Environment Adviser of any scope changes in a timely manner. • Liaise with regulatory authorities as required. • Review this EP as necessary and manage change requests.

Title (role)	Environmental Responsibilities Related to the EP
	<ul style="list-style-type: none"> • Ensure all relevant project and support vessel crew members complete an HSE induction. • Verify that contractors meet environmental related contractual obligations. • Confirm environmental incident reporting meets regulatory requirements (as outlined in this EP) and Woodside's Health, Safety and Environment Reporting and Investigation Procedure. • Monitor and close out corrective actions identified during environmental monitoring or audits
Woodside Environmental Adviser	<ul style="list-style-type: none"> • Verify relevant Environmental Approvals for the activities exist prior to commencing activity. • Track compliance with performance objectives and performance standards as per the requirements of this EP. • Prepare environmental component of relevant Induction Package. • Assist with the review, investigation and reporting of environmental incidents. • Ensure environmental monitoring and inspections/audits are undertaken as per the requirements of this EP. • Liaise with relevant regulatory authorities as required. • Assist in preparation of external regulatory reports required, in line with environmental approval requirements and Woodside incident reporting procedures. • Monitor and close out corrective actions (Campaign Action Register (CAR)) identified during environmental monitoring or audits. • Provide advice to relevant Woodside personnel and contractors to assist them to understand their environment responsibilities. • Liaise with primary installation contractors to ensure communication and understanding of environment requirements as outlined in this EP and in line with Woodside's Compass values and management systems.
Woodside Corporate Affairs Adviser	<ul style="list-style-type: none"> • Prepare and implement the Stakeholder Consultation Plan for the Petroleum Activities Program. • Report on stakeholder consultation. • Ongoing stakeholder liaison as required
Woodside Marine Assurance Superintendent	<ul style="list-style-type: none"> • Conducts relevant audit and inspection to confirm vessels comply with relevant Marine Orders and Woodside Marine Charters Instructions requirements to meet safety, navigation and emergency response requirements.
Woodside 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"> • establish and take control of the IMT and establish an appropriate command structure for the incident • assess situation, identify risks and actions to minimise the risk • communicate impact, risk and progress to the Crisis Management Team and stakeholders • develop the incident action plan (IAP) including setting objectives for action • approve, implement and Manage the IAP • communicate within and beyond the incident management structure • manage and review safety of responders • address the broader public safety considerations • conclude and review activities.

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Title (role)	Environmental Responsibilities Related to the EP
Site/Vessel-based Personnel	
Vessel Master	<ul style="list-style-type: none"> • Ensure the vessel management system and procedures are implemented. • Ensure personnel commencing work on the vessel receive an induction that meets the relevant requirements specified in this EP. • Ensure personnel are competent to undertake the work they have been assigned. • Verify SOPEP drills are conducted as per the vessel's schedule. • Ensure the vessel Emergency Response Team (ERT) has been given sufficient training to implement the SOPEP. • Ensure any environmental incidents or breaches of relevant Environmental Performance Objectives or performance standards detailed in this EP, are reported immediately to the Woodside Site Representative. • Ensure corrective actions for incidents or breaches are developed, communicated to the Woodside Site Representative, and tracked to close out in a timely manner. Close out of actions is communicated to the Woodside Site Representative.
Construction Manager*	<ul style="list-style-type: none"> • Confirm that activities are undertaken in accordance with this EP, as detailed in the Woodside approved Contactor Environmental Management Plan. • Ensure personnel commencing work on the project receive a relevant induction that meets the requirements specified in this EP. • Ensure personnel are competent to undertake the work they have been assigned • Ensure any environmental incidents or breaches of objectives, standards or criteria outlined in this EP, are reported immediately to the Woodside Site Representative (WSR) / Resident Engineer or Vessel Master.
Logistics Coordinators	<ul style="list-style-type: none"> • Ensure waste is managed on the relevant vessels and sent to shore as per the relevant Waste Management Plan.
Woodside Site Representative (WSR) / Resident Engineer*	<ul style="list-style-type: none"> • Ensure activities are undertaken as detailed in this EP. • Ensure the EPOs are met and the PSs detailed in this EP are implemented on site. • Ensure environmental incidents or breaches of objectives, standards or criteria outlined in this EP, are reported as per the Woodside Corporate Event Notification Matrix and corrective actions for incidents and breaches are tracked and closed out in a timely manner. • Verify HSE improvement actions identified during the project are implemented where practicable • Ensure periodic environmental inspections are completed.
HSE Advisers*	<ul style="list-style-type: none"> • Support the Woodside Site Representative to ensure the controls detailed in this EP are implemented and help collect and record evidence of implementation. • Support the Woodside Site Representative to ensure the EPOs are met and the PSs detailed in this EP are implemented on site. • Support the Woodside Site Representative to ensure environmental incidents or breaches of objectives or standards outlined in this EP, are reported, and corrective actions for incidents and breaches are tracked and closed out in a timely manner. • Support the completion of periodic environmental inspections/reviews, with corrective actions from inspections tracked and closed out in a timely manner. • Review contractors' procedures, input into Toolbox talks and JSAs. • Provide day-to-day environmental support for activities in consultation with the Woodside Environment Adviser.

* *Apply to PV and construction vessel(s) – other vessels in the Petroleum Activities Program will have different levels of crewing. Where named roles are not present onboard, responsibilities will fall to the PV or construction vessel personnel who will manage the other vessels accordingly.

6.3 Decommissioning

Decommissioning is a planned activity for the offshore oil and gas industry. Woodside's process for decommissioning planning follows the current best practice for decommissioning to assist with the compliance with s104(2) of the Petroleum (Submerged Lands) Act 1982 and is aligned with the Guideline for the *Development of Petroleum, Geothermal and Pipeline Environment Plans in Western Australia* (DMIRS 2022). Decommissioning planning generally commences in the early project phases (before project approvals) and continue through exploration, construction and operations. The timeframe selected for decommissioning planning depends on the complexity for the infrastructure requiring decommissioning.

To ensure compliance with s104(2) of the *Petroleum (Submerged Lands) Act 1982*, and for consistency with the *Guideline for the Development of Petroleum, Geothermal and Pipeline Environment Plans in Western Australia* (DMIRS 2022), consideration has been given to decommissioning requirements including:

- Post activity land use,
- Closure objectives,
- Completion criteria,
- Collection and analysis of closure data, and
- Proposed rehabilitation and closure monitoring and maintenance.

In proactively planning for decommissioning, information has been collated within a Scarborough Decommissioning Strategy, for major and ancillary infrastructure; specifications, compositions, decommissioning critical systems, Infrastructure Maintenance Monitoring and Repair (IMMR) management plans and feasibility of infrastructure removal options.

This information will be reviewed for accuracy and regulatory compliance prior to start-up, before being captured in Maintenance Builds/Plans and handed over to Production for continual management throughout field life. Ancillary equipment will be tracked and inventoried in the same way, and removal options will be subject to future decommissioning planning as per Woodside's Process for Decommissioning Planning.

6.4 Training and Competency

As part of its contracting process Woodside undertakes assessments of a proposed Contractor's environmental management system to determine the level of compliance with the standard AS/NZS ISO 14001. This assessment is undertaken 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 during inductions is required for all personnel, detailing awareness and compliance with the Contractor's environmental policy and environmental management system.

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 are maintained.

6.5 Monitoring and Management of Compliance

Monitoring is conducted during an activity to monitor compliance against the environmental performance objectives, environmental performance standards and measurement criteria which are

developed based on the impacts, risks and associated controls described above. These are reviewed throughout the life of the EP to identify opportunities for improvement.

Any non-conformances with the environmental performance objectives and environmental performance standards in the EP are classified as environmental incidents. These are reported and managed in accordance with Woodside's Health, Safety and Environment Event Reporting and Investigation Procedure and the EP.

All emissions and discharges to the environment from vessels will be monitored to assess the environmental performance, as required in the EP.

Throughout this activity, Woodside will continuously identify new source-based risks and impacts through Monitoring and Auditing systems and tools.

6.5.1.1 Tiered Monitoring and Management Framework

In line with Condition 6.2 of Ministerial Statement No. 1172 Woodside has developed a Dredging and Spoil Disposal Management Plan (DSDMP) which details the tiered monitoring and management framework (TMMF) and relevant monitoring plans for managing impacts to marine environmental quality, benthic communities and habitats and marine fauna from trenching, spoil disposal, backfill and associated activities; and details actions to be implemented during the Petroleum Activities Program. The DSDMP has been developed in consultation with MAC.

6.5.1.2 Management of Cultural Heritage

In accordance with Condition 7.2 of Ministerial Statement No. 1172, the Scarborough Project will implement a Cultural Heritage Management Plan (CHMP) which will align with Woodside's Cultural Heritage Management Procedure and supplements the Pluto LNG Cultural Heritage Management Plan - Commissioning and Operations Phase and the Pluto Expansion Cultural Heritage Management Plan. The CHMP has been developed in consultation with MAC.

6.6 Reporting

To meet the environmental performance objectives and standards outlined in the EP, Woodside reports at a number of levels. Internal reporting includes:

- Daily progress reports and meetings
- Regular HSE meetings
- Performance reporting

External routine reporting also occurs, which includes documenting:

- Environmental performance review and reporting
- Incident reporting
- Quarterly emissions and discharges reporting (including greenhouse gas emissions).

6.7 Emergency Preparedness and Response

Woodside has detailed Oil Pollution Emergency Arrangements and Hydrocarbon Spill Preparedness and Response Procedures. These are supported by various plans that detail the actions and resources available in the event of various emergency scenarios.

Vessels are required to have a Ship Oil Pollution Emergency Plan (SOPEP) in accordance with the requirements of the Australian Marine Orders. These plans outline responsibilities, specify procedures and identify resources available in a hydrocarbon or chemical spill from vessel activities.

The Scarborough Trunkline Installation (State Waters) Hydrocarbon Spill First Strike Plan provides immediate actions required to commence a response if hydrocarbons are released to the marine

environment and would be implemented in conjunction with the SOPEP and the Tactical Response Plans that have been developed for priority protection areas.

In the event of a major spill, the Department of Transport (DoT) as the administrator of the State Hazard Plan Maritime Environmental Emergencies provides support to Woodside through advice and access to equipment, people and liaison. The interface and responsibilities are described in the Oil Pollution Emergency Arrangements and the Scarborough Trunkline Installation (State Waters) Hydrocarbon Spill First Strike Plan.

In the event of a Level 2/3 spill, the role of Controlling Agency may be appointed to either DoT or the Pilbara Ports Authority (PPA) and will be determined by the Jurisdictional Authority (DoT) in consultation with the PPA. The Controlling Agency will be the agency deemed most capable of performing the role of Controlling Agency. The Controlling Agency will appoint an Incident Controller and form a separate Incident Management Team.

6.7.1 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 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, where appropriate.

6.7.2 Hydrocarbon Spill Testing of Arrangements

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 in hydrocarbon spill response.
- 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.

The hydrocarbon spill arrangements 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). Testing methods may include audits, drills, field exercises, functional workshops, assurance reporting, assurance monitoring and review of key external dependencies. Hydrocarbon spill arrangements will be tested over a 3-year rolling schedule

6.7.3 Cyclone and Dangerous Weather Preparation

As the timing of some activities associated with the Petroleum Activities Program are not yet determined, it is possible seabed intervention and trunkline installation activities will overlap with the cyclone season (November to April, with most cyclones occurring between January and March). If conducting activities in cyclone season, the 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 project 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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APPENDIX A

Threatened and migratory marine and terrestrial species identified by the EPBC Act Protected Matters Search Tool as potentially occurring within the Operational Area or EMBA

Species name	Common name	Threatened status under the Biodiversity Conservation Act	Threatened status under the EPBC Act	Migratory status	Potential for interaction	
					Operational Area	EMBA
Marine mammals						
<i>Balaenoptera musculus</i>	Blue whale	Endangered	Endangered	Migratory	✓	✓
<i>Megaptera novaeangliae</i>	Humpback whale	Conservation Dependent	N/A	Migratory	✓	✓
<i>Balaenoptera edeni</i>	Bryde's whale	Not listed	N/A	Migratory	✓	✓
<i>Orcinus orca</i>	Killer whale	Not listed	N/A	Migratory	✓	✓
<i>Sousa sahalensis</i> as <i>Sousa chinensis</i>	Australian humpback dolphin	Not listed	N/A	Migratory	✓	✓
<i>Tursiops aduncus</i>	Spotted bottlenose dolphin (Arafua/Timor sea populations)	Not listed	N/A	Migratory	✓	✓
<i>Dugong dugon</i>	Dugong	Other specially protected fauna	N/A	Migratory	✓	✓
<i>Balaenoptera borealis</i>	Sei whale	Endangered	Vulnerable	Migratory	X	✓
<i>Balaenoptera physalus</i>	Fin whale	Endangered	Vulnerable	Migratory	X	✓
<i>Eubalaena australis</i>	Southern right whale	Vulnerable	Endangered	Migratory	X	✓
<i>Balaenoptera bonaerensis</i>	Antarctic minke whale	Not listed	N/A	Migratory	X	✓
<i>Physeter macrocephalus</i>	Sperm whale	Vulnerable	N/A	Migratory	X	✓
<i>Orcaella heinsohni</i>	Australian snubfin dolphin	Priority	N/A	Migratory	X	✓
<i>Stenella longirostris</i>	Spinner dolphin	Priority	N/A	Migratory	X	✓
Fish						
<i>Rhincodon typus</i>	Whale shark	Other specially protected fauna	Vulnerable	Migratory	✓	✓
<i>Carcharodon carcharias</i>	White shark	Vulnerable	Vulnerable	Migratory	✓	✓

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Species name	Common name	Threatened status under the Biodiversity Conservation Act	Threatened status under the EPBC Act	Migratory status	Potential for interaction	
					Operational Area	EMBA
<i>Pristis clavata</i>	Dwarf sawfish	Not listed	Vulnerable	Migratory	✓	✓
<i>Pristis zijsron</i>	Green sawfish	Vulnerable	Vulnerable	Migratory	✓	✓
<i>Carcharias taurus</i>	Grey nurse shark	Vulnerable	Vulnerable	N/A	✓	✓
<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	Not listed	N/A	Migratory	✓	✓
<i>Anoxypristis cuspidata</i>	Narrow sawfish	Not listed	N/A	Migratory	✓	✓
<i>Manta alfredi</i>	Reef manta ray	Not listed	N/A	Migratory	✓	✓
<i>Manta birostris</i>	Giant manta ray	Not listed	N/A	Migratory	✓	✓
<i>Sphyrna lewini</i>	Scalloped hammerhead	Not listed	Conservation Dependent	N/A	✓	✓
<i>Thunnus maccoyii</i>	Southern bluefin tuna	Not listed	Conservation Dependent	N/A	✓	✓
<i>Isurus oxyrinchus</i>	Shortfin mako	Not listed	N/A	Migratory	X	✓
<i>Isurus paucus</i>	Longfin mako	Not listed	N/A	Migratory	X	✓
Seabirds						
<i>Macronectes halli</i>	Northern giant-petrel	Vulnerable	N/A	Migratory	✓	✓
<i>Anous stolidus</i>	Common noddy	N/A	N/A	Migratory	✓	✓
<i>Ardenna pacifica</i>	Wedge-tailed shearwater	N/A	N/A	Migratory	✓	✓
<i>Calonectris leucomelas</i>	Streaked shearwater	N/A	N/A	Migratory	✓	✓
<i>Fregata ariel</i>	Lesser frigatebird	N/A	N/A	Migratory	✓	✓
<i>Pandion haliaetus</i>	Osprey	N/A	N/A	Migratory	✓	✓
<i>Hydrobates madsenrae</i>	Matsudaira's storm-petrel	Not listed	N/A	Migratory	X	✓
<i>Thalassarche cauta steadi</i>	White-capped albatross	Vulnerable	Vulnerable	Migratory	X	✓
<i>Onychoprion anaethetus</i>	Bridled tern	N/A	N/A	Migratory	X	✓
<i>Fregata minor</i>	Great frigatebird	Not listed	N/A	Migratory	X	✓
<i>Sternula albifrons</i>	Little tern	Not listed	N/A	Migratory	✓	✓
<i>Ardenna carneipes</i>	Flesh-footed shearwater	Vulnerable	N/A	Migratory	X	✓
<i>Sula dactylatra</i>	Masked booby	N/A	N/A	Migratory	X	✓

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Species name	Common name	Threatened status under the Biodiversity Conservation Act	Threatened status under the EPBC Act	Migratory status	Potential for interaction	
					Operational Area	EMBA
<i>Sula leucogaster</i>	Brown booby	N/A	N/A	Migratory	✓	✓
<i>Thalasseus bergii</i>	Crested tern	N/A	N/A	Migratory	✓	✓
<i>Anous tenuirostris melanops</i>	Australian lesser noddy	Endangered	Vulnerable	N/A	X	✓
<i>Chlidonias leucopterus</i>	White-winged tern	N/A	N/A	Migratory	✓	✓
<i>Gelochelidon nilotica</i>	Gull-billed tern	N/A	N/A	Migratory	✓	✓
<i>Sternula nereis</i>	Australian fairy tern	Vulnerable	Vulnerable	N/A	✓	✓
<i>Hydroprogne caspia</i>	Caspian tern	N/A	N/A	Migratory	✓	✓
<i>Sterna dougallii</i>	Roseate tern	N/A	N/A	Migratory	✓	✓
<i>Oceanites oceanicus</i>	Wilson's storm-petrel	N/A	N/A	Migratory	✓	✓
<i>Phaethon lepturus</i>	White-tailed tropicbird	N/A	N/A	Migratory	X	✓
<i>Phaethon rubricauda</i>	Red-tailed tropic bird	N/A	Priority	Migratory	X	✓
<i>Puffinus huttoni</i>	Hutton's shearwater	Endangered	N/A	N/A	X	✓
<i>Sterna hirundo</i>	Common tern	N/A	N/A	Migratory	X	✓
<i>Thalasseus bengalensis</i> as <i>Sterna bengalensis</i>	Lesser crested tern	N/A	N/A	Migratory	✓	✓
Shorebirds						
<i>Calidris ferruginea</i>	Curlew sandpiper	Critically Endangered	Critically Endangered	Migratory	✓	✓
<i>Numenius madagascariensis</i>	Eastern curlew	Critically Endangered	Critically Endangered	Migratory	✓	✓
<i>Calidris canutus</i>	Red knot	Endangered	Endangered	Migratory	✓	✓
<i>Actitis hypoleucos</i>	Common sandpiper	N/A	N/A	Migratory	✓	✓
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	N/A	N/A	Migratory	✓	✓
<i>Calidris melanotos</i>	Pectoral sandpiper	N/A	N/A	Migratory	✓	✓
<i>Charadrius veredus</i>	Oriental plover	N/A	N/A	Migratory	✓	✓
<i>Glareola maldivarum</i>	Oriental pratincole	N/A	N/A	Migratory	✓	✓
<i>Tringa nebularia</i>	Common greenshank	N/A	N/A	Migratory	✓	✓
<i>Arenaria interpres</i>	Ruddy turnstone	N/A	N/A	Migratory	✓	✓
<i>Calidris alba</i>	Sanderling	N/A	N/A	Migratory	X	✓

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Species name	Common name	Threatened status under the Biodiversity Conservation Act	Threatened status under the EPBC Act	Migratory status	Potential for interaction	
					Operational Area	EMBA
<i>Calidris ruficollis</i>	Red-necked stint	N/A	N/A	Migratory	✓	✓
<i>Calidris tenuirostris</i>	Great knot	Critically Endangered	Critically Endangered	Migratory	✓	✓
<i>Charadrius leschenaultii</i>	Greater sand plover	Vulnerable	Vulnerable	Migratory	✓	✓
<i>Limicola falcinellus</i>	Broad-billed sandpiper	N/A	N/A	Migratory	X	✓
<i>Numenius minutus</i>	Little curlew	N/A	N/A	Migratory	✓	✓
<i>Numenius phaeopus</i>	Whimbrel	N/A	N/A	Migratory	✓	✓
<i>Phalaropus lobatus</i>	Red-necked phalarope	N/A	N/A	Migratory	X	✓
<i>Plegadis falcinellus</i>	Glossy ibis	N/A	N/A	Migratory	X	✓
<i>Pluvialis fulva</i>	Pacific golden plover	N/A	N/A	Migratory	✓	✓
<i>Pluvialis squatarola</i>	Grey plover	N/A	N/A	Migratory	✓	✓
<i>Tringa brevipes</i>	Grey-tailed tattler	Priority	N/A	Migratory	✓	✓
<i>Tringa glareola</i>	Wood sandpiper	N/A	N/A	Migratory	X	✓
<i>Tringa stagnatilis</i>	Marsh sandpiper	N/A	N/A	Migratory	X	✓
<i>Xenus cinereus</i>	Terek sandpiper	N/A	N/A	Migratory	✓	✓
<i>Limnodromus semipalmatus</i>	Asian dowitcher	N/A	N/A	Migratory	X	✓
<i>Limosa lapponica</i>	Bar-tailed godwit	N/A	N/A	Migratory	X	✓
<i>Limosa limosa</i>	Black-tailed godwit	N/A	N/A	Migratory	X	✓
<i>Tringa totanus</i>	Common redshank	N/A	N/A	Migratory	X	✓
<i>Rostratula australis</i>	Australian painted snipe	Endangered	Endangered		✓	✓

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