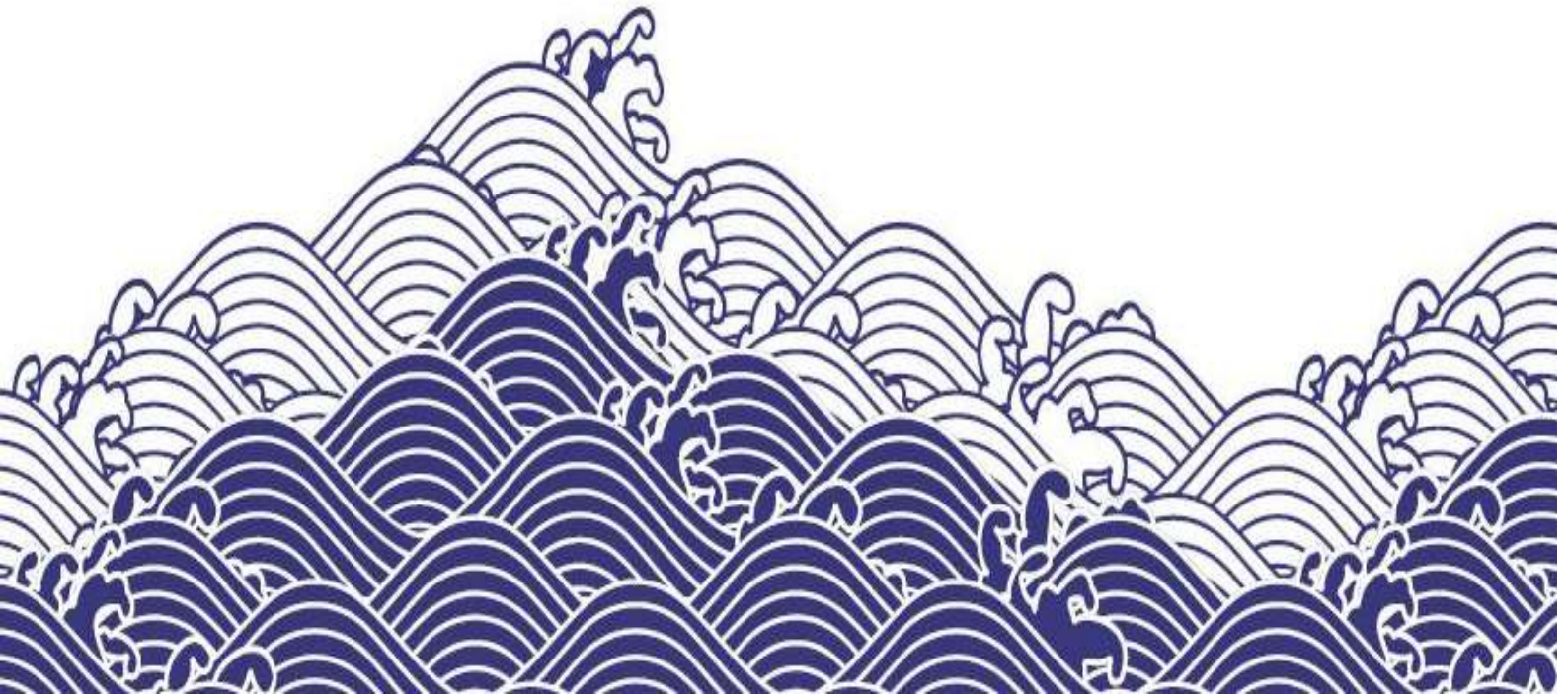
# Ichthys Phase 2 Development
# Drilling Environment Plan



## Acknowledgement

INPEX is committed to recognising and respecting Aboriginal and Torres Strait Islander peoples whose cultures have existed in Australia for tens of thousands of years.

We wish to pay respects to their Elders – past and present – and acknowledge the important role Aboriginal and Torres Strait Islander peoples continue to play in the development of our business in Australia.

## Environment plan summary

This environment plan summary has been prepared from material provided in this environment plan (EP). The summary consists of the following as required by Regulation 35(7) of the OPGGS (E) Regulations 2023:

| EP summary and material requirement | Relevant section of EP containing EP summary material |
|---|---|
| The location of the activity | Section 3.1 |
| A description of the receiving environment | Section 4 |
| A description of the activity | Section 3 |
| Details of the environmental impacts and risks | Sections 7 and 8 |
| The control measures for the activity | Sections 7 and 8 |
| The arrangements for ongoing monitoring of the titleholders environmental performance | Sections 9.11, 9.12 and 9.13 |
| Response arrangements in the oil pollution emergency plan | Sections 8.2, 8.3 and INPEX Browse Regional OPEP |
| Consultation already undertaken and plans for ongoing consultation | Sections 5 and 9.8.3 |
| Details of the titleholders nominated liaison person for the activity | Section 1.5 |

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## Terms, abbreviations and acronyms

| Term, abbreviation or acronym | Meaning |
|---|---|
| °C | degrees Celsius |
| ABARES | Australian Bureau of Agricultural and Resource Economics and Sciences |
| AEP | Australian Energy Producers formerly APPEA |
| AFMA | Australian Fisheries Management Authority (Cwlth) |
| AFZ | Australian fishing zone |
| AHD | Australian height datum |
| AHSV | anchor-handling support vessel |
| AHO | Australian Hydrographic Office |
| AIMS | Australian Institute of Marine Science |
| AIS | automatic identification system |
| ALARP | as low as reasonably practicable |
| AMP | Australian marine park |
| AMSA | Australian Maritime Safety Authority (Cwlth) |
| API | American Petroleum Institute |
| APPEA | Australian Petroleum Production and Exploration Association |
| AR-AFFF | alcohol resistant aqueous film-forming foam |
| ARMA | Aquatic Resources Management Act |
| ARP | applied research program |
| AS/NZS | Australian/New Zealand Standard |
| AUCHD | Australasian underwater cultural heritage database |
| bbl | barrel |
| BIA | biologically important area |
| BMS | business management system |
| BoM | Bureau of Meteorology |
| Bonn Agreement | Bonn Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and other harmful substances |
| BOP | blow-out preventer |

| Term, abbreviation or acronym | Meaning |
|---|---|
| BROPEP | INPEX's Browse Regional Oil Pollution Emergency Plan |
| BROPEP BOD/FCA | Browse Regional Oil Pollution Emergency Plan - Basis of Design and Field Capability Assessment |
| BROPEP IMTCA | Browse Regional Oil Pollution Emergency Plan – Incident Management Team Capability Assessment |
| BWM | ballast water management |
| BWM Convention | International Convention for the Control and Management of Ships' Ballast Water and Sediments |
| CFC | chlorofluorocarbon |
| CHARM | chemical hazard assessment and risk management |
| COLREGs | International Regulations for Preventing Collisions at Sea 1972 |
| CPF | central processing facility |
| CTS | craft tracking system |
| CW | cooling water |
| Cwlth | Commonwealth |
| CWOR | completion workover riser |
| DAFF | Department of Agriculture, Fisheries and Forestry (Cwlth) |
| dB | decibel |
| DBCA | Department of Biodiversity, Conservation and Attractions (WA) |
| DCCEEW | Department of Climate Change, Energy, the Environment and Water (Cwlth) |
| DFAT | Department of Foreign Affairs and Trade (Cwlth) |
| DEMIRS | Department of Energy, Mines, Industry Regulation and Safety WA |
| DNP | Director of National Parks (Cwlth) |
| DP | dynamically positioned |
| EAA | East Asian-Australasian |
| EDP | emergency disconnect package |
| EERS | emissions and energy reporting system |

| Term, abbreviation or acronym | Meaning |
|---|---|
| EEZ | exclusive economic zone |
| EHS | environment, health and safety |
| EIAPP | Engine International Air Pollution Prevention |
| EMBA | environment that may be affected |
| EP | environment plan |
| EPBC Act | *Environment Protection and Biodiversity Conservation Act* 1999 (Cwlth) |
| EPBC Regulations | Environment Protection and Biodiversity Conservation Regulations 2000 |
| EPEI | extent of potential ecological impacts |
| EPO | environmental performance outcome |
| EPS | environmental performance standard |
| ESD | ecological sustainable development |
| FFFP | film forming fluoroprotein foam |
| FLNG | floating liquified natural gas |
| FPSO | floating production storage and offtake |
| $g/m^2$ | grams per square metre |
| $g/m^3$ | grams per cubic metre |
| GEP | gas export pipeline |
| GERB | gas export riser base |
| GHG | greenhouse gas |
| GT | gross tonnes |
| ha | hectare |
| hi-vis | high viscosity |
| HQ | hazard quotient |
| HSE | health, safety and environment |
| Hz | hertz |
| IAPP | International Air Pollution Prevention |
| IBA | important bird area |

| Term, abbreviation or acronym | Meaning |
|---|---|
| IMO | International Maritime Organization |
| IMR | inspection, maintenance and repair |
| IMS | invasive marine species |
| INPEX Ichthys Pty Ltd | INPEX Ichthys Pty Ltd is one of the upstream titleholders and Joint venture partners of petroleum licence area WA-50-L |
| IOGP | International Association of Oil and Gas Producers |
| IOPP | International Oil Pollution Prevention |
| IPA | Indigenous Protected Area |
| ISO | International Organization for Standardization |
| ISPPC | International Sewage Pollution Prevention Certificate |
| IUCN | International Union for Conservation of Nature |
| JRCC | joint rescue coordination centre |
| KEF | key ecological feature |
| kHz | kilohertz |
| km | kilometre(s) |
| L | litre(s) |
| LAT | lowest astronomical tide |
| LBL | long base line |
| licence area | production licence WA-50-L |
| LLR | lower limits of reporting |
| LNG | liquefied natural gas |
| LRP | lower riser package |
| LWI | light well intervention |
| $m^2$ | square metres |
| $m^3$ | cubic metres |
| m/s | metres per second |
| MARPOL | International Convention for the Prevention of Pollution from Ships, 1973/1978 |
| MEG | monoethlyene glycol |

| Term, abbreviation or acronym | Meaning |
|---|---|
| mg/L | milligrams per litre |
| MGO | marine gas oil |
| MMO | marine mammal observer |
| MMscf | million standard cubic feet |
| MNES | Matters of National Environmental Significance |
| MoC | management of change |
| MODU | mobile offshore drilling unit which may be semi-submersible (moored or DP) or a drillship |
| MoU | memorandum of understanding |
| MP | marine park |
| MSI | Maritime Safety Information |
| NDC | nationally determined contribution |
| nm | nautical miles |
| NOPSEMA | National Offshore Petroleum Safety and Environmental Management Authority |
| NOPTA | National Offshore Petroleum Titles Administrator |
| NORM | Naturally occurring radioactive material |
| NOx | mono-nitrogen oxides |
| NT | Northern Territory |
| NWCS | North-west cable system |
| NWMR | north-west marine region |
| NWS | north-west shelf |
| OCNS | Offshore Chemical Notification Scheme |
| ODS(s) | ozone-depleting substance(s) |
| OEM | original equipment manufacturer |
| OIM | offshore installation manager |
| OIW | oil in water |
| OoDC | oil-on-dry cuttings |
| OPEP | oil pollution emergency plan |

| Term, abbreviation or acronym | Meaning |
|---|---|
| OPGGS Act | *Offshore Petroleum and Greenhouse Gas Storage Act* 2006 (Cwlth) |
| OPGGS (E) Regulations | Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (Cwlth) |
| OSM BIP | operational and scientific monitoring bridging implementation plan |
| OSPAR | The 1992 OSPAR Convention ("Convention for the protection of the marine environment of the north-east Atlantic") |
| OWD | oil-in-water dispersions |
| OWS | oil-water separator |
| PAH(s) | polycyclic aromatic hydrocarbon(s) |
| PDCA | plan, do check, act |
| PFAS | per-and polyfluoroalkyl substances |
| PLONOR | pose little or no risk (to the environment) |
| POTS Act | *Protection of the Sea (Prevention of Pollution from Ships) Act* 1983 |
| ppb | parts per billion |
| PPE | personal protective equipment |
| ppm | parts per million |
| ppm(v) | parts per million by volume |
| ppt | parts per thousand |
| PSV | platform supply vessel |
| PSZ | petroleum safety zone |
| PTS | permanent threshold shift |
| PTW | permit to work |
| PW | produced water |
| QA/QC | quality assurance and quality control |
| Ramsar Convention | The Convention on Wetlands of International Importance, especially as Waterfowl Habitat (the Ramsar Convention) |
| RCC | rescue coordination centre |
| RMR | riserless mud return |

| Term, abbreviation or acronym | Meaning |
|---|---|
| RO | reverse osmosis |
| ROV | remotely operated (underwater) vehicle |
| SBM | synthetic-based mud |
| SCSSV | surface controlled subsurface safety salve |
| SEEMP | Ship Energy Efficiency Management Plan |
| SIMA | spill impact mitigation assessment |
| SIMOPs | simultaneous operations |
| SME | subject matter expert |
| SOLAS | International Convention for the Safety of Life at Sea |
| SOPEP | shipboard oil pollution emergency plan |
| SPL | sound pressure level |
| SPRAT | species profile and threats |
| SPS | subsea production system |
| SSS | side-scan sonar |
| STP | sewage treatment plant |
| T | Tonne |
| t/d | tonnes per day |
| TD | total depth |
| $tC0_2$-e | tonnes of carbon dioxide equivalent |
| THS | tubing head spool |
| TPH | total petroleum hydrocarbons |
| TSS | total suspended solids |
| TTS | temporary threshold shift |
| UNEP | United Nations Environment Programme |
| USBL | ultra-short baseline |
| VOC(s) | volatile organic compound(s) |
| WA | Western Australia |
| WA-50-L | production licence area within the Browse Basin |

| Term, abbreviation or acronym | Meaning |
|---|---|
| WA DoT | Western Australian Department of Transport |
| WA DPIRD | Western Australian Department of Primary Industries and Regional Development |
| WA EPA | Western Australian Environmental Protection Authority |
| WAFIC | Western Australian Fishing Industry Council |
| WBM | water based mud |
| WCSS | worst credible spill scenario |
| WCWBS | worst credible well blowout scenario |
| WHO | World Health Organisation |
| WOMP | well operations management plan |
| wt/dry wt | weight per dry weight |
| XT | xmas tree |
| µg/L | micrograms per litre |
| µPa | micropascal |

# 1 INTRODUCTION

## 1.1 Overview

INPEX Ichthys Pty Ltd, on behalf of the Ichthys Upstream Unincorporated Joint Venture Participants, is developing the Ichthys Field in the Browse Basin off the north-west coast of Western Australia (WA) to produce condensate offshore for export to markets in Japan and elsewhere, and export gas for further processing at the Ichthys liquefied natural gas (LNG) plant in Darwin (Figure 1-1).

INPEX is preparing to expand capacity with further development of the Ichthys Field, as approved under the Ichthys LNG Project Commonwealth approval decision (EPBC 2008/4208), with approval granted for up to 50 wells across 12 – 15 drill centres.

Initial development wells were drilled and the Ichthys LNG offshore facilities were installed and commissioned from 2014 through 2018. The assets commenced production in July 2018 and now routinely ship cargoes of condensate from the floating production storage and offtake (FPSO) to international customers and sends gas to the Darwin plant via the Gas Export Pipeline (GEP). Between 2018 and 2024, eleven additional development wells have been drilled.

The existing facilities consist of a subsea production system (SPS) (e.g. xmas trees (XT), manifolds, subsea control systems and umbilicals, risers and flowlines (URF), and the gas export riser base (GERB), which connect the wells to the central processing facility (CPF) and FPSO.

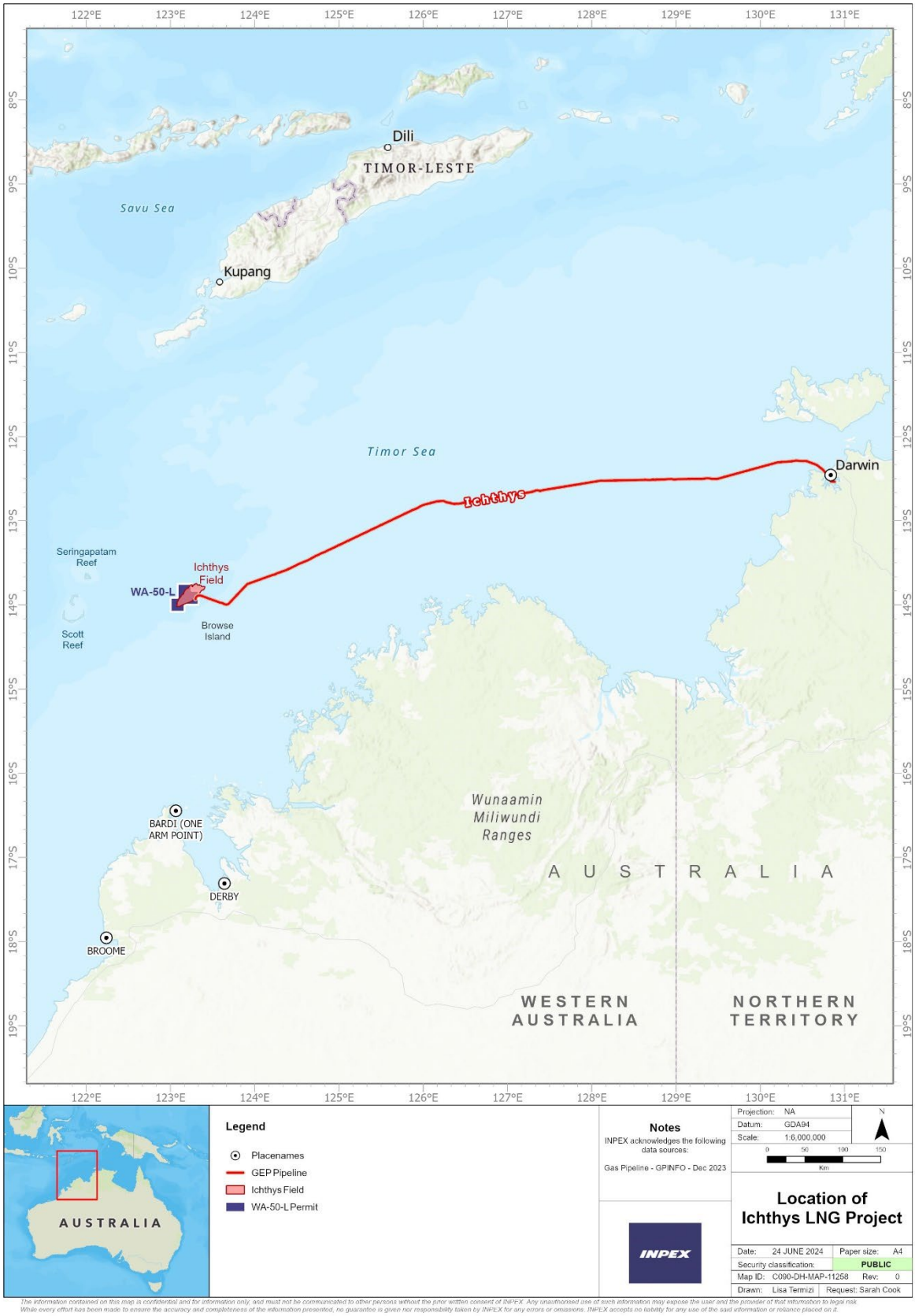



**Figure 1-1: Location of the Ichthys LNG Project**

For context, the various scopes of work (or petroleum activities) occurring in WA-50-L under in force Environment Plans (EPs) or proposed future EPs are described in Table 1-1 which also details estimated schedules. The activities described in these other plans and potential future submissions, are out of the scope of this EP.

**Table 1-1: INPEX Ichthys Project environment plans**

| Title | Activities | Indicative timing |
|---|---|---|
| *Ichthys Development Drilling Campaign WA-50-L Environment Plan*<br>(0000-AD-PLN- 60003)<br>(Accepted) | • continued drilling campaign (12 – 15 development wells over the duration of the EP) using semisubmersible drilling rigs<br>• installation of well infrastructure and xmas trees (XTs)<br>• well clean-up and completions<br>• inspection, maintenance and repair of proposed and existing wells in WA-50-L including well intervention and well work over activities<br>• support activities, including equipment transfers, refuelling, crew transfers, and transfer of waste and general supplies to and from logistics support vessels. | 2019-2024<br>*Note this plan will be withdrawn once this EP is accepted.* |
| *Ichthys Project Offshore Facility (Operation) Environment Plan*<br>(X060-AH-PLN-70007)<br>(Accepted) | • operating the interlinked facility namely the CPF (Ichthys Explorer), FPSO (Ichthys Venturer) and SPS infrastructure (e.g. XTs, manifolds, subsea control systems and the GERB, which connect the wells to the CPF and FPSO). Scope includes transferring condensate via an offtake hose to an offloading tanker (noting that the offloading tankers are not considered to be a facility under Schedule 3, Part 1, Clause 4 (6) of the Offshore Petroleum and Greenhouse Gas Storage Act 2006. Offloading tankers are not owned, chartered or operated by the titleholder and ownership of the condensate transfers at the inlet flange of the offloading tanker.<br>• inspection, maintenance and repair (IMR) activities on the facility and installed subsea infrastructure<br>• installation and commissioning of a booster compression module<br>• operating vessels that for particular activities would be a facility as defined by Schedule 3, Part 1, Clause 4 of the Offshore Petroleum and Greenhouse Gas Storage Act 2006. | 2022 – 2027 |

| Title | Activities | Indicative timing |
|---|---|---|
| *Ichthys Project Gas Export Pipeline (Operation) Environment Plan* (F075-AH-PLN-10001) (Accepted) | • operation of the GEP from the GERB to the boundary of Commonwealth waters (NT)<br>• IMR of GEP infrastructure during the Operations stage<br>• deployment of a pipeline repair system during a repair scenario<br>• post-repair discharges of residual hydrocarbon, air, nitrogen gas, filtered inhibited seawater or monoethylene glycol (MEG) to the environment. | 2022 – 2027 |
| *Ichthys URF and SPS Installation Environment Plan* (E075-AH-PLN-7000) (Accepted; 5-year revision in preparation) | • geophysical and geotechnical surveys<br>• installation of an additional gathering system<br>• installation of new infrastructure required to connect new production wells to the other existing gathering systems already operation<br>• hydrotesting<br>• pre-commissioning. | 2020 – 2025 |

## 1.2 Scope

Drilling, completion and well flow back operations for the second phase of the Ichthys Development Drilling Campaign are addressed in the in-force Ichthys Development Drilling Campaign WA-50-L Environment Plan (EP) (0000-AD-PLN-60003) accepted in November 2019 by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The scope of this EP is for the next stage of the drilling campaign which will consist of the drilling, completion and flow back of at least seven additional development wells (up to a maximum of 13) within WA-50-L over the next five years (2024 – 2029). The scope also includes the ongoing potential for workovers and well intervention of existing and planned development wells in WA-50-L.

Drilling campaign activities will be conducted using a semi-submersible mobile offshore drilling unit (MODU). The MODU will be anchored to the seabed and/or dynamically positioned (DP). It is anticipated that two anchor handling supply vessels (AHSVs) and one platform supply vessel (PSV) will provide support for the drilling campaign including the installation and recovery of pre-lay anchors. Personnel transfers to and from the MODU will be by helicopter several times per week. Reference to “supply vessels” in this EP refers to either an AHSV or a PSV, unless referenced specifically. Inspection, maintenance and repair (IMR) or light well intervention (LWI) vessels may be used to undertake additional well related activities (see Sections 3.2.3 and 3.2.3) during the drilling campaign.

This EP revision will cover continuous operations 24 hours per day, for a period of up to five years from acceptance of this EP revision. Although drilling of the new wells is not expected to commence until quarter four (Q4) of 2027; however, the start date for drilling activities is subject to MODU availability, operational efficiencies and weather.

The scope of this EP does not include the movement of vessels or helicopters outside of the production licence area (e.g. travel to and from WA-50-L). These activities will be undertaken in accordance with other relevant maritime and aviation legislation; most notably, the *Navigation Act 2012* (Cwlth) and *Civil Aviation Act 1988* (Cwlth).

## 1.3 Objectives

The objectives of this EP are to:

- demonstrate that the environmental impacts and risks associated with the petroleum activity have been reduced to 'as low as reasonably practicable' (ALARP) and are of an acceptable level
- establish appropriate environmental performance outcomes, environmental performance standards and measurement criteria in relation to the petroleum activity
- define an appropriate implementation strategy and monitoring, recording and reporting arrangements, whereby compliance with this EP, the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations (OPGGS (E) Regulations), and other relevant legislative requirements, can be demonstrated
- demonstrate that INPEX has carried out the consultations required by the OPGGS (E) Regulations
- demonstrate that the measures adopted by INPEX, arising from the consultation process, are appropriate
- demonstrate that the petroleum activity complies with the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act) and the OPGGS (E) Regulations.

## 1.4 Overview of activity description

Table 1-2 provides an overview of the proposed drilling activity to be undertaken under this EP.

**Table 1-2: Overview of the activity description**

| Item | Description |
|---|---|
| Petroleum production licence area | WA-50-L |
| Basin | Browse |
| Gas field | Ichthys Field |
| Reservoirs | Brewster<br>Plover |
| Activity location | Wholly located within Commonwealth waters approximately 390 km north of Derby, Western Australia in the North-west Marine Region (NWMR) of the Timor Sea. |
| Well type | Development (i.e. subsea production wells) |
| Hydrocarbon type | Gas and condensate |
| Water depth | Ranges from 235–275 m at Lowest Astronomical Tide (LAT) |
| MODU and vessels | MODU(s) (semi-submersible, moored or DP), AHSVs, PSVs, IMR/LWI vessel(s) and other support vessels. |

| Item | Description |
|---|---|
| Activities | Drilling and completion of at least 7 development wells (up to a maximum of 13) targeting the Brewster and Plover reservoirs in the WA-50-L production licence area.<br>Well intervention and well work over activities may also be conducted on existing and planned development wells in WA-50-L. |
| Duration of the activity | This EP revision will cover continuous operations 24 hours per day, for a period of up to five years from acceptance of this EP revision. |

## 1.5 Titleholder details

INPEX Ichthys Pty Ltd is a joint titleholder of production licence WA-50-L but has been nominated as the single titleholder for the purposes of taking eligible voluntary actions under subsection 775B of the OPGGS Act, such as making submissions.

In accordance with Regulation 23(1) of the OPGGS (E) Regulations, details of the titleholder are described in Table 1-3. INPEX will be responsible for ensuring that activities covered in this EP are carried out in accordance with the OPGGS (E) Regulations, this EP and other applicable Australian legislation.

In accordance with Regulation 23(2) of the OPGGS (E) Regulations, details of the titleholder's nominated liaison person are provided in Table 1-4.

**Table 1-3: Titleholder details**

| | |
|---|---|
| **Name** | INPEX Ichthys Pty Ltd (INPEX) |
| **Business address** | Level 22, 100 St Georges Tce, Perth, WA 6000 |
| **Telephone number** | +61 8 6213 6000 |
| **Fax number** | +61 8 6213 6455 |
| **Email address** | enquiries@inpex.com.au |
| **ABN** | 46 150 217 253 |

**Table 1-4: Titleholder nominated liaison officer**

| | |
|---|---|
| **Name** | Chris Serginson |
| **Position** | INPEX Environment Manager |
| **Business address** | Level 22, 100 St Georges Tce, Perth, WA 6000 |
| **Telephone number** | +61 8 6213 6000 |
| **Email address** | enquiries@inpex.com.au |

### 1.5.1 Notification arrangements

In the event that the titleholder, nominated liaison person or contact details for the nominated liaison person change, INPEX will notify the regulator in accordance with Regulation 23(3) of the OPGGS (E) Regulations.

### 1.5.2 Financial assurance

Financial assurance for the titleholder's liabilities for cleaning up, remediating and monitoring the impact of a petroleum release has been calculated using the AEP methodology for estimating levels of financial assurance (2024), based on the maximum credible loss scenario from a loss of well containment.

Declarations of financial assurance will be provided in relation to title WA-50-L prior to acceptance of the EP by NOPSEMA.

# 2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

## 2.1 Corporate framework

INPEX's Business Management System (BMS) is a comprehensive, integrated system that includes standards and procedures necessary for the management of health, safety and environment (HSE) risks.

The INPEX health, safety, security, environment and quality policy sets the direction and minimum expectations for environmental performance and is implemented through the standards and procedures of the BMS. The BMS and INPEX health, safety, security, environment and quality policy are further described in Section 9 in accordance with Regulation 24(a) of the OPGGS (E) Regulations.

## 2.2 Legislative framework

In accordance with Regulation 21(4) of the OPGGS (E) Regulations, the legislative framework relevant to the petroleum activity is listed in Table 2-1. A summary of applicable industry standards and guidelines is also presented in Table 2-2. Ongoing management of legislative and other requirements is described further in in Section 9.8.1.

**Table 2-1: Summary of applicable legislation**

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act; Cwlth)<br>and<br>Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) | Provides for the protection and management of nationally and internationally important flora, fauna, ecological communities, and heritage places. | The OPGGS (E) Regulations include the requirement that matters protected under Part 3 of the EPBC Act are considered and any impacts are at acceptable levels.<br>Part 8 of the EPBC Regulations outlines requirements for vessel when interacting with cetaceans.<br>In accordance with Regulation 26 of the OPGGS (E) Regulations 2023, the activities described in this EP were approved by the Commonwealth Environment Minister under Part 9 of the EPBC Act (EPBC Approval Decision 2008/4208).<br>The EPBC Act provides for protection of 'matters of national environmental significance' including not only listed species but also heritage properties and Ramsar wetlands. There are exemptions covering provisions of Part 3 and 13 of the EPBC Act, for the undertaking of activities when responding to maritime environmental emergencies, in accordance with the National Plan (NatPlan).<br>Australian Marine Parks (AMPs) are proclaimed under this Act and associated management plans are enacted under this legislation. | Relevant approval conditions within approval decision EPBC 2008/4208 have been addressed in this EP and are summarised in Appendix A.<br>Section 4.3 – Australian marine parks<br>Section 7.4.2 Interaction with marine fauna.<br>Section 8 – Emergency conditions.<br>INPEX Browse Regional Oil Pollution Emergency Plan (OPEP)<br>A demonstration of how this EP addresses the relevant conservation management documents related to EPBC-listed species has been presented in Appendix B. |
| *OPGGS Act 2006*<br>and<br>OPGGS (E) Regulations (Cwlth) 2023 | The OPGGS Act provides the regulatory framework for petroleum exploration, production and greenhouse gas activities in Commonwealth waters.<br>The OPGGS Act (Section 616) details the requirement for a Petroleum Safety Zone (PSZ). | The OPGGS Act requires a PSZ to be in place for the purposes of protecting a well, structure or any equipment, in an offshore area, by notice published in the Gazette, administered by NOPSEMA.<br>The OPGGS (E) Regulations require that the petroleum activity is undertaken in an ecologically sustainable manner, and in accordance with an accepted EP. | Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| | The OPGGS (E) Regulations under the OPGGS Act require a titleholder to have an accepted plan in place for a petroleum activity. | | |
| *Navigation Act 2012* (Cwlth) | The primary legislation that regulates ship and seafarer safety, shipboard aspects of protection of the marine environment, and employment conditions for Australian seafarers. | The *Navigation Act 2012* includes specific requirements for safe navigation, including systems, equipment and practices consistent with the International Convention for the Safety of Life at Sea (SOLAS) and the International Regulations for Preventing Collisions at Sea (COLREGS), as implemented as maritime law in Australia through a series of Marine Orders, including Marine Order – Part 21 – Safety of navigation and emergency procedures and Marine Order – Part 30 – Prevention of collisions.<br>The *Navigation Act 2012*, in conjunction with the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and through legislative Marine Orders, also requires vessels to have pollution prevention certificates (see below). | Section 7.6.1 – Physical presence – disruption to other marine users<br>Section 8.3 - Vessel collision<br>Implementation of the BMS. |
| *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* (POTS Act; Cwlth) | The POTS Act provides for the prevention of pollution from vessels, including pollution by oil, noxious liquid substances, packaged harmful substances, sewage, garbage, and air pollution.<br>In conjunction with Chapter 4 of the *Navigation Act 2012*, the POTS Act gives effect to relevant requirements of the International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL) in Australia. | The requirements of the POTS Act and the *Navigation Act 2012* are implemented as maritime law in Australia through a series of Marine Orders and legislative instruments, made and administered by the Australian Maritime Safety Authority (AMSA). The requirements of each Marine Order made under the POTS Act and the *Navigation Act 2012* and their relevance to the activity are outlined separately below. | Section 7 and Section 8<br>Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| Marine Order Part 91 – Marine pollution prevention — oil | Marine Order Part 91 implements Part II of the POTS Act, Chapter 4 of the Navigation Act 2012, and Annex I of MARPOL (oil pollution).<br>The Marine Order provides standards for the discharge of certain oily mixtures or oily residues and associated equipment and include duties to manage bunkering and transfers of oil between vessels; to maintain Oil Record Books and Shipboard Oil Pollution Emergency Plans (SOPEPs); and to report oil pollution. | MODU and vessels ≥400 gross tonnes (GT) are required to maintain:<br>• International Oil Pollution Prevention (IOPP) certificates to demonstrate that the vessel or facility and onboard equipment comply with the requirements of Annex I of MARPOL (as applicable to vessel size, type and class).<br>• Oil Record Books to record activities, such as fuel/oil bunkering and discharges of oil, oily water, mixtures and residues.<br>• SOPEPs outlining the procedures to be followed during an oil pollution incident.<br>• Discharges must also comply with Annex I of MARPOL, and oil pollution incidents must also be reported to AMSA. | Section 7.1.3 – Routine discharges to sea<br>Section 7.7.1 – Accidental release<br>Section 8 - Emergency Conditions<br>INPEX Browse Regional OPEP<br>Implementation of the BMS. |
| Marine Order 93 – Marine pollution prevention – noxious liquid substances | Marine Order 93 - Marine pollution prevention – noxious liquid substances (made under the *Navigation Act 2012* and the POTS Act and Annex II of MARPOL) specifies the requirements for the prevention of contaminating liquids and chemicals entering the marine environment. It also sets out guidelines for developing a Shipboard Marine Pollution Emergency Plan (SMPEP). | Requirements of Marine Order 93 include:<br>• International pollution prevention certificates<br>• reporting requirements<br>• emergency plans, record books and tank cleaning.<br>INPEX and MODU/vessel contractor will comply with the Marine Order 93 as appropriate to vessel class, in relation to the discharge to sea of any noxious liquid substances.<br>Marine vessels >150 GT will carry SMPEPs approved under MARPOL Annex II, Regulation 17 if the vessel is carrying noxious liquid substances in bulk. (noting that the vessels SOPEP and SMPEP may be combined into a single document). | Section 7.7.1 – Accidental release<br>Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| Marine Order Part 94 – Marine pollution prevention — packaged harmful substances | Marine Order Part 94, – Marine pollution prevention — packaged harmful substances, and the POTS Act relating to packaged harmful substances as defined by Annex III of MARPOL. | Requirements of Marine Order 94 include:<br>• management of harmful substances in packaged form<br>• considerations prior to washing substances overboard<br>• notifying and reporting incidents.<br>INPEX and MODU/vessel contractor will comply with Marine Order 94 as appropriate to vessel class, through reporting the loss or discharge to sea of any harmful materials. | Section 7.2 – Waste management<br>Implementation of the BMS. |
| Marine Order Part 95 – Marine pollution prevention — garbage | Marine Order Part 95 – Marine pollution prevention — garbage implements Part IIIC of the POTS Act, Chapter 4 of the Navigation Act 2012, and Annex V of MARPOL (garbage).<br>The Marine Order provides for the discharge of certain types of garbage at sea, waste storage, waste incineration, and the comminution and discharge of food waste. It also sets out requirements for garbage management and recording. | MODU and vessels ≥100 GT, or vessels certified to carry 15 persons or more, are required to maintain a Garbage Management Plan.<br>MODU and vessels ≥400 GT are required to maintain a Garbage Record Book.<br>The requirements will apply to MODU and vessels (as appropriate to their size, type and class) at all times. | Section 7.2 – Waste Management<br>Implementation of the BMS. |
| Marine Order Part 96 – Marine pollution prevention — sewage | Marine Order Part 96 – Marine pollution prevention — sewage implements Part IIIB of the POTS Act, Chapter 4 of the Navigation Act 2012, and Annex IV of MARPOL (sewage). | MODU and vessels ≥400 GT are required to maintain ISPPC's to demonstrate that vessels and their onboard sewage systems comply with the requirements of Annex IV of MARPOL.<br>Discharges of sewage must also comply with Annex I of MARPOL, and oil pollution incidents must also be reported to AMSA. | Section 7.1.3 – Routine discharges to sea<br>Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| | The Marine Order includes requirements for the treatment, storage and discharge of sewage and associated sewage systems, and for an International Sewage Pollution Prevention certificate (ISPPC) to be maintained on board. | | |
| Marine Order Part 97 – Marine pollution prevention — air pollution | Marine Order Part 97 – Marine pollution prevention — air pollution implements Part IIID of the POTS Act, Chapter 4 of the Navigation Act 2012, and Annex VI of MARPOL (air pollution).<br>The Marine Order sets requirements for marine diesel engines and associated emissions, waste incineration on board vessels, engine fuel quality, and equipment and systems containing ozone-depleting substances (ODS). | MODU and vessels ≥400 GT are required to have International Air Pollution Prevention (IAPP) certificates and Engine International Air Pollution Prevention (EIAPP) certificates to demonstrate that the vessel or facility and onboard marine diesel engines comply with the requirements of Annex VI of MARPOL.<br>Low-sulphur fuel oil / marine diesel with 0.5% mass for mass (m/m) sulphur content is required to be used.<br>In accordance with Annex VI of MARPOL, the requirements do not apply to the following:<br>• emissions resulting from the incineration of substances that are solely and directly the result of the exploitation and offshore processing of seabed mineral resources (i.e. hydrocarbons), including but not limited to flaring during well completion and testing operations and flaring arising from upset conditions<br>• emissions associated solely and directly with the treatment, handling, or storage of seabed minerals (i.e. hydrocarbons) | Section 7.1.2 – Atmospheric emissions<br>Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| | | • emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of seabed mineral resources (i.e. hydrocarbons).<br><br>MODU and vessels ≥400 GT are required to have an International Maritime Organization (IMO)-approved waste incinerator, as confirmed by the IAPP certificate.<br><br>MODU and vessels ≥400 GT with rechargeable systems containing ODS to maintain an ODS Record Book.<br><br>MODU and vessels ≥400 GT to have an International Energy Efficiency (IEE) certificate (as applicable to the vessel and engine size, type and class).<br><br>MODU and vessels ≥400 GT to have a Ship Energy Efficiency Management Plan (SEEMP) (as applicable to the vessel and engine size, type and class). | |
| *Biosecurity Act 2015* (Cwlth) | The *Biosecurity Act 2015* and its supporting legislation are the primary legislative means for managing risk of pests and diseases entering into Australian territory and causing harm to animal, plant and human health, the environment and/or the economy. | Of specific relevance to this EP, the *Biosecurity Act 2015 (Cwlth)* requires that ballast is managed within Australian seas. The *Biosecurity Act 2015 (Cwlth)* now defines Australian seas as:<br><br>• for domestic and international vessels whose Flag State Administration is party to the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention; IMO 2009)– the waters (including the internal waters of Australia) that are within the outer limits of the exclusive economic zone (EEZ) of Australia (all waters within 200 nm); or<br><br>• for all other international vessels – the Australian territorial seas (all waters within 12 nm). | Section 7.4.1 - Invasive marine species<br><br>Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| The Biosecurity Amendment (Biofouling Management) Regulations 2021 | The Biosecurity Amendment (Biofouling Management) Regulations 2021 provide details of Australia's pre-arrival reporting requirements and guidance for operators of international vessels that are subject to biosecurity control while in Australian territorial seas. | The Biosecurity Amendment (Biofouling Management) Regulations 2021 requires the operators of all vessels to provide information on the biofouling management practices prior to arriving in Australia. The requirements include:<br>• Mandatory pre-arrival questions related to biofouling management practices namely:<br>o Confirm if the MODU/vessel has an effective biofouling management plan?<br>o Has the MODU/vessel been cleaned of all biofouling within 30 days of arriving in Australia?<br>o Does the MODU/vessel have an alternative biofouling management method that has been pre-approved by the department?<br>o Do you intend to in-water (underwater) clean biofouling in Australia?<br>• MODU and vessel operators to demonstrate proactive management of biofouling by implementing one of the three accepted proactive biofouling management options:<br>o Implementation of an effective biofouling management plan; or<br>o Cleaned all biofouling within 30 days prior to arriving in Australian territory; or<br>o Implementation of an alternative biofouling management method pre-approved by the department. | Section 7.4.1 - Invasive marine species<br>Implementation of the BMS. |
| *Biodiversity Conservation Act 2018* (WA) | Ensures the protection of biodiversity and humane treatment of native fauna. | Consult with WA Department of Biodiversity, Conservation and Attractions (DBCA) and obtain relevant permit(s) before a wildlife hazing and post-contact wildlife response. | Section 8 – Emergency conditions |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| *Animal Welfare Act 2002* (WA)<br>Biodiversity Conservation Regulations 2018 (WA) | Ensures appropriate treatment and management of wildlife in the event of a potential hydrocarbon spill and response activities. | | INPEX Browse Regional OPEP. |
| *Fish Resources Management Act 1994* (WA) | The *Fish Resources Management Act* is administered by the WA Department of Primary Industry and Regional Development (DPIRD) that has powers to deal with incursions of marine pests. | INPEX will manage its operations in accordance with the Act and the associated Fish Resources Management Regulations (1995) with respect to managing potential invasive marine species (IMS) risks. | Section 7.4.1 - Invasive marine species<br>Implementation of the BMS. |
| *Aquatic Resources Management Act 2016* (ARMA) WA | The ARMA will become the primary legislation used to manage fishing, aquaculture, pearling and aquatic resources in WA. | At the time of submission of this EP, only certain sections of the ARMA have taken effect, with most Sections not yet commenced. While this is the case, the *Fish Resources Management Act 1994* (WA) remains in effect until the transitional provisions for the ARMA are in operation. Once in operation the ARMA will provide new management methods in a flexible framework. This EP will be updated to reflect this once the ARMA comes into effect, expected within the duration of this EP. | Section 7.4.1 - Invasive marine species<br>Implementation of the BMS. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| *Underwater Cultural Heritage Act 2018* | This Act replaced the *Historic Shipwreck Act* 1976 and provides protection to all archaeological remains of vessels and aircraft (including Aboriginal and Torres Strait Islander traditional watercraft) that have been wholly or partially submerged in Australian waters for 75 years or longer, including their immediate environment and associated articles, regardless of whether or not their existence or precise location is known. Disturbance of a protected shipwreck, or any other adverse impact including an indirect impact, without a permit is an offence under the Act. | Discovery of underwater cultural heritage (UCH) must be notified within 21 days of the discovery.<br>Proponents of seabed developments are expected to perform both desktop and direct assessments of the potential underwater cultural heritage resource of their project area prior to work commencing.<br>The Act prohibits certain activities within protected zones (prohibited conduct) including but not limited to:<br>• entry of persons or vessels<br>• allowing a vessel to become stationary<br>• underwater activities<br>• anchoring or mooring vessels<br>• release or deposit of objects or materials.<br>Any access to protected zones would only occur during oil spill response activities and this is exempt as per Section 29(3)C 'dealing with an emergency involving a serious threat to the environment'. | Section 4.9.4 - Underwater cultural heritage<br>Section 7.5 – Seabed disturbance<br>Section 8 – Emergency conditions |
| *National Greenhouse and Energy Reporting Act 2007* (Cwlth; NGER) | The Act provides a single, national framework for the reporting and distribution of information related to greenhouse gas (GHG) emissions, GHG projects, energy production and energy consumption. | The Clean Energy Regulator administers the NGER Act, its legislative instruments, and related policies and processes.<br>Reporting requirements under the NGER Act are made via the Emissions and Energy Reporting System (EERS) on an annual basis.<br>EERS allows all NGER reporters to submit emissions and energy reports under sections 19, 22G and 22X of the NGER Act. | Section 7.1.2 - Atmospheric emissions. |

| Legislation | Description | Requirements | Demonstration of how requirements are met in EP |
|---|---|---|---|
| | | MODU and vessel contractors are responsible for NGER reporting* for the proposed activity described within this EP as they have operational control under the NGER Act.<br><br>*subject to exceeding the reporting threshold of 25 kt or more of GHG (scope 1 and 2 emissions). | |

**Table 2-2: Summary of applicable conventions, agreements, industry standards and guidelines**

| Guideline | Description |
|---|---|
| Australian and New Zealand guidelines for fresh and marine water quality (ANZG 2018) | These guidelines provide a framework for water resource management and state specific water quality guidelines for environmental values, and the context within which they should be applied. |
| International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL) | This convention is designed to reduce pollution of the seas, including dumping, oil and exhaust pollution. MARPOL currently includes six technical annexes. Special areas with strict controls on operational discharges are included in most annexes. |
| International Convention on the Control of Harmful Anti-fouling Systems | This convention prohibits the use of harmful organotins in anti-fouling paints used on ships and establishes a mechanism to prevent the potential future use of other harmful substances in anti-fouling systems. |
| International Convention for the Safety of Life at Sea (SOLAS) 1974 | In the event of an offshore emergency event that endangers the life of personnel, the International Convention for the Safety of Life at Sea (SOLAS) 1974 may take precedence over environmental management. |
| Bonn Agreement for Cooperation in Dealing with Pollution of the North Sea by Oil and other harmful substances (Bonn Agreement) | The Bonn Agreement is the mechanism by which the North Sea states, and the European Union (the Contracting Parties), work together to help each other in combating pollution in the North Sea area from maritime disasters and chronic pollution from ships and offshore installations; and to carry out surveillance as an aid to detecting and combating pollution at sea.<br>The Bonn Agreement Oil Appearance Code may be used during spill response activities. |
| The Australian Petroleum Production and Exploration Association (APPEA) *Code of Environmental Practice* (APPEA 2008) | Recognising the need to avoid or minimise and manage impacts to the environment, this code of environmental practice includes four basic recommendations to APPEA members undertaking activities:<br>• Assess the risks to, and impacts on, the environment as an integral part of the planning process.<br>• Reduce the impact of operations on the environment, public health and safety to as low as reasonably practicable (ALARP) and to an acceptable level by using the best available technology and management practices.<br>• Consult with stakeholders regarding industry activities.<br>• Develop and maintain a corporate culture of environmental awareness and commitment that supports the necessary management practices and technology, and their continuous improvement. |
| Australian Ballast Water Management Requirements, Version 8 (DAWE 2020) | Australian Ballast Water Management (BWM) Requirements outline the mandatory ballast water management requirements to reduce the risk of introducing harmful aquatic organisms into Australia's marine environment through ballast water from international vessels. These requirements are enforceable under the *Biosecurity Act 2015*. |

| Guideline | Description |
|---|---|
| Australian Biofouling Management Requirements (Version 2) (DAFF 2023) | The Australian biofouling management requirements set out vessel operator obligations for the management of biofouling when operating vessels under biosecurity control within Australian territorial seas. The requirements were updated in 2023 to provide clearer guidance to vessel operators and streamline inspection processes for complaint vessels. The requirements include pre-arrival mandatory questions related to biofouling management practices such as:<br>• Does the vessel have an effective biofouling management plan?<br>• Has the vessel been cleaned of all biofouling within 30 days of arriving in Australia?<br>• Does the vessel have an alternative biofouling management method that has been pre-approved by the department?<br>• Do you intend to in-water (underwater) clean biofouling in Australia?<br>Vessel operators must also demonstrate proactive biofouling management by implementing one of the 3 accepted proactive biofouling management options:<br>• Implementation of an effective biofouling management plan; or<br>• Cleaned all biofouling within 30 days prior to arriving in Australian territory; or<br>• Implementation of an alternative biofouling management method pre-approved by the department.<br>Australia's Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) will grant a 'release from biosecurity control' after an inspection of the vessel has been completed at an Australian port and all biosecurity risks have been managed in an approved manner. |
| International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) | All vessels are required to manage their ballast water and sediments in accordance with the Convention and *Biosecurity Act 2015*. The convention came into force on 8 September 2017 and Australia's ballast water policy and legislation align with the convention. |
| Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (IMO 2023) | The guidelines provide a globally consistent approach to the management of biofouling. They aim to reduce the risk of translocation of marine pests from biofouling present on immersed areas of vessels. It was adopted by IMO marine environment committee in the form of Resolution MEPC.378 (80) in 2023 as an update to the previous Resolution MEPC.207 (62) from 2011. |
| National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) | The Guidelines provide best-practice industry standard for managing potential impacts of light pollution on marine fauna. |
| Minamata Convention on Mercury | The objective of the Convention is to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. |

| Guideline | Description |
|---|---|
| | The Convention is an international treaty that covers all aspects of the life cycle of mercury, controlling and reducing mercury across a range of products, processes and industries. This includes controls on mercury mining, manufacture and trade of mercury and products containing mercury, disposal of mercury waste and emissions of mercury from industrial facilities.<br><br>Australia ratified the Minamata Convention on 7 December 2021. Countries that have ratified the Convention are bound by international law to put control measures in place to manage emissions, releases and disposal of mercury and mercury compounds. Measures may include the use of best available techniques and best environmental practices to control releases. Of relevance to this EP is the disposal of potential mercury contaminated waste during drilling operations (refer to Table 7-7 and Table 7-8) |
| United Nations Framework Convention on Climate Change (1992) | The objective of the Convention is to stabilise GHG concentrations in the atmosphere at a level that would prevent dangerous interference with the climate system. Australia ratified the Convention in December 1992 and it came into force on 21 December 1993. |
| Paris Agreement on Climate Change (2015) | The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 $^{o}$C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 $^{o}$C.<br><br>The Paris Agreement provides the international framework and context around Australia's nationally determined contributions (NDC). |
| National disaster risk reduction Framework | In 2019, the Australian Government agreed to a National Disaster Risk Reduction Framework outlining foundational actions to be taken across all sectors to address existing disaster risk and minimise the creation of new risk. The framework recognises global climate change as an underlying driver of disaster risk. |

# 3 ACTIVITY DESCRIPTION

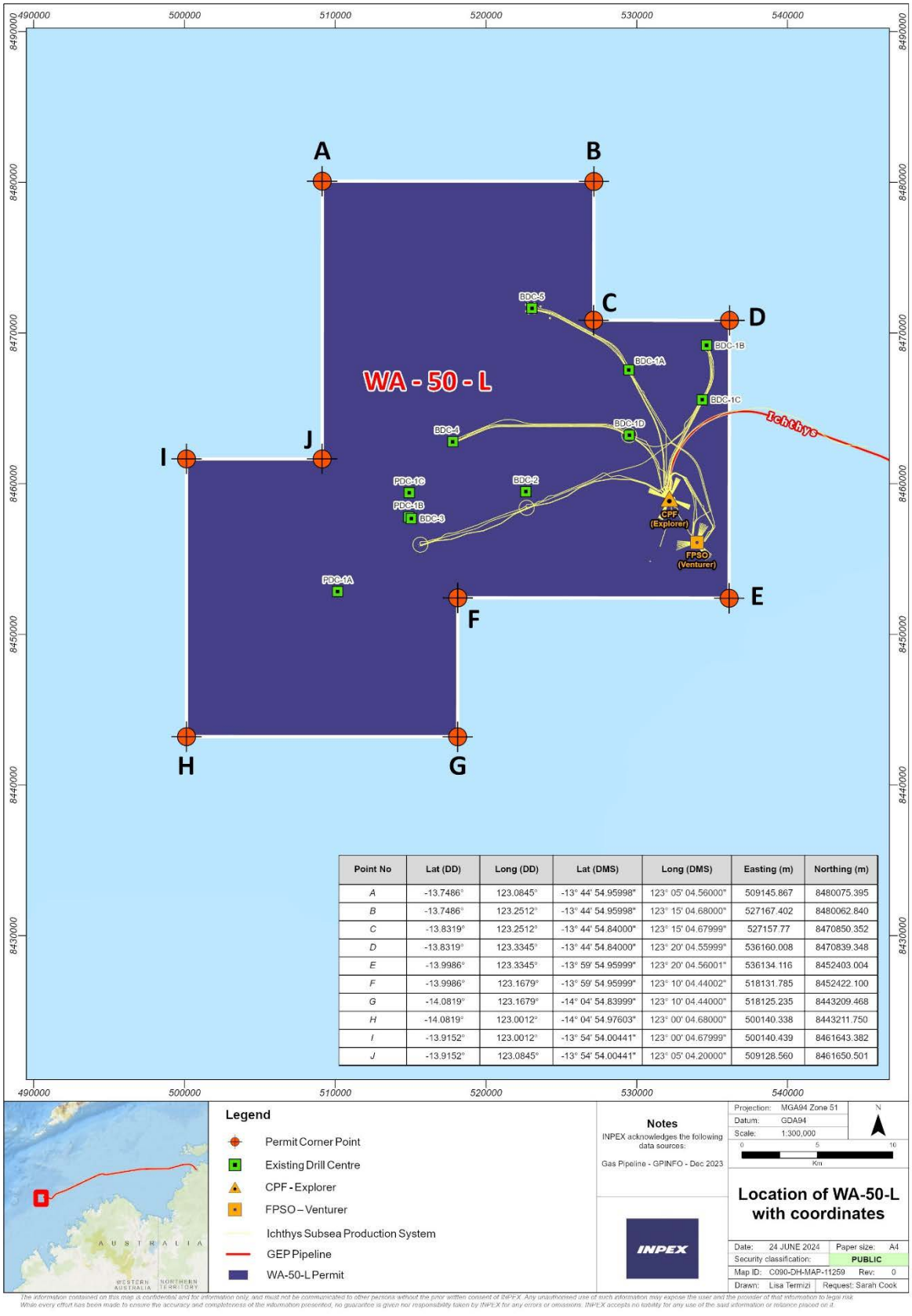
## 3.1 Location, timing and schedule

Production licence, WA-50-L, is located within the Browse Basin in Commonwealth waters within Western Australia (Figure 3-1). It is approximately 230 km north-west of the Kimberley coastline, at its closest point. Water depths in the licence area range between 235 m and 275 m at lowest astronomical tide (LAT). The closest major town is Derby, located approximately 390 km south of the southern boundary of the licence area.

The total duration of the drilling campaign (at least seven wells, up to a maximum of 13, and including potential workovers and/or well intervention operations in WA-50-L) is expected to take up to five years, noting that the exact timing for commencement and completion will be dependent upon approvals, MODU availability, vessel availability, operational efficiencies and weather conditions. The next stage of the Ichthys development drilling campaign will target both Brewster and Plover reservoirs in the Ichthys Field and is planned to commence in Q4 2027.

Operations will be conducted 24 hours per day. Drilling, completion and well flow back activities (including in field MODU moves and anchoring) are expected to take approximately 100 to 125 days per well, noting that drilling activities only occur for a portion of this time. In some cases, development wells may be suspended and at a later date, re-entered and remaining work/stages completed. This will be determined subject to operational, construction and production requirements.

Exact well locations will be confirmed in advance of drilling activities and determined from geophysical and geological data interpretation and production analysis. All wells will be located within the boundaries of WA-50-L. Updates to timing and sequencing will be routinely reported internally for planning and reporting purposes.




| Point No | Lat (DD) | Long (DD) | Lat (DMS) | Long (DMS) | Easting (m) | Northing (m) |
|---|---|---|---|---|---|---|
| A | -13.7486° | 123.0845° | -13° 44' 54.95998" | 123° 05' 04.56000" | 509145.867 | 8480075.395 |
| B | -13.7486° | 123.2512° | -13° 44' 54.95998" | 123° 15' 04.68000" | 527167.402 | 8480062.840 |
| C | -13.8319° | 123.2512° | -13° 44' 54.84000" | 123° 15' 04.67999" | 527157.77 | 8470850.352 |
| D | -13.8319° | 123.3345° | -13° 44' 54.84000" | 123° 20' 04.55999" | 536160.008 | 8470839.348 |
| E | -13.9986° | 123.3345° | -13° 59' 54.95999" | 123° 20' 04.56001" | 536134.116 | 8452403.004 |
| F | -13.9986° | 123.1679° | -13° 59' 54.95999" | 123° 10' 04.44002" | 518131.785 | 8452422.100 |
| G | -14.0819° | 123.1679° | -14° 04' 54.83999" | 123° 10' 04.44000" | 518125.235 | 8443209.468 |
| H | -14.0819° | 123.0012° | -14° 04' 54.97603" | 123° 00' 04.68000" | 500140.338 | 8443211.750 |
| I | -13.9152° | 123.0012° | -13° 54' 54.00441" | 123° 00' 04.67999" | 500140.439 | 8461643.382 |
| J | -13.9152° | 123.0845° | -13° 54' 54.00441" | 123° 05' 04.20000" | 509128.560 | 8461650.501 |



**Figure 3-1: Location and coordinates of WA-50-L**

## 3.2 Drilling activities

### 3.2.1 Indicative drilling method

The Brewster and Plover well design is detailed in Table 3-1. The wells will be drilled using both water-based mud (WBM) and synthetic-based mud (SBM) systems.

**Table 3-1: Well details**

| Well section description | Drilling fluid type | Volume of fluid disposed with cuttings ($m^3$) | Volume of cuttings discharged ($m^3$) |
|---|---|---|---|
| 44" well-bore diameter;<br>36" conductor complete with a low-pressure wellhead housing | WBM, sea water and high-viscosity (hi-vis) gel sweeps.<br>At total depth (TD) the hole will be displaced with hi-vis gel mud.<br>While drilling riserless, all returns will be to the seabed.<br>Fluid remaining at the end of these hole sections will be used on the next hole section.<br>Typical components of the WBM include biocide, bentonite, caustic soda, glycol medium cloud point, PAC Low and Hi Vis, potassium chloride, soda ash, sized cellulose, desco CF and xanthan gum. | 240 | 60 |
| 30" well-bore diameter;<br>26" non-pressure containing surface casing in sub-mudline hanger | | 715 | 180 |
| 20" well-bore diameter;<br>16" intermediate casing complete with high pressure wellhead housing | WBM, gel polymer.<br>This hole section will be drilled riserless with a semi-closed circulating system, (i.e. returns from the well will be circulated back to the MODU via a riserless fluid return system and then pumped back down the well).<br>At the end of this section all remaining WBM will discharged overboard.<br>Typical components of the WBM include biocide, bentonite, caustic soda, glycol medium cloud point, PAC Low and Hi Vis, potassium chloride, soda ash, sized cellulose, Desco CF and xanthan gum. | 1755 | 390 |

| Well section description | Drilling fluid type | Volume of fluid disposed with cuttings ($m^3$) | Volume of cuttings discharged ($m^3$) |
|---|---|---|---|
| 13 ½" well-bore diameter;<br>10 ¾" production casing | Low toxicity SBM.<br>Typical components of the SBM include emulsifier, synthetic base oil (paraffin or linear alpha olefins), organophilic clay, lime, calcium chloride, calcium carbonate, fluid loss additive powder/liquid and barite.<br>Technical justification for SBM use: This hole section will penetrate massive claystone sections including the Jamieson, Echuca Shoals and Lower Echuca Shoals formations. These formations, particularly the Jamieson formation, are known to contain highly reactive claystones. The use of WBM in these formations is known to result in borehole breakout and well-bore collapse which will possibly result in the loss of the hole section and compromising the well objectives. SBM has much lower levels of reactivity with shales and as such is much less likely to cause destabilisation during drilling, tripping and running casing.<br>SBM containment management systems, shale shakers and cuttings dryers will be used to minimise the amount of SBM discharged to the environment as residual oil-on-cuttings.<br>At the end of the section, the mud will be retained and used on the next hole section and/or future wells.<br>At the end of drilling, all the recaptured SBM will be returned to the vendor for reuse. | 270 | 230 |
| 9 ½" x 11" well-bore diameter;<br>Drilling liner - expandable<br>(9 ½" x 8 $^5/_8$")<br>Plover only | Low toxicity SBM.<br>Anticipated bottom hole temperatures when drilling the Brewster reservoir section are expected to be approximately 155°C. The SBM system has been tested to anticipated bottom hole conditions and found to be stable.<br>Typical components of the SBM include emulsifier, synthetic base oil (paraffin or linear alpha olefins), organophilic clay, lime, calcium chloride, calcium carbonate, fluid loss additive powder/liquid and barite. | 25 | 19 |
| 8 ½" well-bore diameter (Brewster); | Low toxicity SBM. | 120 | 40 |

| Well section description | Drilling fluid type | Volume of fluid disposed with cuttings ($m^3$) | Volume of cuttings discharged ($m^3$) |
|---|---|---|---|
| 7" production liner | Anticipated bottom hole temperatures when drilling the Brewster reservoir section are expected to be approximately 155°C. The SBM system has been tested to anticipated bottom hole conditions and found to be stable.<br>Typical components of the SBM include emulsifier, synthetic base oil (paraffin or linear alpha olefins), organophilic clay, lime, calcium chloride, calcium carbonate, fluid loss additive powder/liquid and barite. | | |
| 8 ½" well-bore diameter (Plover);<br>7" production liner | Low toxicity SBM.<br>SBM is required for the high anticipated temperature (175°C) and to prevent formation damage across the Plover reservoir interval.<br>Typical components of the SBM include emulsifier, synthetic base oil (paraffin or linear alpha olefins), organophilic clay, lime, calcium chloride, calcium carbonate, fluid loss additive powder/liquid and barite. | 80 | 35 |

The top section of each well (44" and 30") will be drilled using sea water and high viscosity “sweeps” (comprising prehydrated bentonite, i.e. WBMs) to circulate drilled cuttings from the hole for discharge at the seabed. Prehydrated bentonite consists of up to 98% water, the remainder being drilling fluid additives that are either completely inert in the marine environment, or naturally occurring benign materials. Bentonite is a naturally occurring clay of low toxicity (World Health Organization 2005).

After the setting of the 26" non-pressure containing surface casing, a 20" section will be drilled using WBM, utilising a riserless mud return (RMR) system. The RMR is installed on the wellhead and includes a pump and hose on the seabed. It enables drilling fluids and drilled cuttings to be either discharged from the well at the seabed (conventional riser-less drilling) or circulated back to the MODU, via the RMR. 16" casing will then be cemented in place and the BOP and marine riser installed. The RMR is installed on the wellhead and includes a pump and hose on the seabed. This closed system facilitates the transfer of drilling fluids and drilled cuttings back to the MODU for all subsequent drilling operations.

A 13 ½” hole will then be drilled using SBM and a 10 ¾" production casing cemented in place. In Brewster wells, the next section is 8 ½"; drilled using a SBM formulation followed by the setting and cementing of the 7" production liner. However, in Plover wells, the next section is drilled out through Brewster in 9 ½" hole size and under-reamed out to approximately 11". An 8 $^{5}/_{8}$" solid expandable liner system is then run to isolate the Brewster interval. The final section is then drilled out through Plover in 8 ½" hole size followed by installation and cementing of the 7" production liner which is set in 10 ¾" casing.

Both Brewster and Plover sections will be drilled using SBM given high anticipated temperature (155 - 175°C) and to prevent formation damage across the Plover reservoir interval. SBM section drill cuttings will be processed by a cuttings dryer to reduce the amount of oil on cuttings to no greater than 5.9% by dry weight of cuttings. The dried cuttings will be discharged overboard. The reclaimed SBM will be retained on board for disposal onshore or recycled into the mud system. At the end of drilling, all recaptured SBM will be returned to the vendor for reuse.

### Completions

Well completion activities will be undertaken in both Brewster and Plover development wells after drilling to depth and installing the 7" production liner.

Both Brewster and Plover wells are planned as cased and perforated completions. The upper completion consists of: production packer; down hole pressure and temperature gauges; 7" production tubing; tubing retrievable surface controlled subsurface safety valve (SCSSV); and a series of nipple profiles to allow suspension plugs or contingency tooling to be installed. The SCSSV is designed to automatically close in the event of an emergency shutdown during production.

### Well flow back

Following upper completion installation, a well flow back will be performed to remove completion fluids and debris from the well. The well flow back will be performed using specialised well flow back equipment on the MODU which will be supplied by a third-party service contractor. Each well will be flowed at gas rates of up to 3.68 $Mm^3/d$ (130 MMscf/day).

The well will be perforated, followed by the unloading of the base oil cushion, prior to the arrival of reservoir gas and fluids at the surface, followed by the primary well flowback operation. During the well flowback operations the recovered completion and reservoir fluids, which include hydrocarbons and produced/condensed water, are managed by flaring or safely discharging them into the marine environment via the well testing system. In cases where flaring of produced water (PW) is not feasible due to suboptimal combustion efficiency that could increase the risk of hydrocarbon release, the PW will undergo separation using a dedicated PW filtration system prior to overboard discharge.

Following well clean-up, a multi-rate well test will be conducted at various flow rates to establish baseline well deliverability; to obtain reservoir fluid samples and estimate key formation parameters. All well flow back operations will be conducted in accordance with the MODU's safety case accepted by NOPSEMA.

Overall estimated time for well flow back operations is approximately 24 hours per well, although this will be subject to the precise reservoir characteristics and other factors.

### Well suspension and subsea infrastructure installation

Following well flow back, wells will be suspended in accordance with the INPEX Well Integrity Standard (0000-AD-STD-60003) and the approved Well Operations Management Plan (WOMP). Leaving the wells shut-in with gas prevents any formation damage during the temporary suspension period until commencement of production start-up.

In some circumstances, drilling may cease before the hydrocarbon reservoir is penetrated and the well will be suspended for re-entry at a later date. Suspension for re-entry may occur at any stage of the well, although typically it takes place after the 16" casing, 10 $^3/_4$" casing or 7" production liner has been installed.

The method of post-well flow back well suspension depends on the mode in which the well flow back is performed, and subsea infrastructure installed. This will be either:

1. In-riser Completion Workover Riser (CWOR) mode.

   This mode is typically utilised if a 'xmas tree' (XT) is not available for immediate installation or in the instance of batch completing wells. In this mode the drilling BOP remains installed on the tubing head spool (THS) during the well flow back. The subsea test tree and high CWOR form a conduit from the well to the MODU for all produced fluids. Upon conclusion of the well flow back, the wells will be suspended using two tested barriers (typically suspension plugs) in accordance with the INPEX Well Integrity Standard (0000-AD-STD-60003). This allows recovery of the BOP and subsequent installation of the XT (on the THS). A re-entry activity (well intervention) is subsequently required to remove the suspension plugs (or equivalent) in advance of production; or

2. Open-water CWOR mode.

   In this mode, the BOP is recovered after upper completion installation and prior to well flow back. Two tested barriers are in place for BOP recovery as per the INPEX Well Integrity Standard (0000-AD-STD-60003). After BOP recovery, the XT is installed on the THS and the emergency disconnect package (EDP)/lower riser package (LRP) and high-pressure open-water CWOR is deployed and connected to the XT. The well flow back is then performed with the high-pressure open water CWOR forming the conduit from the well to the MODU for all produced fluids. Open-water CWOR mode does not require subsequent suspension plug recovery since the XT valves can be closed and tested thereby providing the necessary well barriers. No subsequent well intervention activity is required in advance of production.

No environmental impacts have been identified with well suspension and subsea infrastructure installation operations, excepting the discharge of well suspension fluid (brine, MEG and control fluid) and control fluid discharges to sea from BOP, XT and EDP/LRP functions. A water-based subsea control fluid will be used to test THS and XT connectors and to function the XT valves. In addition to discharges from valve functioning, the XT internal body will also be flushed with hydraulic control fluid. The hydraulic control fluid is a water/glycol mixture containing additives to protect against wear, corrosion and bacterial degradation, with a fluorescein dye as evidence of fluid displacement or to facilitate leak detection. This operation is performed using a remote operated vehicle (ROV). Water-based subsea control fluid will be discharged from the ROV and XT valves to the marine environment. ROV tooling equipment may be temporarily placed on the seabed in the vicinity of the well during XT and THS installation operations. The area of seabed occupied by such ROV tooling baskets is typically 2 -3 $m^2$ in size.

### Drilling fluids and chemical selection

A description of the chemical selection procedure for drilling fluids is presented in Section 9.6.1. The exact chemicals to be used will depend on the drilling fluids chemical supplier; however, all products will be selected in accordance with INPEX's chemical assessment and approval process. Wherever possible selected products will be ranked D, E or Silver, Gold and/or pass the INPEX chemical assessment and approval process. A risk assessment will be conducted for all products that fall outside these criteria as well as any that carry substitution warnings (refer to Section 9.6.1).

### Drill cuttings

WBM drill cuttings will either be discharged directly to the seabed (while drilling the riserless 44" and 30" diameter sections) or brought up to the MODU (while drilling the subsequent 20" diameter section). WBM and cuttings brought up to the MODU will be directed over solids control equipment (SCE), which comprises vibrating screens (shale shakers), and the solids will be discharged overboard.

Where SBM is used, SCE will also comprise of centrifuges including cuttings dryers. Except for residual fluid on drill cuttings, no SBM will be discharged to the marine environment. Details of the SCE equipment are provided below.

Shale shakers

Shale shakers primarily remove large amounts of cuttings from drilling mud by directing it from the well to flow over vibrating wire-cloth screens. The screens remove the cuttings after which the mud is directed back to the MODU mud-storage pits.

Centrifuges

Following the processing by shale shakers, the mud may be directed to centrifuges which are used to separate barite and remove fine solids (those below 4.5 to 6 microns). Centrifuges use a rotating bowl to create high centrifugal forces to affect the separation of coarse and fine particles from the mud. Solids from the centrifuge are discharged to sea and the mud recirculated into the fluid system.

Cuttings dryer and dryer centrifuge

While using SBM, a circulating system will be active that processes the SBM over shale shakers and through centrifuges. These allow the SBM fluid component to be separated from the cuttings and captured for continuous recirculation into the fluid system during drilling.

Table 3-1 provides a summary of estimated fluid and cuttings volumes to be discharged. The cuttings dryer will aid in ensuring the volume of SBM retained on cuttings is ≤5.9% weight per dry weight.

### Well completion fluids

Completion operations commence by displacing the entire wellbore contents of SBM and inhibited sodium chloride brine. The brine contains subsea control fluids, MEG, several inhibitors such as a biocide, oxygen scavenger and lubricant. A base oil spacer and a surfactant pill will be used to remove oil film from the pipe and casing in the wellbore. This fluid combination is re-captured in the MODU pit storage tanks upon return to surface. All oil contaminated fluids (approximately <15 $m^3$ per well) will be contained and returned to shore for suitable disposal. Any of the surfactant pill that is not contaminated with oil will be discharged overboard to the marine environment.

Sodium chloride brine will be used to displace the surfactant pills. A closed circulating system will be used to ensure no brine is discharged. Oil contaminated brine will be quarantined and processed to remove the oil. All the removed oil will be sent onshore for disposal.

Remaining brine will be filtered to remove solids and reused on subsequent wells. Where this is not possible the uncontaminated brine will be discharged to the marine environment.

After deployment of the upper completion, prior to setting of the production packer, the tubing and annulus contents will be displaced from the brine to base oil (leaving brine in the 7" liner). During well clean-up the Base oil present in the completion tubing will be burned through the oil burner head flare boom. The base oil contained within the a-annulus, situated between the completion tubing and production casing will remain in place for the life cycle of the well. No base oil will be discharged to the marine environment. At the end of the drilling campaign, all remaining base oil will be returned to shore for reuse.

The exact chemicals to be used will depend on the drilling fluids chemical supplier; however, all products will be selected in accordance with INPEX's chemical assessment and approval process (refer to Section 9.6.1). Typical components of the well completion fluids include xanthan gum, solvent/surfactant, sodium chloride, corrosion inhibitor, bactericide, paraffin/linear alpha olefins base oil, lubricant, citric acid, caustic soda, sodium carbonate and sodium bicarbonate.

### Cementing

Cementing operations are undertaken to ensure well integrity, through the following mechanisms:

- cementing the casing and conductors in place
- sealing the annulus between the casing string and the formation
- sealing lost circulation zones
- setting plugs in an existing well from which to sidetrack
- suspending the well
- plugging and abandoning the well, if required due to unforeseen circumstances.

Cement is transported as dry bulk to the MODU by the support vessels and is mixed with water and additives in the cementing unit immediately before use to form a cement slurry which is then injected down the well by high-pressure pumps.

It is standard practice to allow some excess cement slurry to overflow to the sea floor when cementing the top-hole section as this provides visual evidence that the annular space between the hole and the casing has been filled. This typically covers an area of seabed of up to 10 m from the well. Small volumes of cement slurry may also be discharged to the sea surface when testing the cementing unit or disposing of excess slurry before it sets at the end of a cementing job. Excess bulk cement will be retained for use on the next well. At the end of the drilling campaign, should any bulk cement remain, INPEX will aim to transfer the excess volume to the vessel for onshore disposal/reuse. The bulk transfer (MODU to vessel) will be dependent on the transfer capability of the contracted MODU and whether the unused bulk cement is in a state that can be transferred/pumped out safely. INPEX will transfer as much unused bulk cement as possible; however, some remaining cement, that can't physically be transferred, will be mixed and operationally discharged to the marine environment.

In accordance with the Section 9.6.1, cement products used will have an OCNS rating of D or E or a hazard quotient (HQ) rating of silver or gold. If not OCNS registered, all chemicals will be assessed as 'green' via the INPEX pseudo ranking system in line with the OCNS CHARM/ non-CHARM criteria.

#### Blow-out preventer

A BOP plays a critical role in assuring safe operations in the event of a loss of primary well control. As part of ongoing drilling operations, the BOP stack is required to be regularly function-tested when subsea (typically weekly/fortnightly), as defined by the INPEX Well Operations Standard (0000-AD-STD-60004) and Well Operations Manual (0000-AD-MAN-60002). During testing, volumes of water-based BOP control fluid will be released to the marine environment.

#### Open-water CWOR

The EDP and LRP plays a critical role in providing well barriers when performing well intervention activities in open-water CWOR mode e.g. during suspension plug installation and well flow back from the MODU.

During a typical well intervention or well flow back, the EDP/LRP is function-tested during assembly and maintenance, with regular function-testing and pressure-testing. During testing and regularly while operating, water-based subsea control fluid will be discharged to the marine environment.

### 3.2.2 Gas venting

During drilling operations, minor quantities of drill gas will be separated and safely discharged from mud processing equipment. Additionally, it is possible that a well kick may occur resulting in an undesirable influx of formation fluid into the well-bore. The resultant effect would be a release of gas via the mud-gas separator to the atmosphere during well control operations. During well flow back operations, venting may also occur from vessel surge tanks. Gas will not be vented near any ignition sources.

### 3.2.3 Contingent drilling activities

#### Well inspection, maintenance and repair (IMR) activities

In order to maintain the integrity of completed, suspended or abandoned development wells, INPEX may undertake an inspection program, with provision for maintenance and repair as required to ensure that risks to well integrity are reduced to ALARP.

Activities associated with well IMR may include (but are not limited to):

- vessel operations – transport of equipment and personnel to the drilling campaign area to be used as a platform for subsea activities such as the installation of subsea equipment and ROV operations.
- ROV operations – as required, ROV surveys may be undertaken to visually monitor the well head, XT and other subsea infrastructure associated with the SPS within WA-50-L.
- installation of leak detection systems – leak detection systems may be considered for use to remotely monitor potential leaks from the well heads and XTs. These systems may utilise hydrophones to detect pressure waves or sound, generated by a rupture and would be alarmed to trigger further investigation using an ROV. Transponders and battery pack would sit on the seabed and occupy a small area, in the order of a 4-5 $m^2$, and will be removed at the end of the IMR activity.
- subsea cleaning – subsea cleaning and marine growth removal using ROVs may be undertaken as required on the external surface of the well head, XT and related subsea infrastructure to allow for visibility of, access to or restore functionality of well head or XT components.) Initially, physical removal with high pressure or cavitation jets may be used to remove as much marine growth or calcium deposits as possible.

If physical removal is unsuccessful (i.e. due to access issues) weak acids such as acetic or sulfamic acid may be used to remove residual marine growth / calcium deposits.

- installation and upkeep of cathodic protection systems – cathodic protection may be installed in order to control the corrosion of metal surfaces on the well head. This may involve the deployment of skids containing the required number of anodes around the wellhead occupying a small area of seabed. Typically, these systems cover an area of seabed of approximately 2-3 $m^2$ and will be removed at the end of the IMR activity.

### Well intervention

Well intervention activities are those conducted in already completed wells. Often, well intervention is required as a result of well integrity or performance issues requiring investigation or repair. In Ichthys wells, well intervention may also be undertaken as a planned construction operation to recover suspension plugs from the completion following XT installation if a well has been flowed back via in-water CWOR mode (Section 3.2.1 *Well suspension and subsea infrastructure installation*).

Typically, well intervention involves the use of slick-line, wire-line or coiled tubing to conduct various activities within the wellbore (usually through the installed XT). They are undertaken with a MODU or light well intervention (LWI) vessel. Examples of these activities are presented in Table 3-2.

**Table 3-2: Examples of well intervention activities**

| Method | Activity |
|---|---|
| Coiled tubing | Mechanical or chemical removal of wellbore obstructions |
| | Chemical removal of near wellbore damage |
| | Recovery of spent TCP gun carriers |
| | Re-perforation of the liner or perforation of additional intervals |
| Slick-line and wire-line | Installation of a wire-line retrievable SCSSV |
| | Installation of ceramic sand screens |
| | Installation/retrieval of slick-line or wire-line retrievable suspension plugs |
| | Installation of deep-set mechanical plugs in the completion to isolate leaks prior to a workover |
| | Deployment of wellbore investigation tools to investigate well integrity or productivity issues |

### Well interventions from a MODU

Well intervention from a MODU can be achieved using in-riser or open-water CWOR to undertake coiled tubing, wire-line and/or slick-line well intervention activities. Well flow back may also be performed.

### Well interventions from a LWI vessel

As an alternative to a MODU, well interventions can also be achieved from a LWI vessel. LWI does not utilise a high pressure CWOR back to the vessel, instead a well intervention package is used for pressure control. The well intervention package provides the barriers required to maintain well integrity throughout the well intervention activities.

The well intervention package is installed on top of the XT and consists of a number of surface hydraulically actuated, and ROV operated, valves. During a typical well intervention activity, the well intervention package valves are functioned during assembly and maintenance, with routine function-testing and pressure testing performed on a predetermined schedule. Hydraulic control fluid, wire-line grease and fluorescein dye may be discharged to the marine environment.

Slick-line or wire-line tooling are typically deployed in and out of the well via the well intervention package. For deployment into the well, seawater inside the well intervention package is flushed using MEG and nitrogen. A key reason for this flushing activity is to avoid contamination of the reservoir and avoid hydrate formation. Any hydrates that do form, may be removed by the addition of methanol.

On recovery of the slick-line or wire-line tooling, the pressure inside the well intervention package is bled off and flushed with MEG. The pressure, either from well gas, nitrogen, MEG or seawater, is vented and discharged to the marine environment. As an alternative to bleeding off the well intervention package gas pressure subsea, it may be bled off on the vessel via a surface bleed off package to an overboard vent.

A LWI vessel may also be used for XT change-out.

### Well workover

In the event that well integrity or performance issues are identified requiring investigation and repair, a workover using a MODU may be undertaken. Workovers require removal of the XT and installation of the BOP. Examples of workover activities include:

- replacement of a failed tubing retrievable type SCSSV
- replacement of a failed production packer, completion tubing or completion component
- repair or replacement of failed production casing or casing seal assembly
- XT change-out.

### Well abandonment

If abandonment of a development well is required, the well will be plugged and abandoned in accordance with the approved WOMP. A two-barrier philosophy for permanent abandonment will be maintained in compliance with INPEX barrier standards (INPEX Well Integrity Standard (00-AD-STD-60003) and INPEX Well Operations Manual (00-AD-MAN-60002)).

The timing of this activity will be determined by operational schedules. In the event only part of the well is abandoned, the wellhead may be retained for future access.

Well abandonment activities will also be undertaken in accordance with the requirements of the *OPGGS* Act, the OPGGS (Resource Management and Administration) Regulations 2011. Additionally, in accordance with Section 572 of the OPGGS Act (removal of property) (NOPSEMA 2022), INPEX will remove all structures, equipment and other property associated with abandoned wells in WA-50-L.

### Concurrent drilling operations

Although unlikely, it is possible that concurrent drilling operations may occur during the life of this EP. This would involve up to two MODUs operating in WA-50-L. The two MODUs would not operate at the same drill centre given space limitations associated with the MODU anchoring spread and PSZ. A minimum distance of 3 km would be maintained between concurrently operating MODUs.

### Other contingent drilling activities

Other contingencies, detailed in Table 3-3, may be required in the event of operational or technical issues during the drilling campaign.

**Table 3-3: Drilling contingencies**

| Contingency | Contingency establishment | Description | Environmental considerations |
|---|---|---|---|
| Well re-spud | In the event that operational or technical issues are encountered while drilling. | The process of beginning to drill a well.<br>The location of the re-spud would typically be within the immediate area of the original well at a safe location. | The net environmental effect will be limited to an increase in the volume of cuttings generated. In a worst-case scenario, this could be a doubling of the estimated drill cuttings from the first two sections of the well-bore (Table 3-1).<br>There may also be some additional temporary, localised damage to benthic habitat.<br>Should a well re-spud be required, the original well will be permanently plugged and abandoned as described in Section 3.2.3 *Well abandonment*. |
| Sidetrack | In some instances, the option of a sidetrack instead of a re-spud might be pursued when operational issues are encountered.<br>This contingency option (in conjunction with well workover) may be utilised in events such as a failure where the well is producing sand. | The process of drilling a secondary well-bore away from an original well-bore. | The net environmental effect will be limited to an increase in the volume of cuttings generated. The worst-case would be equivalent to cuttings generated from a single section of the well. |

| Contingency | Contingency establishment | Description | Environmental considerations |
|---|---|---|---|
| Lost circulation | Circulation is said to be lost when the drilling fluid flows into one or more geological formations instead of returning up the annulus. | A number of contingencies are available when lost circulation occurs, depending on the severity:<br>• minor losses may be controlled with the use of fluid-loss control materials such as bentonite and/or polymers, or other additives<br>• severe losses will require the use of fluid-loss control materials such as bentonite and/or polymers and the addition of bridging agents such as ground calcium carbonate and fibrous material<br>• pull back, cement the zone where the losses occurred, and drill through the cement and recommence drilling the well. | Worst-case would be equivalent to a sidetrack operation where additional cuttings would be generated from a single section of the well. |

### 3.2.4 Other drilling related activities

#### Rig acoustic positioning

In order to assist with the rig positioning for the development wells, INPEX may require the deployment and retrieval of long base line (LBL) acoustic positioning arrays at selected drill centres.

Specialist service contractors will be commissioned to provide the services and equipment relating to the LBL array installation including the use of a vessel and crane, and temporary installation of seabed acoustic positioning systems.

Drill centre LBL arrays will generally consist of a number of transponders to be installed temporarily around the wells in fixed stands, standing approximately 2 m above the seabed and covering an area of approximately 2 – 3 $m^2$. There are no emissions or discharges associated with rig acoustic positioning arrays.

#### Simultaneous operations (SIMOPS) activities

In relation to the scope of this EP, SIMOPS are defined as simultaneous operations within drilling-related activities.

The SIMOPS-related environmental risks associated with broader Ichthys LNG Project work scopes that will be occurring in WA-50-L during the course of the proposed drilling schedule will be addressed in activity-specific EPs, which will be submitted to NOPSEMA for assessment and acceptance.

INPEX will manage drilling SIMOPS activities in line with the INPEX SIMOPS Procedure (0000-AH-PRC-60004).

## 3.3 MODU, supporting vessels (including IMR/LWI vessels) and aircraft

The MODU contracted to undertake the drilling campaign will be either a semi-submersible MODU or a drillship with an expected complement of 100 to 180 personnel onboard. A semi-submersible MODU will maintain position using either DP or an anchored mooring system whereas a drillship will maintain position using DP. While on location, a PSZ with a 500 m radius will be maintained around the MODU at all times; to control activities, and to reduce the risk of marine collisions, as required under the OPGGS Act. Marine Safety Information (MSI) notifications will be issued via AMSA, while the Australian Hydrographic Office (AHO) will issue a Notice to Mariners.

The MODU will be supported by two to three vessels (i.e. AHSVs and PSVs), as well as regular helicopter flights from the mainland.

The AHSVs and the PSVs will be used to transport equipment, materials and fuel between the MODU and the port of Broome, the marine supply base for the drilling campaign. The AHSVs will be used to deploy and accurately position anchors for the MODU if required. The vessels will also conduct safety lookouts for helicopter landings and take-offs; monitor the 500 m PSZ maintained around the MODU; and provide support in the event of emergencies. Vessels will remain outside of the PSZ unless undertaking duties. Support vessels will be powered by marine diesel. Each supply vessel will be crewed by up to 25 personnel.

LWI vessels are DP operated vessels typically with 80 to 110 personnel onboard and will be powered by marine diesel. The LWI vessel will also maintain a PSZ (500 m radius), as required under the *OPGGS* Act.

Aviation support will be based at Broome International Airport. Helicopters based in Broome will be used to transfer personnel to and from the MODU several times per week. The transfer frequency may vary depending on MODU manning, the operational phase of the well, and the specification (capacity) of the helicopters contracted.

Vessels and helicopters may be refuelled in WA-50-L as operationally required during the drilling campaign.

### 3.3.1 Anchoring and dynamic positioning

A moored semi-submersible MODU will typically have a minimum of eight anchors, deployed by AHSVs and lowered to the seabed. Anchors may be pre-laid in advance of the MODU arriving at each well location. Once in place, the MODU winches in the slack from the mooring lines to the required tension. Anchors are spread in a radial pattern extending from the MODU. The size of the anchor spread will be dependent on the MODU and the MODU specific mooring analysis conducted during the well planning stage. Typically, mooring lines extend approximately 2,000 m from the MODU with approximately 1,000 m of grounded chain. Each anchor typically occupies a total seabed area of approximately 30 $m^2$. Retrieval of anchors is the reverse of the deployment procedures.

If a DP MODU is selected for use, it will only use DP when transiting between well locations in WA-50-L and/or in the event of adverse weather/cyclone. At all other times the DP MODU would maintain position through a mooring system that is set up at each well location in advance of the MODU arriving as described above. If a drillship is selected for use, it will maintain position on DP at all times.

Vessels, including the LWI vessel, will not moor at the well locations; they will use DP to maintain position. Vessels may also use temporary moorings which may be installed in the vicinity of the Ichthys Field to reduce marine diesel consumption while vessels are on stand-by. Temporary moorings would likely consist of a single clump weight or drag embedment anchor, a length of chain and cable to a buoy, which would be retrieved at the end of the drilling campaign. The expected area of physical disturbance to the seabed associated with a temporary mooring is approximately 15-30 $m^2$.

### 3.3.2 Remotely operated vehicle (ROV)

The MODU, as well as other specialised vessels will be equipped with a ROV for:

- pre-spud hazard surveys
- monitoring of BOPs/marine riser, EDP/LRP and well intervention package
- monitoring of cementing operations
- monitoring subsurface infrastructure installation, shallow gas, and unplanned discharges
- function and pressure-testing of well THS and XT connectors (if installed)
- functioning of ROV operated valves on THS, XT, BOP, EDP/LRP and well intervention package
- functioning subsea equipment for cleaning marine growth and troubleshooting.

Camera systems (still and video) are also fitted to the ROV to capture permanent records of the environment and operations.

## 3.4 Greenhouse gas emissions

Expected direct greenhouse gas (GHG) emissions associated with the proposed activity are presented in Table 3-4, with emissions data presented on a per well basis. Emissions are calculated using the NGER Emissions and Energy Threshold Calculator 2022-2023. Noting that these direct emissions relate to MODU and vessel contractors who have operational control and are therefore required to report under the NGER Act (refer to Table 2-1). There are no INPEX scope 1 or 2 emissions associated with the activity covered by this EP. The direct emissions are considered as scope 3 emissions for INPEX Australia.

**Table 3-4: Expected direct GHG emissions generated per well**

| Activity | GHG emissions (t-$CO_2$-e) per well* | | |
|---|---|---|---|
| Drilling support vessels | 7,840 | | |
| Helicopters | 982 | | |
| MODU | Moored semi-submersible: 4,880 | DP semi-submersible: 9,760 | Drillship: 17,885 |

| Activity | GHG emissions (t-$CO_2$-e) per well* | | |
|---|---|---|---|
| Well flow back operation | Gas: 9,296<br>Liquids: 2,030<br>Fugitive emissions: 40 | | |
| Total | 25,068 | 29,948 | 38,073 |

*Assumptions: Figures based on 3 drilling support vessels; 3 helicopter visits per week; duration of 120 days drilling activities; allowance for 24-hour flowback.

The expected GHG emissions presented in Table 3-4 are per well. Therefore, based on the expected number of wells to be drilled, completed and flowed back during the campaign the GHG emissions could range from a maximum of 266,511 to 494,949 t-$CO_2$-e for 7 to 13 wells respectively.

## 3.5 Summary of emissions, discharges and wastes

A summary of the emissions, discharges, and wastes resulting from the activity are described in Table 3-5.

**Table 3-5: Emissions (E), discharges (D) and wastes (W) generated during the activity**

| Activity / system | E, D, W | Description | |
|---|---|---|---|
| Power generation | E | MODU | Combustion emissions from MODU and diesel-powered generators onboard emitted to the atmosphere.<br>Moored MODU approximately 4,880 t-$CO_2$-e.<br>DP MODU approximately 9,760 t-$CO_2$-e.<br>DP drillship approximately 17,885 t-$CO_2$-e. |
| | E | MODU | Noise emissions from power generation (and other topside activities) including DP thrusters. |
| | E | Vessels | Combustion emissions from support vessels and diesel-powered generators onboard emitted to the atmosphere.<br>Approximately 7,840 t-$CO_2$-e. |
| | E | Vessels | Noise emissions from support vessel engines and propulsion systems (such as DP thrusters). |
| | E | Helicopter | Combustion emission from helicopters - aviation fuel emitted to the atmosphere.<br>Approximately 982 t-$CO_2$-e. |
| Drilling | E | MODU | Noise emissions resulting from drilling. |
| Drilling fluids | D | MODU | Basic WBM system uses low-toxicity drilling fluid that is benign to the environment.<br>Sections of the well will be drilled with SBM for technical reasons (Table 3-1). |

| Activity / system | E, D, W | Description | |
|---|---|---|---|
| | | | All drilling fluids selected for use are assessed and approved by the environmental advisor prior to use. |
| Drill cuttings | D | MODU | While drilling riserless, all returns will be to the seabed.<br>For well sections that require SBM, SCE will be used, and cuttings discharged from the surface. No whole SBM will be discharged, only residual fluid on drill cuttings will be discharged (≤5.9% oil-on-cuttings wt/dry wt (averaged over the SBM sections)). |
| Cementing | D | MODU | Seabed discharge of cement at each well location may cover an area of seabed up to 10 $m^2$ from the well, in addition to surface discharge from tank cleaning. Any bulk cement remaining at the end of the campaign is transferred onshore for disposal/reuse. Should this option not be available, the remaining cement will be mixed and operationally discharged to the marine environment. |
| Completion fluids | D, E | MODU | All oil contaminated fluids (approximately <15 $m^3$ per well) will be contained and returned to shore for suitable disposal or reconditioning.<br>Oil contaminated brine will be processed to remove the oil prior to discharge.<br>Uncontaminated surfactant pill discharged to the marine environment.<br>Base oil cushion will be burnt through the oil burner head flare boom prior to well flow back operations. |
| Open-water CWOR | D | MODU | Routine subsea discharges of water-based hydraulic fluids and subsea control fluids (< 1 $m^3$). |
| Gas venting | E | MODU | Atmospheric emissions when venting during drilling (via the mud-gas separator during well control operations). |
| Well flow back operations | E | MODU | Each well will be flowed at gas rates of up to 3.68 $Mm^3/d$ (130 MMscf/day).<br>Light emissions from flaring during well flow back, approximately 24 hours per well. |
| | D | MODU | Produced/condensed water generated during well flowbacks (~240 $m^3$ per well) that cannot be combusted will be processed via a dedicated water filtration unit and discharged overboard at an oil in water (OIW) concentration of < 30 ppm. |
| Well suspension | D | MODU | Well suspension fluids including corrosion inhibitors, biocide and MEG.<br>Routine subsea discharges of water-based hydraulic fluids and subsea control fluids (< 1 $m^3$) from BOP, XT and EDP/LRP activities. |

| Activity / system | E, D, W | Description | |
|---|---|---|---|
| | | | XT flushed with hydraulic control fluid (water/glycol mixture with a fluorescein dye) (< 1 $m^3$). |
| Installation of subsea infrastructure | D | MODU | Routine subsea discharges of water-based hydraulic fluids and subsea control fluids (< 1 $m^3$) associate with XT function testing and ROV use.<br>Discharge of MEG and fluorescein dye (to confirm fluid displacement and facilitate leak detection). |
| Well intervention package | D | LWI vessel | Discharges of water-based subsea control fluid (< 1 $m^3$).<br>Methanol used to dissolve hydrates (<200 L) and MEG (< 5 $m^3$).<br>Hydraulic control fluid, wire-line grease and fluorescein dye may be discharged to the marine environment (< 1 $m^3$). |
| ROV operations | D | MODU or vessel based ROV | Routine subsea discharges of water-based hydraulic fluids and subsea control fluids (< 1 $m^3$). |
| BOP | D | MODU | Water-based BOP control fluids. BOP function/pressure testing results in approximately 0.25 $m^3$ of BOP fluid discharged to the marine environment per test. |
| IMR activities | D | Vessel | Subsea discharges of water based hydraulic fluids (< 1 $m^3$) from ROV use.<br>Subsea cleaning and marine growth removal chemicals using solutions of weak acetic or sulphamic acid.<br>Contingency discharge of MEG from SPS (manifold/jumper spool flushing) via the MODU infrastructure (< 5 - 20 $m^3$), typically released subsea. |
| Cooling water | D | MODU<br>Vessels | Seawater used as heat-exchange medium for machinery engines. Return seawater containing residual heat and residual sodium hypochlorite is returned to sea.<br>During well flowback, a deluge of cooling water (seawater) is used to cool the exterior of the MODU during flaring and returned to sea containing residual heat. |
| Open-drains system | D | MODU | The MODU main deck and moon pool areas will have an open drains system. Deck drainage water will be discharged to sea. Note low toxicity rig wash will be used for washing the main deck of the MODU.<br>MODU drill floor drainage may be routed for mud recovery and re-used in the active mud system. |
| Closed-drains system | W | MODU | The MODU pump rooms and engine rooms are closed drainage areas. Oily waste material from the closed drains is collected in a holding tank and returned to shore for treatment and disposal. |

| Activity / system | E, D, W | Description | |
|---|---|---|---|
| | | | During the use of SBM, all drains in areas exposed to SBM will be plugged. A mud vacuum system (mud-vac) will be used to collect spillages of SBM. The SBM collected by the mud-vac will either be treated and reused or shipped to shore for disposal. |
| Vessel deck drainage | D | Vessels | Vessel deck drainage water will be discharged to sea. |
| Bilge system | D | MODU<br>Vessels | Treated contaminated bilge water with <15 ppm (v) OIW is discharged to sea. |
| Foam fire-extinguishing | D | MODU<br>Vessels | Firefighting foam is routed to the open-drains/deck drainage system and may be released to sea in the event of system deployment. Minor quantities of wind-blown foam may also be released. |
| Sewage, grey water and macerated food waste effluent | D | MODU<br>Vessels | Treated effluent produced by sewage treatment plants is discharged to sea. |
| Ballast system | D | MODU<br>Vessels | Return ballast is discharged to sea. |
| Desalination brine | D | MODU<br>Vessels | Brine produced from the Reverse Osmosis (RO) process will be diluted and discharged to sea. |
| Miscellaneous | E | MODU<br>Vessels | Light emissions from deck and navigation lights on the MODU and vessels. |
| | W | | Solid and liquid wastes from general maintenance operations, equipment replacement, etc., and domestic wastes are transported to shore for disposal. |

# 4 EXISTING ENVIRONMENT

## 4.1 Regional setting

Production licence area, WA-50-L is situated in the northern Browse Basin, approximately 390 km north of Derby, WA. In the event of a worst-case unplanned oil spill, the environment that may be affected (EMBA) covers a considerably larger area than the licence area where planned activities will occur.

The spatial extent of the EMBA was determined using stochastic spill modelling. This considered the worst-case credible hydrocarbon scenario identified for the activity (refer Table 7-16) in the context of defined hydrocarbon exposure thresholds (refer Table 8-2) for surface, entrained/dissolved and shoreline hydrocarbons. The EMBA is used to establish the area for relevant person consultation and to assess impacts to socio-economic and cultural receptors.

Potential impacts to ecological receptors are assessed through the application of specific oil spill modelling thresholds (Table 8-2). This area, where concentrations exceed ecological impact thresholds, is defined as the Extent of Potential Ecological Impacts (EPEI). As the outer extent of the EMBA and EPEI are dictated by the same thresholds for entrained and dissolved hydrocarbons, the EMBA/EPEI boundaries are only different if the floating oil thresholds dictate the furthest extent.

The resulting EMBA and EPEI represent the sum of 300 overlaid modelling runs (100 per season), during all seasons (summer, winter and transitional months) and under different hydrodynamic conditions (e.g. currents, winds, tides, etc.). As such, the actual area that may be affected from any single spill event would be considerably smaller than represented by the EMBA and EPEI.

To identify relevant values and sensitivities that may be affected by both planned and unplanned activities an EPBC Act Protected Matters Database search has been undertaken for WA-50-L and the EMBA (Appendix B). For ease of reference, all figures within this section of the EP include the boundaries of WA-50-L, the EMBA/EPEI and shoreline contact locations.

Oil spill modelling of 300 simulations predicted shoreline contact may occur at various locations, as described in Section 8.2.4. The model algorithms use many conservative assumptions including dispersion rates, entrainment rates and biological degradation rates, which collectively result in an over-prediction of entrained oil concentrations over large distances. The consequence of these conservative assumptions results in the over-estimation of the volumes of oil being calculated by the model, to be arriving at a shoreline. Along with other conservative assumptions associated with oil spill modelling, the outcome is likely to be resulting in the model over-reporting locations of shoreline contact. Although not identified as within the EMBA or EPEI polygons for floating, entrained and dissolved hydrocarbons used for the EPBC Act Protected Matters Database search (Appendix B), a description of the locations of potential shoreline contact have been include within this existing environment section of the EP refer to Sections 4.1.3, 4.4, 4.7.2 and 4.7.3.

### 4.1.1 Commonwealth waters

Australia's offshore waters have been divided into six marine regions in order to facilitate their management by the Australian Government under the EPBC Act. The production licence area, EMBA and EPEI are located entirely within the North-west Marine Region (NWMR). The relevant key features of the NWMR in the context of WA-50-L, EMBA and EPEI are further described in subsequent sections of this EP.

**North-west Marine Region**

The NWMR comprises Commonwealth waters, from the WA–NT border in the north, to Kalbarri in the south. The NWMR encompasses a number of regionally important marine communities and habitats which support a high biodiversity of marine life and feeding and breeding aggregations (DSEWPaC 2012).

### 4.1.2 External Australian Territories

In total there are seven Australian external territories; Ashmore and Cartier Islands, Australian Antarctic Territory, Christmas Island, Cocos (Keeling) Islands, Coral Sea Islands, Heard and McDonald Islands and Norfolk Island (Geoscience Australia 2024). External Australian territories located within the EMBA include Ashmore and Cartier Islands, described in Section 4.3.

### 4.1.3 International waters

The EMBA extends into the international waters of Indonesia with the accumulation of oil predicted on shorelines within the Nusa Tenggara Timur (east) and Nusa Tenggara Barat (west) provinces.

The Indonesian archipelago lies between the Pacific and Indian oceans and bridges the continents of Asia and Australia and comprises of over 17,000 islands (Huffard et al. 2012). The archipelago is divided into several shallow shelves and deep-sea basins (ADB 2014). Indonesian waters, especially the eastern part of the archipelago, play an important role in the global water mass transport system, in which warm water at the surface conveys heat to deeper cold waters. The water mass transport from the Pacific to the Indian Ocean through various channels in Indonesia is known as the Indonesian Throughflow (described in Section 4.6.2).

This region contains suitable habitat for corals and is considered important for coral endemism. The Indonesian coastline is rich in tropical marine ecosystems such as sandy beaches, mangroves, coral reefs and seagrasses (Hutomo & Moosa 2005).

## 4.2 Key ecological features

The Australian Government has identified parts of the marine ecosystem that are of importance for a marine region's biodiversity or ecosystem function and integrity, referred to as key ecological features (KEFs). The north-western corner of WA-50-L overlaps one KEF, and a further four KEFs are located within the EMBA and EPEI (Figure 4-1) as follows:

WA-50-L:

- Continental slope demersal fish communities.

EMBA and EPEI:

- Ancient coastline at 125 m depth contour
- Ashmore Reef and Cartier Island and surrounding Commonwealth waters
- Carbonate bank and terrace system of the Sahul Shelf
- Seringapatam Reef and Commonwealth waters in the Scott Reef complex.

### 4.2.1 Continental slope demersal fish communities

The north-western corner of WA-50-L overlaps a small portion of the continental slope demersal fish community KEF. The level of endemism of demersal fish species in this community is the highest among Australian continental slope environments.

The demersal fish species occupy two distinct demersal community types associated with the upper slope (water depth of 225–500 m) and the mid-slope (750–1,000 m) (DCCEEW 2024a). Although poorly studied, it is suggested that the demersal-slope communities rely on bacteria and detritus-based systems comprised of infauna and epifauna, which in turn become prey for a range of teleost fish, molluscs and crustaceans (Brewer et al. 2007). Higher-order consumers may include carnivorous fish, deepwater sharks, large squid and toothed whales (Brewer et al. 2007). Pelagic production is phytoplankton based, with hot spots around oceanic reefs and islands (Brewer et al. 2007).

Bacteria and fauna present on the continental slope are the basis of the food web for demersal fish and higher-order consumers in this system. Therefore, loss of benthic habitat along the continental slope at depths known to support demersal fish communities could lead to a decline in species richness, diversity and endemism associated with this feature (DSEWPaC 2012). Other potential concerns with regard to pressure on this KEF include climate change (increasing sea temperature/ocean acidification), habitat modification due to fishing gear and commercial fishing by-catch resulting in the potential to diminish the species richness and diversity of these communities (DCCEEW 2024a).

### 4.2.2 Ancient coastline at 125 m depth contour

The ancient coastline at 125 m depth contour KEF runs diagonally in a north-easterly direction, approximately 20 km south of WA-50-L, at its closest point. Parts of the ancient coastline, particularly where it exists as a rocky escarpment, are thought to provide biologically important habitats in areas otherwise dominated by soft sediments. The topographic complexity of the escarpments may facilitate vertical mixing of the water column, providing relatively nutrient-rich local environments. The ancient coastline is an area of enhanced productivity, attracting baitfish which, in turn, supplies food for migrating species (DSEWPaC 2012).

While there is little information available on the fauna associated with the hard substrate of the escarpment, it is likely to include sponges, corals, crinoids, molluscs, echinoderms and other benthic invertebrates representative of hard substrate fauna in the NWMR (DSEWPaC 2012).

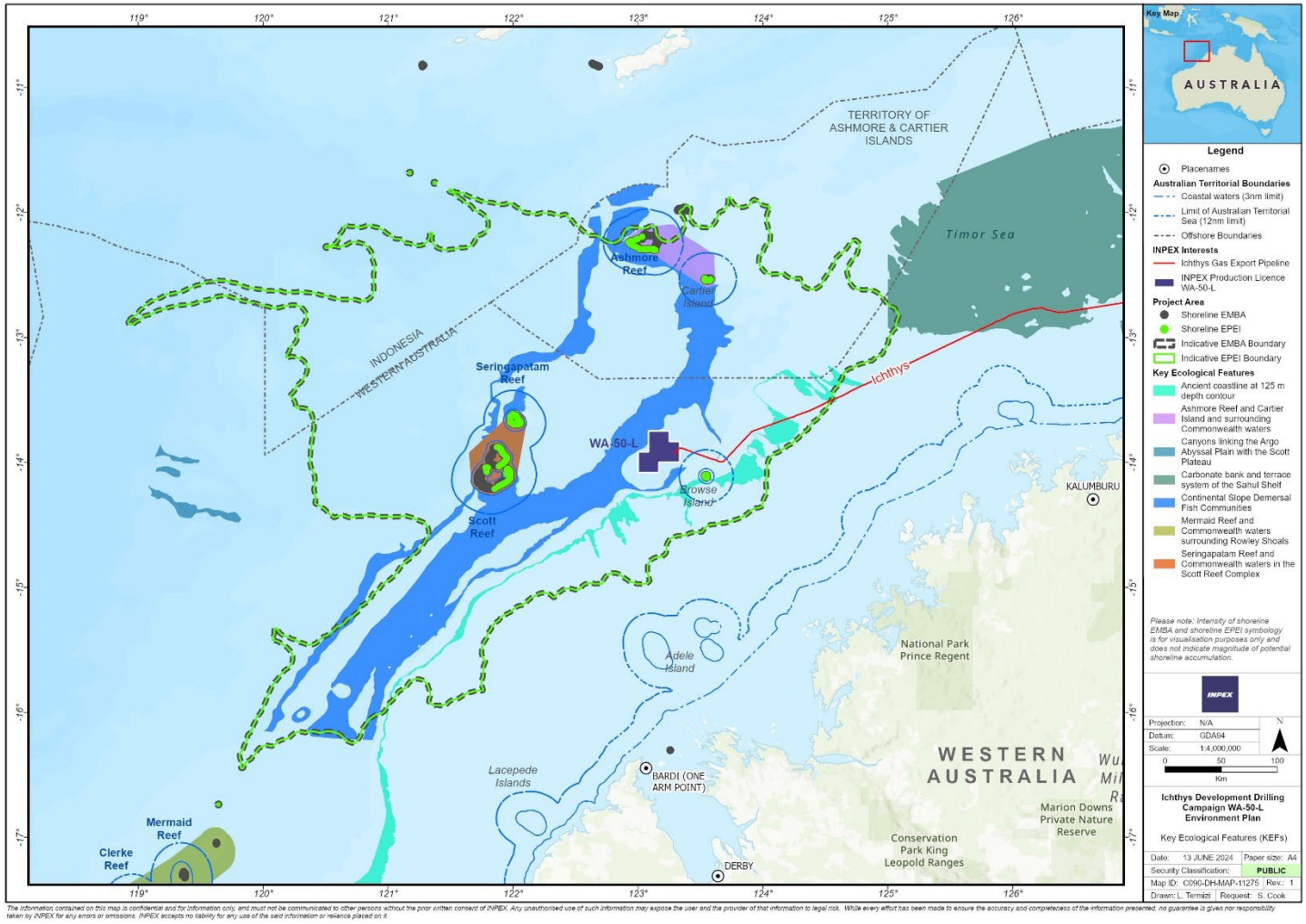



**Figure 4-1: Key ecological features in north-west Australia**

### 4.2.3 Ashmore Reef and Cartier Island and surrounding Commonwealth waters

The Ashmore Reef and Cartier Island and surrounding Commonwealth waters KEF is located approximately 130 km north of WA-50-L, at its closest point. The KEF is recognised for its ecological functioning and integrity (high productivity), and biodiversity (aggregations of marine life) values, which apply to both the benthic and pelagic habitats within the feature.

Ashmore Reef is the largest of only three emergent oceanic reefs in the north-eastern Indian Ocean and is the only oceanic reef in the region with vegetated islands. The waters surrounding Ashmore Reef and Cartier Island are important because they are areas of enhanced productivity in relatively unproductive waters (DSEWPaC 2012).

Further details regarding the values associated with Ashmore Reef and Cartier Island and surrounding Commonwealth waters are provided in Section 4.3 which describes Australian Marine Parks.

### 4.2.4 Carbonate Bank and Terrace System of the Sahul Shelf

The carbonate bank and terrace system of the Sahul Shelf KEF is located in the western Joseph Bonaparte Gulf, approximately 205 km north-east of WA-50-L at the closest point. The KEF is recognised for its biodiversity values (a unique seafloor feature with ecological properties of regional significance), which apply to both its benthic and pelagic habitats. The banks consist of a hard substrate with flat tops. Each bank occupies an area generally less than 10 $km^2$ and is separated from the next bank by narrow sinuous channels up to 150 m deep (DSEWPaC 2012).

Although little is known about the bank and terrace system of the Sahul Shelf, it is considered to be regionally important due to its continuous and large expanse, as well as the ecological role it is likely to play in the biodiversity and productivity of the Sahul Shelf (DSEWPaC 2012). The banks support a high diversity of organisms, including reef fish, sponges, soft and hard corals, gorgonians, bryozoans, ascidians and other sessile filter-feeders (Brewer et al. 2007). They are foraging areas for loggerhead, olive ridley and flatback turtles. Humpback whales and green and freshwater sawfish are also likely to occur in the KEF (Donovan et al. 2008). However, due to their ecology, sawfish (generally estuarine rather than open-ocean species), are not expected to be present within open-ocean environments.

### 4.2.5 Seringapatam Reef and Commonwealth waters in the Scott Reef Complex

The Seringapatam Reef and Commonwealth waters in the Scott Reef Complex KEF is located approximately 100 km west of WA-50-L at the closest point and comprises Seringapatam Reef, Scott Reef North and Scott Reef South. Scott and Seringapatam reefs are part of a series of submerged reef platforms that rise steeply from the seafloor. The total area of this KEF is approximately 2,400 $km^2$ (DSEWPaC 2012).

Seringapatam Reef is a small circular-shaped reef, the narrow rim of which encloses a relatively deep lagoon. Much of the reef becomes exposed at low tide. There are large boulders around its edges, with a few sandbanks, which rise about 1.8 m above the water, on the west side. The reef covers an area of 55 $km^2$ (including the central lagoon). Scott Reef North is a large circular-shaped reef composed of a narrow crest, backed by broad reef flats, and a deep central lagoon that is connected to the open sea by two channels. The reef and its lagoon cover an area of 106 $km^2$. Scott Reef South is a large crescent-shaped formation with a double reef crest. The reef and its lagoon cover an area of 144 $km^2$.

Scott and Seringapatam reefs are regionally significant because of their high representation of species not found in coastal waters off WA, and for the unusual nature of their fauna which has affinities with the oceanic reef habitats of the Indo-West Pacific, as well as the reefs of the Indonesian region.

The coral communities at Scott and Seringapatam reefs play a key role in maintaining the species richness and subsequent aggregations of marine life identified as conservation values for this KEF. Scott Reef is a particularly biologically diverse system and includes more than 300 species of reef-building corals, approximately 400 mollusc species, 118 crustacean species, 117 echinoderm species, and around 720 fish species (Woodside 2009).

Scott and Seringapatam reefs, and the waters surrounding them, attract aggregations of marine life, including humpback whales, blue whales and other cetacean species, whale sharks and sea snakes (Donovan et al. 2008; Jenner et al. 2008; Woodside 2009). Two species of marine turtle, the green and hawksbill, nest during the summer months on Sandy Islet (a small sand cay), located on Scott Reef South. These species also internest and forage in the surrounding waters (Guinea 2006). The reef also provides foraging areas for seabird species, such as the lesser frigatebird, wedge-tailed shearwater, brown booby and roseate tern (Donovan et al. 2008).

## 4.3 Australian marine parks

Australian Marine Parks (AMPs) have been established around Australia as part of the National Representative System of Marine Protected Areas (NRSMPA). The primary goal of the NRSMPA is to establish and effectively manage a comprehensive, adequate and representative system of marine reserves to contribute to the long-term conservation of marine ecosystems and protect marine biodiversity.

Petroleum activities fall within the definition of ‘mining operations’ (EPBC Act section 355) and are allowed to occur inside certain zones within some AMPs. Zones are classified according to the International Union for the Conservation of Nature (IUCN) Categories for Marine Protected Areas.

The IUCN categories that are present within the AMPs intersected by the EMBA, as shown in Table 4-1, include:

- IUCN Category Ia – Strict nature reserve – Protected area managed mainly for science.
- IUCN Category II – National Park – Protected area managed mainly for ecosystem conservation and recreation.
- IUCN Category IV – Habitat/species management area – Protected area managed mainly for conservation through management intervention.
- IUCN Category VI – Managed resources protected areas – Protected area managed mainly for the sustainable use of natural ecosystems. Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

The Director of National Parks (DNP) may make, amend and revoke prohibitions, restrictions and determinations under regulations 12.23, 12.23A, 12.26, 12.56 and 12.58 of the EPBC Regulations where it is considered necessary to:

- protect and conserve biodiversity and other natural, cultural and heritage values; or
- to ensure human safety or visitor amenity; or
- where it is otherwise necessary to give effect to the management plan.

At commencement of the North-west Marine Parks Network Management Plan (DNP 2018) prohibitions made under regulation 12.23 of the EPBC Regulations are in place prohibiting entry to Ashmore Reef Marine Park, other than parts of West Lagoon and West Island, to protect the fragile habitats and biodiversity, and to Cartier Island Marine Park due to the presence of unexploded ordnance. These have been in place for many years.

All visitors to Ashmore Reef and Cartier Island (except recreational boat users accessing the Marine National Park Zone of Ashmore Reef) require approval from the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW). Undertaking other activities in these AMPs may also require approval from the DNP under Part 13 of the EPBC Act.

The Commonwealth DNP has issued a general approval under Section 359B of the EPBC Act allowing a range of activities to occur within these AMPs. The activities approved including 'mining operations' which, as defined under the EPBC Act, also includes all petroleum activities, including associated emergency response activities. No other approvals relating to this activity are required from the DNP.

Actions to respond to oil pollution incidents (including environmental monitoring and remediation) in AMPs, can be undertaken without an authorisation issued by the DNP, provided that the actions are undertaken in accordance with an EP that has been accepted by NOPSEMA. However, the DNP is to be notified of the pollution event or proposed spill response actions within AMPs prior to the activity being undertaken where practicable.

WA-50-L does not overlap any AMPs (Figure 4-2).The AMPs that overlap the EMBA and their IUCN categories are outlined in Table 4-1 with a further description provided in subsequent sections.

**Table 4-1: AMP and IUCN categories**

| AMP | Sanctuary Zone (IUCN Ia) | (Marine) National Park Zone (IUCN II) | Habitat Protection Zone (IUCN IV) | Recreational Zone (IUCN IV) | Multiple Use Zone (IUCN VI) | Special Purpose Zone (IUCN VI) | Special Purpose Zone (Trawl) (IUCN VI) |
|---|---|---|---|---|---|---|---|
| Argo-Rowley Terrace | | X | | | X | | |
| Ashmore Reef | X | | | X | | | |
| Cartier Island | X | | | | | | |
| Kimberley | | | | | X | | |

### 4.3.1 Argo-Rowley Terrace

The Argo-Rowley Terrace MP covers an area of approximately 146,000 km$^2$ and is the largest AMP in the north-west (Parks Australia 2024a). The MP eastern boundary is approximately 280 km from WA-50-L at the closest point.

The Argo-Rowley Terrace MP is an important area for sharks, which are found in abundance around the Rowley Shoals and provides important foraging areas for migratory seabirds and the endangered loggerhead turtle (DNP 2018). There is limited information about the cultural significance of this MP to indigenous Australians (DNP 2018).

### 4.3.2 Ashmore Reef MP

Ashmore Reef MP is in the NWMR and is located approximately 155 km north of WA-50-L. It covers an area of 583 km$^2$ and the site is also a designated a “wetland of international importance” under the Convention on Wetlands of International Importance (Ramsar Convention) especially as Waterfowl Habitat (Parks Australia 2024b) (refer Section 4.5).

Ashmore Reef is an atoll-like structure with low, vegetated islands, sand banks, lagoon areas, and surrounding reef. It is the largest of only three emergent oceanic reefs present in the north-eastern Indian Ocean and is the only oceanic reef in the region with vegetated islands. The reef exhibits a higher diversity of marine habitats compared with other North West Shelf (NWS) reefs, and supports an exceptionally diverse fauna, particularly for corals and molluscs (DNP 2018). Dugong foraging and breeding is reported at Ashmore Reef correlating with seagrass habitats.

The reef and its surrounding Commonwealth waters are regionally important for feeding and breeding aggregations of birds. It has major significance as a staging point for wading birds migrating between Australia and the northern hemisphere, including 43 species listed on one or both of the China–Australia Migratory Bird Agreement and the Japan–Australia Migratory Bird Agreement.

Ashmore Reef supports some of the most important seabird rookeries on the NWS, including colonies of bridled terns, common noddies, brown boobies, eastern reef egrets, frigatebirds, tropicbirds, red-footed boobies, roseate terns, crested terns and lesser crested terns. It provides important staging points/feeding areas for many migratory seabirds (Parks Australia 2024b; DNP 2018).

There is limited information about the cultural significance of this MP to indigenous Australians (DNP 2018). However, Ashmore Reef MP contains Indonesian artefacts and grave sites and Ashmore lagoon is still accessed as a rest or staging area for traditional Indonesian fishers travelling to and from fishing grounds within the MoU Box (refer to Section 4.10.4 and Figure 4-9) (DNP 2018).

### 4.3.3 Cartier Island MP

Cartier Island MP is located in the NWMR approximately 130 km north of WA-50-L and covers an area of approximately 172 km$^2$ (Parks Australia 2024c). The reserve includes Cartier Island and the area within a 4 nm radius of the centre of the island, to a depth of 1 km below the seafloor. It is an IUCN Category Ia Sanctuary Zone with water depths from less than 15 m to 500 m (DNP 2018).

Cartier Island is an unvegetated sandy cay surrounded by a reef platform. The island and its surrounding waters support prolific seabird rookeries, many species of which are migratory and have their main breeding sites on the small, isolated islands. Seabirds at Cartier Island include colonies of bridled terns, common noddies, brown boobies, eastern reef egrets, frigatebirds, tropicbirds, red footed boobies, roseate terns, crested terns and lesser crested terns (Parks Australia 2024c). Much like Ashmore Reef, Cartier Island is an important staging point/feeding area for many migratory seabirds. The island also supports significant populations of feeding and nesting marine turtles and a high abundance and diversity of sea snakes (DSEWPaC 2012).

Cartier Island is part of the Ashmore Reef and Cartier Island and surrounding Commonwealth waters KEF (Section 4.2). There is limited information about the cultural significance of this MP to indigenous Australians (DNP 2018).

### 4.3.4 Kimberley MP

The Kimberley MP is located approximately 100 km to the south-east of WA-50-L with the EMBA/EPEI overlapping the multi-use zone in the north-west portion of the MP (Figure 4-2). The Kimberley MP occupies an area of approximately 74,500 $km^2$ (Parks Australia 2024d).

This Kimberley MP provides an important migration pathway and nursery areas for humpback whales, and foraging areas for migratory seabirds, migratory dugongs, dolphins and threatened and migratory marine turtles (DNP 2018). It is adjacent to important foraging and pupping areas for sawfish and important nesting sites for green turtles (Parks Australia 2024d). The Wunambal Gaambera, Dambimangari, Mayala, Bardi Jawi and the Nyul Nyul people's sea country extends into the Kimberley MP (DNP 2018).

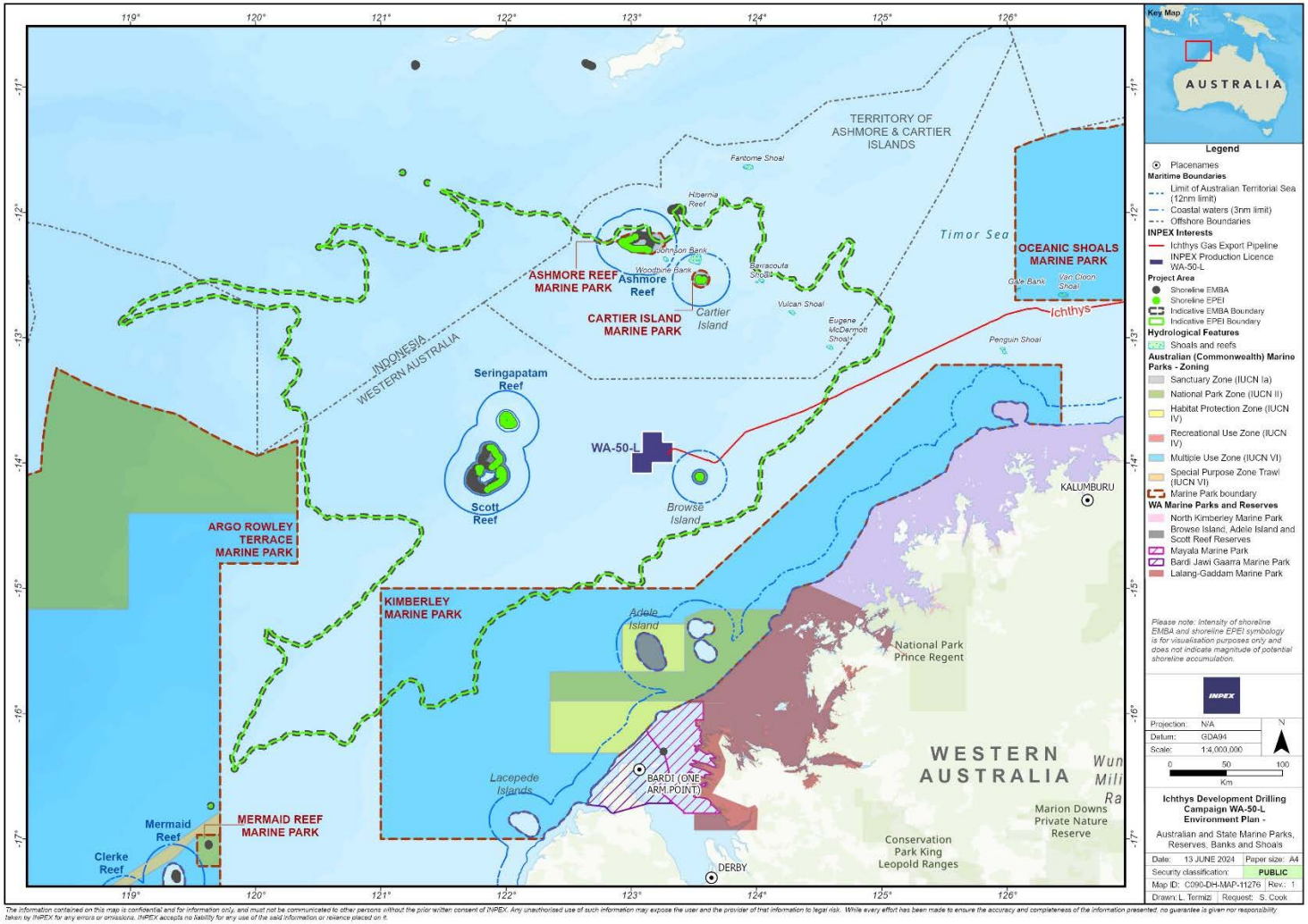





**Figure 4-2: Australian and state marine parks, reserves, banks and shoals**

## 4.4 State reserves and marine parks

There are no State marine parks/reserves that overlap WA-50-L (Appendix B).

The EPBC Act Protected Matters database search (Appendix B) identified three State reserves within the EMBA/EPEI as listed below. In addition to these locations, where oil spill modelling (refer to Section 8.2.4) predicted accumulation of oil on shorelines within State marine parks/reserves they have also been described below. Unnamed locations were identified using the Collaborative Australian Protected Areas Database (CAPAD 2022):

- Browse Island
- Scott Reef
- Unnamed WA41775 identified as Browse Island
- Mayala MP.

Should any new State marine park/reserve management plans come into effect, the impacts of these changes will be assessed in accordance with Section 9.8.1 and Section 9.7 of this EP.

### 4.4.1 Browse Island Nature Reserve

Browse Island is the nearest landform to WA-50-L (approximately 26 km away at the closest point) with predictive oil spill modelling indicating that shoreline accumulations of oil may occur in the event of a worst-case spill scenario. Identified as a Class 'C' nature reserve, Browse Island is an isolated sand cay surrounded by an intertidal reef platform and shallow fringing reef. The purpose of this reserve (#41775) is conservation, navigation (a lighthouse is present on the island), communication, meteorology and survey.

The Browse Island reef complex is an outer shelf, biohermic structure rising from a depth of approximately 200 m. It is a flat-topped, oval-shaped, platform reef with the largest diameter being about 2.2 km. The island is a triangular, vegetated sandy cay, standing just a few metres above high-tide level. It measures approximately 700 m by 400 m.

Browse Island features diverse coral reef fauna with numerous patch reefs and hard coral cover in shallow depths (Heyward et al. 2019). Benthic cover transitions to hard and soft coral communities at deeper (40-60 m) depths around Browse Island before transitioning into filter feeding communities. Browse Island also supports a highly diverse assemblage of tropical reef fish with 385 species identified (Heyward et al. 2019). In contrast to the subtidal habitat surround the island, the intertidal areas (e.g. reef platform/flat) has low species richness of flora and fauna (Olsen et al. 2018). Interestingly, seagrass is completely absent at Browse Island. Rocky shore habitat is represented only by exposed beach rock, and there are no intertidal sand flats.

Green and flatback turtle (*Chelonia mydas* and *Natator depressus*) nesting occurs during the summer months and Browse Island also provides habitat for seabirds and shorebirds. Additionally, Browse Island (inclusive of a 20 km buffer) has been classified as important nesting areas for green turtles from November to March under the Recovery Plan for Marine Turtles in Australia (DEE 2017a). The Scott-Browse green turtles are a distinct genetic unit, nesting only at Scott Reef (Sandy Islet) and Browse Island.

It is not a regionally significant habitat for seabirds, with previous surveys finding a lack of diversity of seabirds breeding there (Clarke 2010). The DCCEEW has not listed Browse Island as a marine avifauna BIA. However, colonies of nesting crested terns (*Thalasseus bergii*) were observed nesting on the north-western side of Browse Island in a colony of approximately 1,000 birds (Olsen et al. 2018). Browse Island has also been recognised, through stakeholder consultation between INPEX and the DBCA, as an important location for seabirds.

### 4.4.2 Scott Reef Nature Reserve

Scott Reef Nature Reserve is located approximately 125 km from WA-50-L. Sandy Islet is a C class nature reserve (under WA legislation) for the purpose of conservation (No. 42749), declared to low water mark. It has an approximate area of 117 $km^2$. This encompasses much of the South Scott lagoon, and the south-western reef flat of North Scott Reef. The remainder of the South Scott Reef lagoon and North Scott Reef are Commonwealth waters and Commonwealth jurisdiction applies.

The coral communities at Scott reef play a key role in maintaining the species richness and subsequent aggregations of marine life. Scott Reef is a particularly biologically diverse system and includes more than 300 species of reef-building corals, approximately 400 mollusc species, 118 crustacean species, 117 echinoderm species, and around 720 fish species (Woodside 2009). The reef also provides foraging areas for seabird species, such as the lesser frigatebird, wedge-tailed shearwater and roseate tern (Donovan et al. 2008). Scott Reef (including a 20 km buffer) has been classified as habitat critical to the survival of marine turtles in the Recovery Plan for Marine Turtles (DEE 2017a) as described in Section 4.7.4.

### 4.4.3 Mayala MP

The Mayala MP is located approximately 215 km south of WA-50-L and covers an area of approximately 3,150 $km^2$. The Mayala MP is located in the Buccaneer Archipelago within the Kimberley region of WA, approximately 200 km north-east of Broome. The Mayala MP is a 'Class A' MP providing the highest level of protection (DBCA 2022).

The Mayala MP is bordered to the west by the Bardi Jawi Gaarra MP and bordered to the east by the Lalang-gaddam MP. The Mayala MP comprises an extensive network of hundreds of islands. No terrestrial areas are included within the Mayala MP but intertidal areas to the high-water mark are included (DBCA 2022).

The area covered by the Mayala MP is home to a diverse range of marine life. Fringing reefs have formed around the many islands of the Buccaneer Archipelago, withstanding a tidal range in excess of 11 m (Richards et al. 2017; Mayala Inninalang Aboriginal Corporation RNTBC 2019). Mangrove-lined creeks, seagrass meadows and macroalgae communities create important nursery areas for fish, and turtles are regularly seen foraging and nesting in the area. From June to November each year humpback whales (*Megaptera novaeangliae*) migrate to Mayala sea country and beyond to give birth to their young, and dugongs visit the proposed marine park from May to July.

The Mayala MP supports commercial activities such as pearling, aquaculture and commercial fishing. Customary hunting of turtles, dugongs and saltwater crocodiles is permitted by Mayala people in the MP.

According to the Mayala MP Management Plan and the Mayala Country Plan, the MP contains many places of cultural and spiritual importance and so the establishment and management of the Mayala MP will contribute to the conservation and enhancement of the outstanding cultural, ecological, recreational and commercial values in the area (DBCA 2022; Mayala Inninalang Aboriginal Corporation RNTBC 2019).

## 4.5 Wetlands of conservational significance

### 4.5.1 Ashmore Reef National Nature Reserve

In addition to being listed as a National Nature Reserve and a nationally important wetland, Ashmore Reef has been designated a Ramsar site due to the importance of the islands in providing a resting place for migratory shorebirds and supporting large breeding colonies of seabirds (Hale & Butcher 2013). Ashmore Reef is located within the EMBA and is approximately 155 km north of WA-50-L.

The Ashmore Reef National Nature Reserve provides a staging point for many migratory wading birds from October to November and March to April as part of the migration between Australia and the northern hemisphere (Commonwealth of Australia 2002). Migratory marine and shorebirds use the islands and sand cays as feeding and resting areas during their migration. The values of this wetland (habitat which supports migratory birds) are described in Section 4.3.2.

## 4.6 Physical environment

### 4.6.1 Climate

#### Air temperature

Air temperatures recorded at Browse Island, the closest Bureau of Meteorology (BOM) climatological station to WA-50-L, shows a maximum temperature of 33.3 degrees Celsius (°C) and a minimum of 21.6 °C (BOM 2024a). Air temperatures in the Browse Basin remain warm throughout the year with means and maxima ranging from 26–30 °C and 32–35 °C, respectively (INPEX 2010).

#### Winds

The climate of northern Australia shows two distinct seasons: winter, from April to September; and summer, from October to March. There are rapid transitional periods between the two main seasons, generally in April and September/October (RPS MetOcean Pty Ltd 2011).

The winter season is characterised by steady north-east to south-east winds of 5 metres per second (m/s) to 12 m/s, driven by south-east trade winds. The prevailing south-east winds bring predominantly fine conditions throughout the north of Australia. The summer season is the period of the predominant north-west monsoon. It is characterised by north-west to south-west winds of 5 m/s for periods of five to 10 days with surges in airflow of 8 m/s to 12 m/s for periods of one to three days.

During the summer season, the weather in the north is largely determined by the position of the monsoon trough, which can be in either an active or an inactive phase. The active phase is usually associated with broad areas of cloud and rain, with sustained moderate to fresh north-westerly winds on the north side of the trough. Widespread heavy rainfall can result if the trough is close to, or over, land. An inactive phase occurs when the monsoon trough is temporarily weakened or retreats north of Australia. It is characterised by light winds, isolated showers, and thunderstorm activity, sometimes with gusty squall lines.

Tropical cyclones can also develop off the coast in the northern wet season (summer), usually forming within an active monsoon trough. Heavy rain and strong winds, sometimes of destructive strength, can be experienced along the coast within several hundred km of the centre of the cyclone. The Browse Basin is prone to tropical cyclones, mostly during the tropical wet season (summer) from December to March (INPEX 2010). Under extreme cyclone conditions, winds can reach 83 m/s.

#### Rainfall

The region has a pronounced monsoon season between December and March, which brings with it heavy rainfall. Heaviest rainfall is typically associated with tropical cyclones.

Troughton Island located on the Kimberley coastline is the closest location to WA-50-L with a historical rainfall record. Historical rainfall data shows the highest maximum (269.8 mm) and mean (>100 mm) monthly rainfalls occur from December to March (BOM 2024a). Rainfall intensity at the Ichthys Field is expected to range from approximately 215 mm/h to 460 mm/h over a 5-minute interval (based on 1-year and 200-year average recurrence intervals) (AMEC Ltd. 2011).

#### Air quality

There is currently no air quality data recorded within the vicinity of WA-50-L. However, given the distance from land, air quality is expected to be relatively high. Potential sources of air pollution associated with anthropogenic influences are expected to be emissions generated by shipping, and oil and gas activities, and therefore considered to be localised in relation to the regional setting.

### 4.6.2 Oceanography

#### Currents

Broad-scale oceanography in the north-west Australian offshore area is complex, with major surface currents influencing the region, including the Indonesian Throughflow, the Leeuwin Current, the South Equatorial Current, and the Eastern Gyral Current (Figure 4-3). The Indonesian Throughflow current is generally strongest during the south-east monsoon from May to September (Qiu et al. 1999). The Indonesian Throughflow is a key link in the global exchange of water and heat between ocean basins. It brings warm, low-nutrient, low-salinity water from the western Pacific Ocean, through the Indonesian archipelago, to the Indian Ocean. It is the primary driver of the oceanographic and ecological processes in the region (DSEWPaC 2012).

Offshore regions with water depths exceeding 100-200 m tend to experience significant large-scale drift currents. These drift currents tend to be stronger than tidal currents. Drift currents in the location of the INPEX *Ichthys Venturer* FPSO within WA-50-L are expected to be directed towards the south-west during summer and winter. During the transitional months, drift currents will be variable, predominantly switching between the south-west and north-east directions. Typical drift current speeds range from zero to 0.3 m/s throughout the year (APASA 2015). Tidal current data, also from the FPSO location, indicate that tidal currents are likely to be directed along a north-west to south-east axis throughout the year. Typical tidal current speeds are in the range of 0.2–0.6 m/s (APASA 2015). Wind shear at the surface also generates local-scale currents.

#### Tides

The tides within WA-50-L are semidiurnal, with two daily high tides and two daily low tides (McLoughlin et al. 1988). Both the semidiurnal and diurnal tides appear to travel north-eastwards in the deep water leading to the Timor Trough before propagation eastwards and southwards across the wide continental shelf. The NWMR experiences some of the largest tides along a coastline adjoining any open ocean in the world.

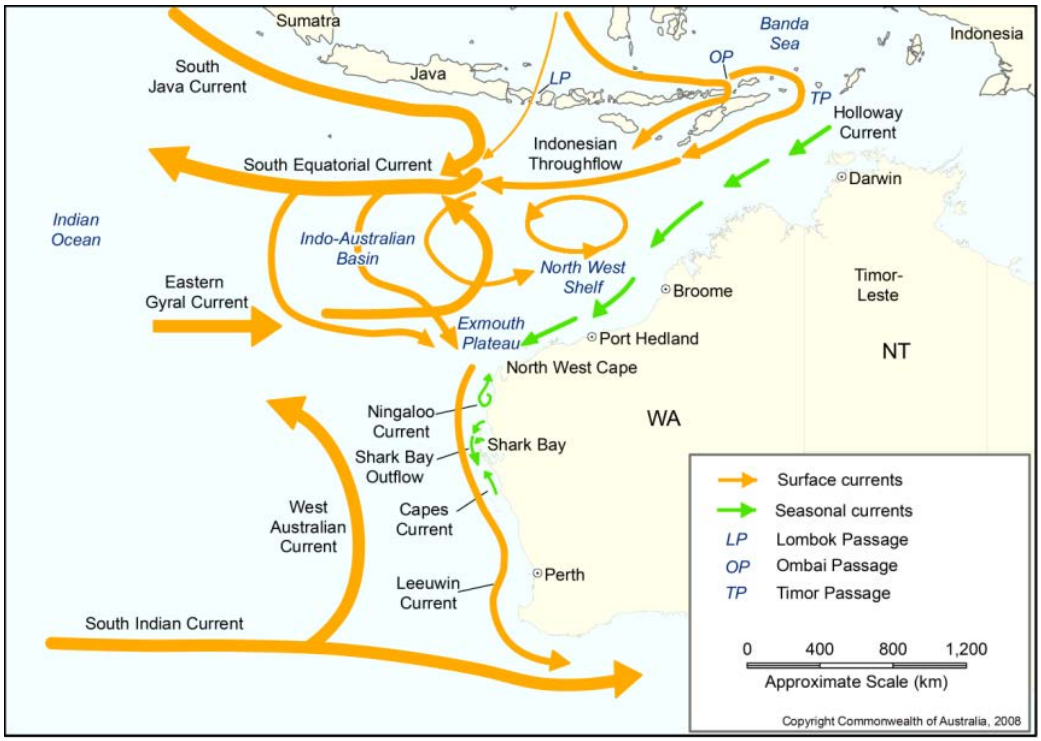



**Figure 4-3: Surface currents for Western Australian waters**

### Waves

Summertime tropical cyclones generate waves propagating radially out from the storm centre. Depending upon the storm size, intensity, relative location and forward speed, tropical cyclones may generate swell with periods of 6–10 seconds (s) from any direction and with wave heights of 0.5–9.0 m. During severe tropical cyclones, which can generate major short-term fluctuations in current patterns and coastal sea levels (Fandry & Steedman 1994; Hearn & Holloway 1990), current speeds may reach 1.0 m/s and occasionally exceed 2.0 m/s in the near-surface water layer. Such events are likely to have significant impacts on sediment distributions and other aspects of the benthic habitat.

## 4.6.3 Bathymetry and seabed habitats

Water depth within WA-50-L ranges from 235 m to 275 m at LAT. Geophysical surveys have been undertaken by INPEX at the Ichthys Field and in areas close to Heywood and Echuca shoals and south-east towards the Kimberley coast (INPEX 2010). These studies indicated that seabed topography is relatively flat and featureless, and the geology is generally homogeneous through the region.

Soft substrates in the Browse Basin and continental shelf are typical of deep-sea, outer continental shelf and slope benthic habitats found along the length of the NWS (RPS 2007). This habitat generally supports a diverse infauna dominated by polychaetes and crustaceans typical of the broader region and this is reflected in survey results which indicate the epibenthic fauna is diverse but sparsely distributed (RPS 2008). Deep-sea infaunal assemblages of this kind are very poorly studied on the NSW but are likely to be widely distributed in the region (INPEX 2010).

Areas of mud and fine sand are widespread on the outer shelf and slope in the Browse Basin indicating that it is a depositional area where fine sediments and detritus accumulate. The distribution of seabed type shows some correlation with water depth, with sediments becoming coarser as water depth increases (INPEX 2010). However, there are also large sand waves in parts of the basin, showing that, locally, there are strong seabed currents. The sand waves are likely to move in response to seasonal changes in the currents and the substrate instability is expected to limit the development of infaunal communities in this habitat.

During surveys of the Ichthys Field, no obstructions were noted on the seafloor and no features such as boulders, reef pinnacles or outcropping hard layers were identified (INPEX 2010; Fugro Survey Pty Ltd 2005, 2015). A previous survey undertaken in WA-50-L at the approximate location of the Ichthys gathering system 4 reported some areas of well-developed sand waves, with the largest ranging from 0.5 m to 1.0 m high and up to approximately 30 m in length (Fugro Survey Pty Ltd 2015). In general, the seabed sediments grade from soft featureless sandy silts to gravelly sand suggestive of strong near-seabed currents and mobile sediments that do not favour the development of diverse epibenthic communities.

### 4.6.4 Water quality

Offshore surface waters are typically oligotrophic. This has been confirmed by studies recording low nitrate concentrations and low phytoplankton abundance. In general, the region experiences an influx of comparatively nutrient-rich waters at depth in summer and a variety of processes, such as tidal currents, internal waves and cyclone mixing, are known to carry these nutrients into the bottom waters of the shelf (Hallegraeff 1995).

Inshore coastal waters tend to be more turbid than offshore open ocean waters due to suspension of sediments by wave action and sediment laden runoff from the land. Higher total suspended solids (TSS) concentrations tend to occur during spring tide conditions due to stronger tidal currents and meteorological perturbations, such as periods of strong winds.

Water quality has been measured by INPEX during numerous surveys in order to describe the natural water quality conditions in the Ichthys Field and in surrounding areas including WA-50-L. An overview of the water quality studies undertaken are as follows:

- Water quality sampling was conducted at 27 offshore locations near the Ichthys Field, Echuca Shoal and their surrounds between March 2005 to June 2007 as a part of the INPEX Ichthys EIS studies (INPEX 2010).
- Near-seabed temperature and salinity profiles were obtained along the proposed pipeline route from the Ichthys Field to Darwin Harbour during geophysical and geotechnical surveys conducted between August and October 2008 (Neptune Geomatics 2009).
- ARP studies between INPEX and Shell in the Browse Basin included 66 water quality profiles, and more than 1,300 water samples collected from 56 locations around the Ichthys Field in May 2015. Sampling locations were based on a gradient design away from a central point in the Ichthys Field and also included increased sampling around Browse Island, Echuca and Heywood shoals. Samples were analysed for metals and hydrocarbons (Ross et al. 2017). In addition, ad hoc water quality samples have also been collected from sampling locations during other ARP field surveys to increase the dataset and knowledge.
- Water quality monitoring in the receiving environment was undertaken in 2019, as part of the INPEX offshore facility liquid effluent management plan, to detect changes in water quality attributable to liquid discharges from the Ichthys offshore facility (CPF and FPSO) located in WA-50-L. Samples were collected from 31 locations based on the

modelled mixing zones for the CPF and FPSO and included fixed sampling locations and sampling sites along the prevailing currents (Jacobs 2019). This monitoring was also repeated in 2024 (O2 Marine 2024).

The results of these studies, as relevant to this EP, are summarised in Table 4-2.

**Table 4-2: Summary of water quality parameters in the vicinity of WA-50-L**

| Parameter | Description |
|---|---|
| Surface-water temperature | The surface waters of the region are tropical year-round, with surface temperatures of ~26 °C in summer and ~22 °C in winter (DSEWPaC 2012). The baseline monitoring in the Ichthys Field area recorded surface water temperatures of ~30 °C in summer (March) and ~26–27 °C in winter (July) (INPEX 2010).<br>Offshore waters in the region are typified by thermal stratification, with the start of the thermocline generally around 60 m below sea surface (but ranging from 30-80 m) (Ross et al 2017). Temperature decays rapidly through the water column to 14 °C at approximately 200 m and then decays more slowly to a minimum of circa 8 °C recorded at the deepest sites (Ross et al. 2017).<br>Data from 2024 monitoring undertaken by INPEX reported surface waters were 29.6°C on average, with a thermocline and corresponding drop in temperature evident at approximately 40 – 100 m, and bottom temperatures (247 m) recording 13.4°C (O2 Marine 2024). These temperatures are similar to those presented in previous monitoring studies (Jacobs 2019). |
| Salinity | Salinity was spatially and temporally consistent at 34 to 35 parts per thousand (ppt) across all sampling sites and can reasonably be expected to be similar within the wider area, given the distance from major freshwater discharges (INPEX 2010).<br>Sampling undertaken in 2019, found the vertical salinity profiles of various sites sampled within and around the CPF and FPSO in WA-50-L were similar and did not change markedly from surface to bottom. Generally, salinity was approximately 34.4 ppt at the surface and then increased slightly at the seabed 34.5 ppt (Jacobs 2019).<br>Data from 2024 monitoring undertaken by INPEX reported salinity ranging from 33.8 – 34.9 PS at fixed sites, 34.1 – 35.1 PSU at the CPF mobile sites and 34.4 – 34.8 PSU at the FPSO mobile sites. Salinity did not change markedly from surface to bottom (O2 Marine 2024). |
| Dissolved oxygen | Dissolved oxygen concentrations in the Ichthys Field mirrored water temperatures, with concentrations varying considerably between the surface and subsurface layers. The surface mixed layer was generally well oxygenated throughout; however, below the thermocline (starting at approximately 60 m through to 200 m water depth), the concentration of dissolved oxygen decreased consistently with depth (RPS 2007; Ross et al. 2017; Jacobs 2019). Dissolved oxygen concentrations were recorded at constant levels of 6.0 to 6.5 ppm at or above the thermocline in both summer and winter. In the cooler waters below the thermocline, dissolved oxygen decreased with increasing depth, with levels as low as 4.5 to 5.0 ppm recorded at a depth of 93 m and 3 ppm at a depth of 250 m (INPEX 2010). This indicates that the strong thermal stratification at the offshore locations results in limited oxygen replenishment of subsurface waters due to the lack of regular mixing between water layers (RPS 2007). |
| pH | The average pH of waters was measured at approximately 8.4 (RPS 2007), which is slightly higher (more alkaline) than normally encountered in the marine environment and is above the default criteria given in the Australian and New Zealand guidelines for fresh and marine water quality (ANZG 2018). |

| Parameter | Description |
|---|---|
| | Sampling undertaken in 2019 reported, the pH of the surface water for sites within and around the CPF and FPSO in WA-50-L ranged from 8.12 to 8.20 (Jacobs 2019). Further, the shape of the profiles for pH and dissolved oxygen were similar, with a decrease in pH occurring near the top of the thermocline, due to oxidation of organic matter. |
| Turbidity and light attenuation | Turbidity is generally higher in the shallow waters of the continental shelf and towards the base of many of the deeper water column profiles. Sampling undertaken in 2019, found turbidity was very low throughout the majority of the water column at each site sampled. At approximately 20–50 m above the seabed the turbidity was slightly elevated and increased with depth (Jacobs 2019). This has been attributed to the action of currents passing over the seabed causing some turbulence and resuspension of sediments. The re-suspension of materials from the seafloor includes organic material, which could comprise a pathway for hydrocarbon materials to become incorporated into sediments.<br><br>Light attenuation coefficients calculated from photosynthetically active radiation measurements ranged from 0.026 to 0.043 µMol/$m^2$/s in October and December 2006, and 0.048 to 1.09 µMol/$m^2$/s in June 2007. These were observed to be consistent with reported “typical” levels for the region (RPS 2007). |
| Petroleum hydrocarbons | Baseline sampling has indicated low levels of naturally occurring hydrocarbons released by organic matter decay or higher trophic level organisms. Shallow water sites showed a constant hydrocarbon concentration through the profile. Deep water sites showed a low and constant concentration above the thermocline, with a peak of 0.2-0.25 µg/L at the thermocline before slowly diminishing (Ross et al. 2017). |
| Radionuclides | Water-column sampling for radionuclides in the Ichthys Field area indicated concentrations of radium-226 ranging from below lower limits of reporting (LLR) to 0.034 (±0.012) becquerels per litre (Bq/L) and concentrations of radium-228 ranging from below LLR to 0.167 (±0.128) Bq/L. With the exception of one mid-depth sample, all samples returned gross alpha-particle and gross beta-particle radiation levels below the Australian Drinking Water Guidelines screening criterion of 0.5 Bq/L provided by the National Health and Medical Research Council (NHMRC) and the Natural Resource Management Ministerial Council (NRMMC). |
| Metals | Total metal concentrations in the offshore waters sampled were below the 99% species protection level for marine waters with the exception of zinc and cobalt at one site each. The reason for these two slightly elevated readings is unknown (INPEX 2010).<br><br>Ultra-trace-level analysis methods were used to assess metal concentrations in surface waters because ANZG (2018) guideline trigger values at the 99% species protection level are lower than the limits of standard laboratory methods. Mercury was the only metal not detected above the LLR, while cobalt was marginally above the LLR at only one site. Concentrations of arsenic, nickel, chromium and zinc were consistent across all sites, but the concentrations of cadmium, copper and lead showed greater variability (INPEX 2010). |

| Parameter | Description |
|---|---|
| | Sampling undertaken in 2019, found copper concentrations above 99% species protection levels were recorded at various sites including sites up to 10 km from the FPSO in WA-50-L (Jacobs 2019). There were no exceedances of the copper guideline value for sites closest to the discharge for either fixed or mobile sites and all sites with exceedances were different distances and directions from the discharge. Chromium was detected in water samples collected from both fixed and mobile sites the edge of the CPF and FPSO mixing zones or beyond. All chromium concentrations were below the laboratory limits of reporting (Jacobs 2019). |

### 4.6.5 Sediment quality

Similar to water quality, marine sediments have been sampled during numerous surveys in order to characterise the marine sediments in the Ichthys Field and surrounding areas. Overviews of the studies are listed below, with the results as relevant to this EP summarised in Table 4-3:

- Sampling and characterisation of marine sediments in the Ichthys development area was conducted at 10 sites in September 2005 and May 2007. This included five sites within 20 km of the Ichthys Venturer FPSO location and another five sites between 36 km and 134 km away. A further 10 sites were also sampled for particle size distribution (PSD) between 24 km and 66 km of the FPSO location in WA-50-L.
- Seabed sediment sampling along the proposed pipeline route from the Ichthys Field to Darwin Harbour was also conducted at approximately 10 km intervals during geophysical and geotechnical surveys between August and October 2008.
- ARP studies included 133 sediment samples at 56 locations collected around the Ichthys Field in May 2015. Sampling locations were based on a gradient design away from a central point in the Ichthys Field and also included increased sampling around Browse Island, Echuca and Heywood shoals. Samples were analysed for metals and hydrocarbons (Ross et al. 2017). In addition, ad hoc sediment samples have also been collected from sampling locations during other ARP field surveys to increase the dataset and knowledge.
- Sediment quality monitoring in the receiving environment was undertaken in 2019 and 2024 to detect changes in surficial sediment quality attributable to liquid discharges from the CPF and FPSO located in nearby WA-50-L. Sediment samples were collected from 18 fixed sampling locations based on a gradient design radiating out from the FPSO to approximately 10 km as the FPSO represents a point source discharge.

**Table 4-3: Summary of sediment quality parameters in the vicinity of WA-50-L**

| Parameter | Description |
|---|---|
| Particle size distribution (PSD) | The seabed in offshore locations on the continental shelf is known to consist of generally flat, relatively featureless plains characterised by soft sandy-silt marine sediments that are easily resuspended. Similarly, the substrate of the Scott Reef – Rowley Shoals Platform, in water depths of 200–600 m, is considered to be a depositional area with predominantly fine and muddy sediments (INPEX 2010).<br>The PSD of sediment at sites located within the Ichthys Field was primarily sand, with some silts. |
| Petroleum hydrocarbons | Concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) and polycyclic aromatic hydrocarbons (PAH) compounds in sediments in the vicinity of the sampling sites were very low (Ross et al. 2017, RPS 2007). The components of the more prevalent alkane compounds found indicated that the concentrations observed were likely to have originated from biogenic sources (Ross et al. 2017).<br>Sampling undertaken in 2019 at fixed and mobile sites around the FPSO (out to 10 km) found all hydrocarbons, BTEX and speciated phenols were below the laboratory limits of reporting and guideline values (Jacobs 2019). |
| Radionuclides | Naturally occurring radioactive materials (NORM) for the majority of results were below or close to LLR. Radium-226 was detected at one site, but all other samples were below LLR for each radium isotope. The concentration of uranium and thorium was consistent across all sites (RPS 2007).<br>Sampling undertaken in 2019 found NORMs were below background concentrations at all sampling sites (fixed and mobile) (Jacobs 2019). |
| Metals | Concentrations of all metals were consistent across the sampling sites and well below the interim sediment quality guidelines low screening level (ANZG 2018), with the majority also below their respective LLR (RPS 2007).<br>Organometallics (i.e. tributyltin) were below ANZG (2018) guidelines and lower than the LLR at all sampling locations.<br>Sampling undertaken in 2019 and 2024 at fixed sampling sites at the FPSO, found all metals/metalloids were below the guideline values indicating no significant change to sediment quality has occurred as a result of the FPSO discharges in WA-50-L (Jacobs 2019, O2 Marine 2024). |

### 4.6.6 Underwater noise

The Centre for Marine Science and Technology (CMST) at Curtin University undertook a study on behalf of INPEX from September 2006 to August 2008 to assess ambient biological and anthropogenic sea noise sources in the Browse Basin. Ambient noise in the Ichthys Field was measured using a sea noise logger deployed at a depth of 240 m on the seabed 45 km north-west of Browse Island. The monitoring revealed an average ambient noise level of 90 dB re 1 µPa under low sea states, with inputs of low frequency energy from the Indian Ocean (INPEX 2010).

Biological noise sources recorded in the Ichthys Field included regular fish choruses (one at >1 kHz and another at around 200 Hz) and several whale calls from humpback whales, pygmy blue whales, minke whales and other unidentified species. Results from this survey are considered to be indicative of typical underwater noise levels and frequencies within the NWMR bioregion as a whole.

## 4.7 Biological environment

### 4.7.1 Planktonic communities

Plankton communities comprise phytoplankton and zooplankton, including fish eggs and larvae. Phytoplankton and zooplankton are a source of primary and secondary productivity, and key food sources for other organisms in the oceans (Brewer et al. 2007). Eggs and larvae may be dispersed throughout the water column and throughout the region, playing an important role in species recruitment.

Plankton abundance and distribution is patchy, dynamic and strongly linked to localised and seasonal productivity (Evans et al. 2016). The mixing of warm surface waters with deeper, more nutrient-rich waters (i.e. areas of upwelling) generates phytoplankton production and zooplankton blooms. In the offshore waters of north-western Australia, productivity typically follows a 'boom and bust' cycle. Productivity booms are thought to be triggered by seasonal changes to physical drivers or episodic events, which result in rapid increases in primary production over short periods, followed by extended periods of lower productivity.

The Indonesian Throughflow has an important effect on biological productivity in the northern areas of Australia and Indonesia. Generally, its deep, warm and low nutrient waters suppress upwelling of deeper, comparatively nutrient-rich waters, thereby forcing the highest rates of primary productivity to occur at depths associated with the thermocline (generally 70 – 100 m depth). When the Indonesian Throughflow is weaker, the thermocline lifts, and brings deeper, more nutrient-rich waters into the photic zone, which results in conditions favourable to increased productivity. Consequently, plankton populations have a high degree of temporal and spatial variability. In tropical regions, higher plankton concentrations generally occur during the winter months (June to August).

The waters of north-western Australia, encompassing the Ichthys Field (WA-50-L), are generally considered to be of low productivity in comparison with other global oceanic systems. This is largely due to the relatively low-nutrient, shallow water environment. Planktonic community densities recorded in the Ichthys Field are considered to be very sparse and are indicative of offshore waters where no significant nutrient sources exist. The most common plankton classes recorded from the sampling of the Ichthys Field development area were the Prasinophyceae (68%), followed by the Bacillariophyceae (30%), the Dinophyceae (1%) and the Cryptophyceae (<1%), all of which are common throughout the region (INPEX 2010).

### 4.7.2 Benthic communities

#### Banks and shoals

A number of banks, shoals and reefs exist within the Browse Basin (Figure 4-2). The closest are Echuca shoal and Heywood shoal located approximately 65 km and 90 km away from WA-50-L at their closest points respectively. Browse Island is the nearest intertidal habitat which is located approximately 26 km away from WA-50-L.

Other representative banks and shoals within the EMBA/EPEI, with approximate distances from WA-50-L include:

- Johnson Bank (150 km)
- Vulcan Shoals (175 km)
- Eugene McDermott Shoals (175 km)
- Barracouta Shoals (180 km)
- Woodbine Bank (180 km).

A detailed study on Echuca and Heywood Shoals, the two closest submerged shoals to WA-50-L, was undertaken as part of the Shell/INPEX ARP comprising of annual field surveys conducted from 2014 to 2016 (Heyward et al. 2018). The focus of the study was the shoal benthic habitats and associated fish communities predominantly on the plateau areas, present as horizontal or gently sloping seabed in depths of 15 m to 30 m. The outcome of the study by Heyward et al. (2018) reported that Echuca Shoal's oval shaped and slightly shallower 11 $km^2$ plateau had less unconsolidated substrate, such as sand or rubble, than Heywood Shoal's plateau of approximately 31 $km^2$. The benthic habitats and fish communities were similar, with many species in common. All epibenthic organisms on both shoals appeared normal and healthy throughout the study. Fish abundance and diversity was high but varied over time and between the shoals in a consistent manner. Species richness, abundance and fish community structure were influenced mainly by depth and the abundance of epibenthos, especially hard coral (Heyward et al. 2018). These results are comparable with other shoals throughout the region.

The submerged shoals within the NWMR support diverse tropical ecosystems, including phototrophic benthos typical of tropical coral reefs. The shoals support a diverse biota, including algae, reef-building corals, hard corals and filter-feeders. In general, the flora and faunal assemblages are typical of the oceanic reefs of the Indo–West Pacific region (INPEX 2010), with many of the species in common with those found at the Ashmore, Cartier and Scott Reef complexes. The shoals and banks of the NWMR may therefore act as 'stepping stones' for enhanced biological connectivity between the reef systems of the region. Shoal and bank habitats are thought to provide additional regional habitat for marine fauna, including sharks and sea snakes (AIMS 2012).

The community structure of the banks and shoals is likely to be influenced by a number of processes, including disturbance resulting from storms and cyclones, and localised recruitment due to the limited larval dispersal of some invertebrate species (AIMS 2012). It is unknown how interconnected the individual banks and shoals are in regard to larval recruitment. The majority lie in the path of a south-westerly flowing current originating in the Indonesian Throughflow. However, seasonal reversals of current flow suggest larval recruitment can be supplied from outside this process. Seasonal current patterns, local effects within ocean currents (e.g. reversal of current direction against prevailing winds) and species lifecycle characteristics are all likely to exert an influence over the larval recruitment (and hence biodiversity) of the banks and shoals (INPEX 2010).

### Coral reefs

Coral reefs within the region can be categorised into three general groups: fringing reefs, large platform reefs, and intertidal reefs. Corals are significant benthic primary producers that play a key ecosystem role in many reef environments and have an iconic status in the environments where they occur. Coral reefs within the EMBA/EPEI include:

- Ashmore Reef (155 km from WA-50-L)
- Cartier Island (130 km from WA-50-L)
- Seringapatam Reef (110 km from WA-50-L)
- Scott Reef (125 km from WA-50-L)
- Hibernia Reef (195 km from WA-50-L)
- Rowley Shoals including Clerke, Imperieuse and Mermaid Reef [1] (500 km from WA-50-L).

[1] Although not within the EMBA/EPEI polygon for floating, dissolved or entrained oil, shoreline contact was predicted at Clerke Reef and Imperieuse Reef arising from the accumulation of entrained hydrocarbons at concentrations below the threshold values as described in Section 8.1.

The above reefs are recognised as having the highest richness and diversity of coral species in WA (Mustoe & Edmunds 2008, cited in Department of State Development 2010) and are described in more detail in Section 4.2, 4.3 and 4.4. Coral reefs associated with Browse Island (the nearest coral reef to WA-50-L) are described in Section 4.4.1.

Hibernia Reef, 42 km northeast of Ashmore Reef and located at the outer boundary of the EMBA, has no permanently dry land area, although large parts of the reef become exposed during low tide. Along with Ashmore Reef, Hibernia Reef is noted for supporting high levels of biodiversity and was previously known to support an abundance of sea snakes (D'Anastasi et al. 2016).

The Rowley Shoals are a collection of three atoll reefs, Clerke, Imperieuse and Mermaid, which are located approximately 300 km north-west of Broome. These reefs form part of the Mermaid Reef and Commonwealth waters surrounding Rowley Shoals KEF which is regionally important in supporting high species richness, higher productivity and aggregations of marine life associated with the adjoining reefs themselves (Done et al. 1994; DSEWPaC 2012). Both Clerke Reef and Imperieuse Reef have permanent islands above the high-water mark called Bedwell Island and Cunningham Island (Parks Australia 2024e).

Indonesia has the largest coral reef area in Southeast Asia and estimates of the extent of these coral reefs vary, but they likely total about 51,000 km² (ADB 2014). More than 590 species of corals have been identified in Indonesian waters. Shoreline accumulations were predicted only in the Nusa Tenggara Timur and Barat provinces, where emergent or fringing coral reefs could be contacted. Fringing coral reefs tend to be less developed on the southern, more exposed shorelines (Wilson et al. 2011). Coral species composition is influenced by regional and local scale seasonal upwellings that typically occur from April to May each year on the southern side of the Indonesian islands (DeVantier et al. 2008).

Observations throughout the world indicate that coral spawning on most reefs extends over a few months during the spawning period, typically between late spring and autumn (Stoddart & Gilmour 2005, cited in INPEX 2010). Spawning of corals in the Northern Territory Aquarium has been observed around the full moon period in October and November (TWP 2006, cited in INPEX 2010). In northern Queensland, captive corals have been observed to spawn at the same time as those in the adjacent waters. Coral spawning has been observed at Scott Reef during summer/autumn (March/April; main spawning event) and spring (October/November) (Gilmour et al. 2009). This has been confirmed by AIMS research at Scott Reef, which estimates that 60–75% of community reproductive output occurs in autumn, 15–25% in spring, and 5–15% in summer, with comparatively little reproductive output during winter (Gilmour et al. 2013). Research into coral larval dispersal (Gilmour et al. 2009, 2010, 2011; Underwood et al. 2009, 2017; Cook et al. 2017; Waples et al. 2019) has indicated that dispersal and recruitment is predominately local and limited to within a few kilometres to a few tens of kilometres from natal reef patches.

### Seagrass

There is no seagrass within WA-50-L due to water depth (approximately 250 m) and lack of suitable habitat.

The largest known seagrass locations for the NWMR have been reported from around the Buccaneer Archipelago located north of the Dampier Peninsula (Wells et al. 1995). The closest important seagrass habitat to WA-50-L is associated with the dugong foraging BIA at Ashmore Reef. Other seagrass habitats are also found at Browse Island, Scott Reef and Cartier Island.

Coastal shallow-water seagrass habitats are generally rare in the region, accounting for only 11.5 km or 0.2% of the total Australia coastline surveyed by Duke et al. (2010). The regionally dominant genera in Australia are *Halophila* and *Halodule*.

Seagrass habitats are widely distributed across Indonesian provinces, and within Indonesian waters the lower intertidal and upper subtidal zones are considered important areas for the growth of seagrass (Hutumo & Moosa, 2005). Pioneering vegetation in the intertidal zone is dominated by *Halophila ovalis* and *Halodule pinifolia* while *Thalassodendron ciliatum* dominate the lower subtidal zones (Hutumo & Moosa, 2005).

### 4.7.3 Shoreline habitats

There are no islands within WA-50-L, with the closest intertidal habitat located at Browse Island (26 km south-east of WA-50-L at the closest point). Other shoreline habitats include Cartier Island and Sandy Islet, which together with Browse Island have associated Commonwealth or State marine park/reserve status. The values and sensitivities associated with the shorelines of these islands are described in Section 4.3 and 4.4.

#### Sandy beaches

Sandy beaches are the dominant shoreline habitat on offshore islands and provide significant habitat for turtles and seabird nesting above the high tide line (Section 4.7.4). Sandy beaches are present at the sandy cays of Cartier Island, Browse Island and Sandy Islet as described in Sections 4.3 and 4.4.

Generally, sands are highly mobile and therefore do no support a high level of biodiversity. Fauna within sandy beach habitats usually consists of polychaete worms, crustaceans and bivalves. These faunae provide a valuable food source for resident and migratory sea and shorebirds (DEC/MPRA 2005). Natural processes tend to supply fresh sediments and larval stock (food source) with each tidal influx.

#### Mangroves

Mangrove communities make up a common shoreline habitat along the Indonesian coastline where shoreline accumulations of oil may occur. They are commonly found in sheltered coastal areas in tropical and sub-tropical latitudes. Mangroves play an important role in connecting the terrestrial and marine environments and reducing coastal erosion. They also play an important ecosystem role in nutrient cycling and carbon fixing (NOAA 2010).

Within Indonesia, 41 species of mangroves, occupying some 32,000 $km^2$ have been recorded (ADB 2014).

### 4.7.4 Marine fauna

#### Species of conservation significance

Species of conservation significance within WA-50-L and the EMBA/EPEI were identified through a search of the EPBC Act Protected Matters database (Appendix B).

A total of 31 “listed threatened” species and 58 “listed migratory” species were identified as potentially using or passing through the EMBA/EPEI. In addition to the listed threatened or listed migratory species, 95 “listed marine” species were identified including 27 “whales and other cetaceans” that may also occur at, or immediately adjacent to, the EMBA/EPEI. The full search results are contained in Appendix B.

Table 4-4 presents the marine species that are “listed threatened” species or “listed migratory species”. Note that true terrestrial species have not been listed in Table 4-4 on the basis that the outer extent of the EMBA/EPEI was defined by entrained and dissolved hydrocarbons in the water column (refer Section 8).

**Table 4-4: Listed threatened and/or migratory marine species under the EPBC Act potentially occurring within the EPEI**

| Species | Common name | Conservation status | Migratory |
|---|---|---|---|
| **Marine mammals** | | | |
| *Balaenoptera borealis* | Sei whale | Vulnerable | Migratory |
| *Balaenoptera musculus* | Blue whale | Endangered | Migratory |
| *Balaenoptera physalus* | Fin whale | Vulnerable | Migratory |
| *Balaenoptera edeni* | Bryde’s whale | N/A | Migratory |
| *Megaptera novaeangliae* | Humpback whale | N/A | Migratory |
| *Orcinus orca* | Killer whale | N/A | Migratory |
| *Physeter macrocephalus* | Sperm whale | N/A | Migratory |
| *Tursiops aduncus* (Arafura/Timor Sea populations) | Spotted bottlenose dolphin | N/A | Migratory |
| *Dugong dugon* | Dugong | N/A | Migratory |
| **Marine reptiles** | | | |
| *Caretta caretta* | Loggerhead turtle | Endangered | Migratory |
| *Chelonia mydas* | Green turtle | Vulnerable | Migratory |
| *Dermochelys coriacea* | Leatherback turtle | Endangered | Migratory |
| *Eretmochelys imbricata* | Hawksbill turtle | Vulnerable | Migratory |
| *Lepidochelys olivacea* | Olive Ridley turtle | Endangered | Migratory |
| *Natator depressus* | Flatback turtle | Vulnerable | Migratory |
| *Aipysurus apraefrontalis* | Short-nosed seasnake | Critically Endangered | N/A |
| *Aipysurus foliosquama* | Leaf-scaled seasnake | Critically Endangered | N/A |
| *Aipysurus fuscus* | Dusky seasnake | Endangered | N/A |
| *Crocodylus porosus* | Saltwater crocodile | N/A | Migratory |
| **Sharks, fish and rays** | | | |
| *Rhincodon typus* | Whale shark | Vulnerable | Migratory |

| Species | Common name | Conservation status | Migratory |
|---|---|---|---|
| *Carcharodon carcharias* | Great white shark | Vulnerable | Migratory |
| *Carcharias taurus* | Grey nurse shark | N/A | Migratory |
| *Glyphis garricki* | Northern river shark | Endangered | N/A |
| *Sphyma lewini* | Scalloped hammerhead shark | Conservation dependent | N/A |
| *Carcharhinus longimanus* | Oceanic whitetip shark | N/A | Migratory |
| *Pristis pristis* | Northern sawfish, Freshwater sawfish, Largetooth sawfish | Vulnerable | Migratory |
| *Pristis zijsron* | Green sawfish | Vulnerable | Migratory |
| *Pristis clavata* | Dwarf sawfish | Vulnerable | Migratory |
| *Anoxypristis cuspidata* | Narrow sawfish | N/A | Migratory |
| *Isurus oxyrinchus* | Shortfin mako | N/A | Migratory |
| *Isurus paucus* | Longfin mako | N/A | Migratory |
| *Manta alfredi* | Reef manta ray | N/A | Migratory |
| *Manta birostris* | Giant manta ray | N/A | Migratory |
| **Marine avifauna** | | | |
| *Anous tenuirostris melanops* | Australian lesser noddy | Vulnerable | N/A |
| *Calidris acuminata* | Sharp-tailed Sandpiper | Vulnerable | Migratory |
| *Calidris canutus* | Red Knot | Vulnerable | Migratory |
| *Calidris ferruginea* | Curlew Sandpiper | Critically Endangered | Migratory |
| *Charadrius leschenaultii* | Greater Sand Plover | Vulnerable | Migratory |
| *Limnodromus semipalmatus* | Asian Dowitcher | Vulnerable | Migratory |
| *Limonsa lapponica menzbieri* | Northern Siberian Bar tailed Godwit | Endangered | N/A |
| *Numenius madagascariensis* | Eastern curlew | Critically Endangered | Migratory |
| *Papasula abbotti* | Abbott's Booby | Endangered | N/A |

| Species | Common name | Conservation status | Migratory |
|---|---|---|---|
| *Phaethon lepturus fulvus* | Christmas Island White-tailed Tropicbird, Golden Bosunbird | Endangered | N/A |
| *Phaethon rubricauda westralis* | Red-tailed tropicbird | Endangered | N/A |
| *Rostratula australis* | Australian Painted Snipe | Endangered | N/A |
| *Anous stolidus* | Common noddy | N/A | Migratory |
| *Ardenna pacifica* | Wedge-tailed Shearwater | N/A | Migratory |
| *Calonectris leucomelas* | Streaked shearwater | N/A | Migratory |
| *Fregata ariel* | Lesser frigatebird | N/A | Migratory |
| *Fregata minor* | Great frigatebird | N/A | Migratory |
| *Hydroprogne caspia* | Caspian tern | N/A | Migratory |
| *Onychoprion anaethetus* | Bridled tern | N/A | Migratory |
| *Phaethon lepturus* | White-tailed tropicbird | N/A | Migratory |
| *Phaethon rubricauda* | Red-tailed tropicbird | N/A | Migratory |
| *Sterna dougallii* | Roseate tern | N/A | Migratory |
| *Sterna albifrons* | Little tern | N/A | Migratory |
| *Sula dactylatra* | Masked booby | N/A | Migratory |
| *Sula leucogaster* | Brown booby | N/A | Migratory |
| *Sula sula* | Red-footed booby | N/A | Migratory |
| *Acrocephalus orientalis* | Oriental Reed-Warbler | N/A | Migratory |
| *Actitis hypoleucos* | Common Sandpiper | N/A | Migratory |
| *Calidris melanotos* | Pectoral Sandpiper | N/A | Migratory |
| *Limosa Lapponica* | Bar-tailed Godwit | N/A | Migratory |
| *Thalasseus bergii* | Greater Crested Tern | N/A | Migratory |

### Conservation management plans

In addition to species being identified as threatened or migratory and MNES, depending on the threat classification, the DCCEEW has established management policies, guidelines, plans and other materials for threatened fauna, threatened flora (other than conservation-dependent species) and threatened ecological communities listed under the EPBC Act.

In particular, the objectives of the published recovery plans and conservation advices, seek to support the long-term recovery of various species outlining research and management measures that must be undertaken to stop the decline of, and support the recovery of a species, including the management of threatening processes.

Species identified during the EPBC Act Protected Matters database search that have a conservation advice or a recovery plan in place, as well as any particular relevant actions to assist their recovery and conservation, including threat abatement plans, are summarised in Appendix B.

### Biological important areas

The DCCEEW has, through the marine bioregional planning program, identified, described and mapped BIAs for protected species under the EPBC Act. BIAs spatially and temporally define areas where protected species display biologically important behaviours (including breeding, foraging, resting or migration), based on the best available scientific information. These areas are those parts of a marine region that are particularly important for the conservation of protected species.

Table 4-5 provides an overview of the EPBC-listed species, identified by the EPBC Act Protected Matters database search, that are associated with a BIA in the EMBA/EPEI noting that there are no BIAs that intersect WA-50-L. The locations of relevant BIAs for EPBC-listed species are shown in Figure 4-4 to Figure 4-7.

In addition to BIAs, an area of habitat critical to the survival of marine turtles was identified during the EPBC Act Protected Matters database search. This is in relation to green turtle nesting at Browse Island, Scott Reef, Ashmore Reef and Cartier Island.

**Table 4-5: BIAs intersecting or adjacent to the EMBA/EPEI**

| Species | F | B | C | N/IN | M | R |
|---|---|---|---|---|---|---|
| Dugong | x | | x | | | |
| Green turtle | x | x | | x | | |
| Hawksbill turtle | X | | | X | | |
| Wedge-tailed shearwater | | x | | | | |
| Great frigatebird | | x | | | | |
| Lesser frigatebird | | x | | | | |
| White-tailed tropicbird | | x | | | | |
| Roseate tern | | x | | | | |
| Little tern | | | | | | x |
| Brown booby | | x | | | | |
| Red footed booby | | x | | | | |
| Lesser crested tern | | x | | | | |
| Whale shark | x | | | | | |
| Pygmy blue whale | x | | | | x | |

F = foraging; B = breeding; C = calving; N/IN = nesting/internesting; M = migration; R = resting.

### Marine mammals

There are no identified BIAs for marine mammals within WA-50-L as shown in Figure 4-4. Pygmy blue whale distribution, foraging and migration overlaps the EMBA/EPEI and is described in more detail in this subsection.

The closest humpback whale BIA to WA-50-L relates to calving and resting and is located approximately 100 km away in a south-easterly direction, not overlapping WA-50-L or the EMBA/EPEI. However, isolated observations of humpback whales and their calves have been noted within the Ichthys Field. As the humpback whale remains a MNES under the EPBC Act as a listed cetacean and as a listed migratory species it has also been described in this subsection.

The Omura's whale was listed as migratory under the EPBC Act in September 2024 but was not identified in the search of the EPBC Act Protected Matters Database. The Omura's whale is a recently described species and is widely distributed in primarily tropical and warm-temperate locations, between 35°S and 35°N (Cerchio et al. 2019).

In Australia, acoustic detections, photographic accounts and a single stranding record has documented Omura's whales from Exmouth to the Great Barrier Reef (Cerchio et al. 2019). Acoustic recordings documented in Australia between 2010 and 2013 (McCauley 2009, 2014) indicates the potential year-round presence of Omura's whales near Scott Reef. McPherson et al. (2017) examined recordings from the Pilbara, west Kimberley, Browse Basin and Timor Sea for the period 2010 to 2015. The results indicate presence across north-west Australian continental shelf, with potential seasonal movements across the region; however, McPherson et al. (2017) state that more data and analysis are needed to understand coastal/oceanic basin movements and population structure.

More recently published research by Browne et al. (2024) examined recordings from 41 locations between 2005 and 2023, and reported Omura's whale vocalisations were detected consistently throughout the year at monitoring sites at Browse Island and Scott Reef in the Kimberley region, showing a continuous presence. This contrasts with other regions where their presence was more seasonal. Such as in the Joseph Bonaparte Gulf where the highest rates of vocal detection have been recorded.

Given the year-round detection of Omura's whale vocalisations across north-western Australia, the Omura's whale may be encountered within WA-50-L and the EBA/EPEI.

*Blue whale*

There are two recognised subspecies of blue whale in the southern hemisphere, which are both recorded in Australian waters. They are the southern (or 'true') blue whale (*Balaenoptera musculus intermedia*) and the 'pygmy' blue whale (*Balaenoptera musculus brevicauda*) (DoE 2015; DAWE 2021). In general, southern blue whales occur in waters south of 60°S and pygmy blue whales occur in waters north of 55°S (i.e. not in the Antarctic) (DoE 2015). On this basis, any blue whales present within WA-50-L or EPEI would be expected to be pygmy blue whales, listed as endangered under the EPBC Act.

The 2015 Conservation Management Plan for the Blue Whale (DoE 2015) outlines a large distribution area for blue whales in Australian waters which includes BIAs for calving, resting, foraging and migration.

Pygmy blue whales in the south-east Indian Ocean are known to migrate from the southern coast of Australia to Indonesia, with a significant part of their migration route passing along the WA coastline. Observations suggest most pygmy blue whales pass along the shelf edge out to water depths of 1,000 m but centred near the 500 m depth contour (McCauley & Jenner 2010). Satellite tagging (2009–2011) confirmed that the general distribution of pygmy blue whales was offshore in water depths >200 m and commonly >1,000 m (Double et al. 2014).

The spatial extent of distribution, migration and foraging areas has been quantified by Thums et al. (2022) using passive acoustic monitoring data sets from 2006 – 2019 and satellite telemetry data from 2009 – 2021 to identify high use areas. These high use areas were then overlaid with the current BIAs published in DCCEEW's National Conversation Values Atlas with the aim that a greater understanding of pygmy blue whale spatial and temporal use of the north-west of WA may be useful for updating BIA boundaries.

Thums et al. (2022) reported that pygmy blue whales demonstrated extensive use of slope habitat off WA and only limited use of shelf waters. Pygmy blue whale movement off north-west WA was predominantly relatively fast, directed travel interspersed with relatively short periods (28 hours) of low move persistence indicative of foraging and/or resting/breeding. Pygmy blue whales had high use (both in time and number of whales) and low move persistence along the Ningaloo Coast up to the Rowley Shoals from April to June on their northern migration to the Banda Sea. From November to December, they were present in the north-west of WA, with some periods of high use and low move persistence in similar areas while on their southern migration (Thums et al 2022).

Data analysed by Thums et al (2022) suggests that the north-west Australian shelf areas may not be the core pygmy blue whale distribution with only minor use of the shelf, especially between the area north-west of Dampier and Scott Reef. The study also indicated that most pygmy blue whales migrate much further offshore along the north-west part of the WA coast, even out to the abyssal plain suggesting that that the current migration BIA (DoE 2015) includes a broader north-west distribution and migration extent than was reported during the study by Thums et al (2022).

Pygmy blue whales are not expected to occur in WA-50-L. The closest BIAs overlapping the EMBA/EPEI, relate to the migratory corridor, and foraging activities at Scott Reef approximately 100 km west of WA-50-L (Figure 4-4).

*Humpback whale*

Although not overlapping the EMBA/EPEI, there are two humpback whale (*Megaptera novaeangliae)* BIAs located along the WA coastline; a migratory corridor and a resting, calving and nursing area (Figure 4-4).

In 2022, the conservation status of the humpback whale was updated, and the species was removed from the threatened species list. Despite removal from the threatened species list, the humpback whale remains a MNES under the EPBC Act as a listed cetacean and as a listed migratory species.

The migratory habitat for the humpback whale around mainland Australia is primarily coastal waters less than 200 m in depth and generally within 20 km of the coast (Jenner et al. 2001). Breeding and calving generally occurs between the Lacepede Islands and Camden Sound. Camden Sound is considered the northern most limit and is considered an important calving and breeding area (Jenner et al. 2001). A recent study as part of the Kimberley Marine Research Project (Thums et al. 2018) analysed three decades of satellite, aerial, boat-based sightings and determined that abundance was greatest in nearshore waters in water depths of approximately 35 m. However, whales (including cows and calves) may also occur in lower abundance elsewhere within and further offshore from the BIAs, with whales having been recorded in offshore locations such as Browse Island and Scott Reef (e.g. McCauley 2009).

Isolated observations of humpback whales and their calves have been noted within the Ichthys Field. The closest humpback whale BIA to WA-50-L relates to resting, calving and nursing and is located approximately 100 km south-east of the licence area.

*Dugongs*

Within the EMBA/EPEI there is a dugong foraging BIA at Ashmore Reef (Figure 4-4) which correlates with seagrass habitats (refer Section 4.7.2). Whiting and Guinea (2005) reported that cow and calf pairs were present on Ashmore Reef indicating that breeding occurs on the reef and there is some short-term residency.

Dugongs are considered Specially Protected under Schedule 4 of the *Biodiversity Conservation Act 2018* (WA) and are listed as a migratory species under the EPBC Act. A significant proportion of the world's dugong population occurs in the coastal waters of the west-Pilbara nearshore, as well as Ningaloo Reef and Exmouth Gulf (Marsh et al. 2011). Dugongs generally inhabit shallow waters (around 10 m depth) and are commonly found in mangrove channels of inshore islands and shallow areas near the seagrass habitats on which they feed.

As stated, Ashmore Reef supports a small dugong population (Whiting & Guinea 2005). Although unconfirmed, it is thought that this population is genetically distinct from other Australian populations and the extent to which it interacts with Indonesian populations is unknown. It is possible that the population's range extends to Cartier Island and other shallow submerged shoals on the Sahul Banks (Whiting & Guinea 2005). The oceanic coral reef habitat used by these dugongs is unusual when compared to the coastal habitat used by other Australian populations (Whiting & Guinea 2005).

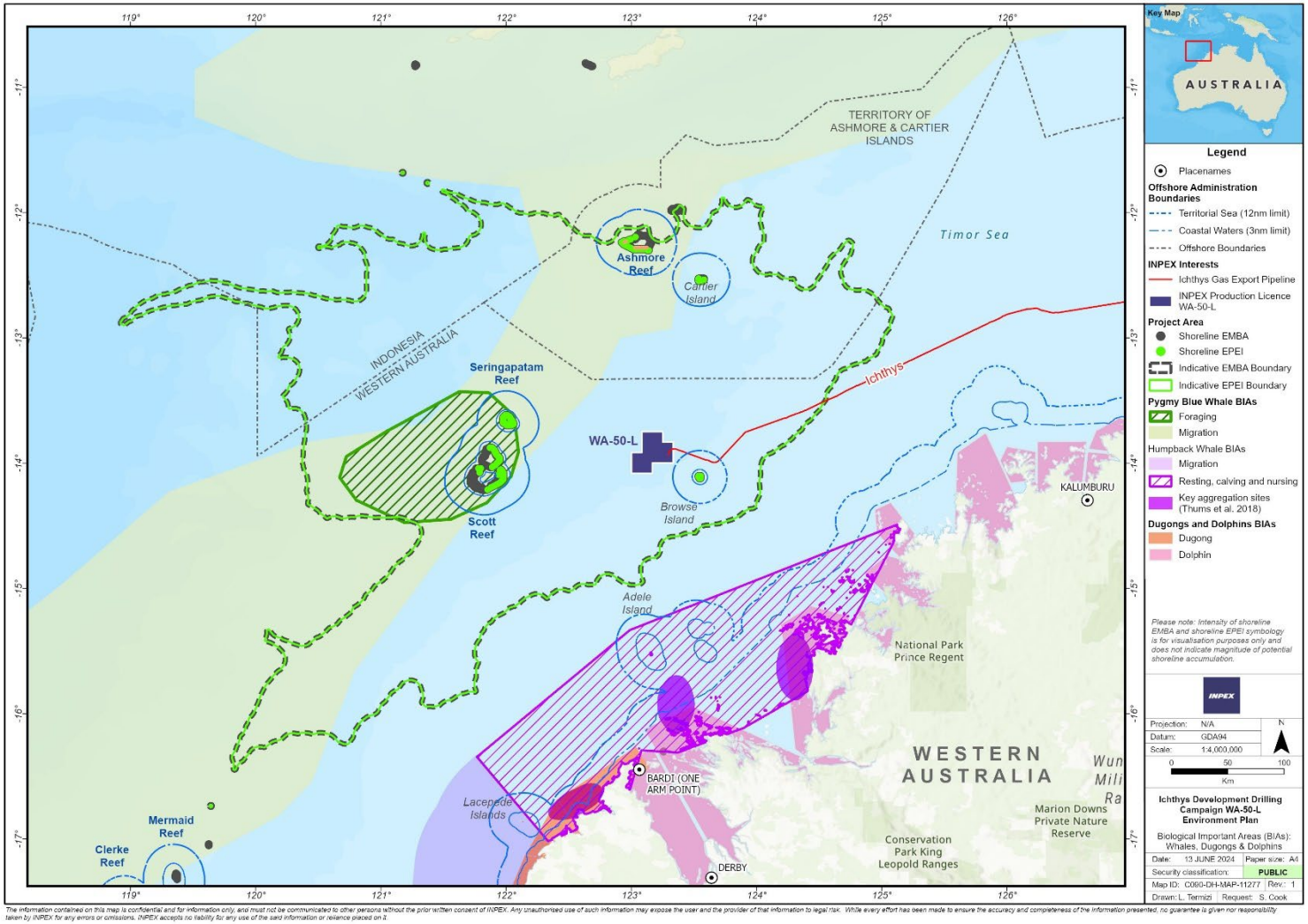





**Figure 4-4: Biologically important areas associated with whales, dugong and dolphins**

*Dolphins*

There are no dolphin BIAs that overlap WA-50-L or the EMBA/EPEI. Coastal dolphin BIAs for breeding, resting, calving and foraging are located approximately 75 - 100 km from the outer boundary of the EMBA/EPEI as shown in Figure 4-4. There is one migratory species of coastal dolphin which may transit through the EMBA/EPEI, Spotted Bottlenose Dolphin (*Tursiops aduncus* - Arafura/Timor Sea populations). They are not expected in WA-50-L or the EMBA/EPEI in large numbers given their preferred shallow water range.

The spotted bottlenose dolphin (*Tursiops aduncus*) is generally considered to be a warm water subspecies of the common bottlenose dolphin (*Tursiops truncatus*). This species of dolphin appears to occupy inshore waters, often in depths of less than 10 m (Bannister et al. 1996). It is known to occur from Shark Bay, north to the western edge of the Gulf of Carpentaria and is regarded as a migratory species under the EPBC Act (DCCEEW 2024b).

### Marine reptiles

Turtles

The EPBC Act Protected Matters search identified six species of marine turtle which may occur within the EMBA/EPEI: the green turtle (*Chelonia mydas*), loggerhead turtle (*Caretta caretta*), leatherback turtle (*Dermochelys coriacea*), flatback turtle (*Natator depressus*), hawksbill turtle (*Eretmochelys imbricate*) and olive ridley turtle (*Lepidochelys olivacea*).

Browse Island is the closest turtle-nesting area (located approximately 26 km south-east of WA-50-L at the closest point) and is surrounded by a 20 km internesting buffer for green turtles between November and March (DEE 2017a) as shown on Figure 4-5.

Nesting rookeries where there is a potential for shoreline accumulations in the event of a worst-case spill scenario include Browse Island, Ashmore Reef, Cartier Island and Sandy Islet.

Peak nesting periods for all turtle species within these areas are generally between November and April (DEE 2017a). At Scott Reef there is also an interesting BIA (20 km buffer) for hawksbill turtles where internesting occurs in October – February each year, and peaks in December and January (DEE 2017a).

Satellite tagging of nesting female loggerhead turtles from the Ningaloo/Pilbara coast of WA have shown dispersal north-west as far as Indonesia and southern Borneo, north-east as far as the Tiwi Islands and south as far as the Great Australian Bight (Waayers et al. 2015; Whiting et al. 2008). Flatback turtles are known to forage across the Australian continental shelf as far north as Indonesia and Papua New Guinea (DEE 2017a). There is limited tag recovery data for olive ridley turtles, but satellite tracking data indicates that they appear to remain on the Australian continental shelf (Waayers et al. 2015).

Satellite tracking data reviewed in more recent studies (Ferreira et al. 2020; Thums et al. 2021; Ferreira et al. 2023) concluded that the spatial extent of marine turtle internesting areas was adequately covered by the defined internesting buffers and therefore afforded an appropriate level of protection. However, the spatial extents of foraging BIAs are considered to potentially underestimate the distribution of foraging turtles. The closest turtle foraging BIAs to WA-50-L relate to Ashmore Reef, Cartier Island and Scott Reef. Although turtle species have different foraging habitats e.g. seagrass for green turtles, reef for hawksbill turtles and soft bottom habitats for flatback turtles, they are all benthic foragers and during foraging and migration they predominantly remain in coastal habitats (Ferreira et al. 2023). Flatback turtles may use deeper habitats for foraging (water depths < 100 m deep) than hawksbill turtles (14.5 m water depth) and green turtles (9 m water depth); however, all species remain well within continental shelf waters (Ferreira et al 2023).

In the study by Ferreira et al. (2023) distributions of marine turtles during migration and foraging largely occurred over continental shelf waters (<200 m depth). Only limited migratory movements occurred in oceanic areas (water depths > 200 m) or outside the Australian EEZ, with a median water depth of 53 m during migration.

In summary, based on water depth, marine turtles are not expected to be present in high numbers in WA-50-L. However, individual green turtles may occasionally be present associated with the internesting buffer at Browse Island. Other marine turtle species may be present in the waters of the EMBA/EPEI as the location of these offshore waters may play an important role in connecting a number of locations that support turtle foraging, nesting and internesting behaviours (Thums et al. 2021).

Sea snakes

The EPBC Act Protected Matters database search identified 21 sea snakes within WA-50-L and the EMBA/EPEI. There are no reported BIAs for sea snakes. Scott Reef is considered a region of high sea snake endemism and a decline in sea snake abundance has been reported within the Ashmore Reef MP (Udyawer 2020).

Most of the knowledge of sea snakes in Australian waters comes from trawler bycatch (Udyawer et al. 2020; Milton et al. 2009; Ward 1996). These studies indicate that sea snakes in northern regions of Australia tend to breed in shallow embayment's and estuaries. Therefore, these species may be seen in the open waters of WA-50-L, but their presence is unlikely to be common.

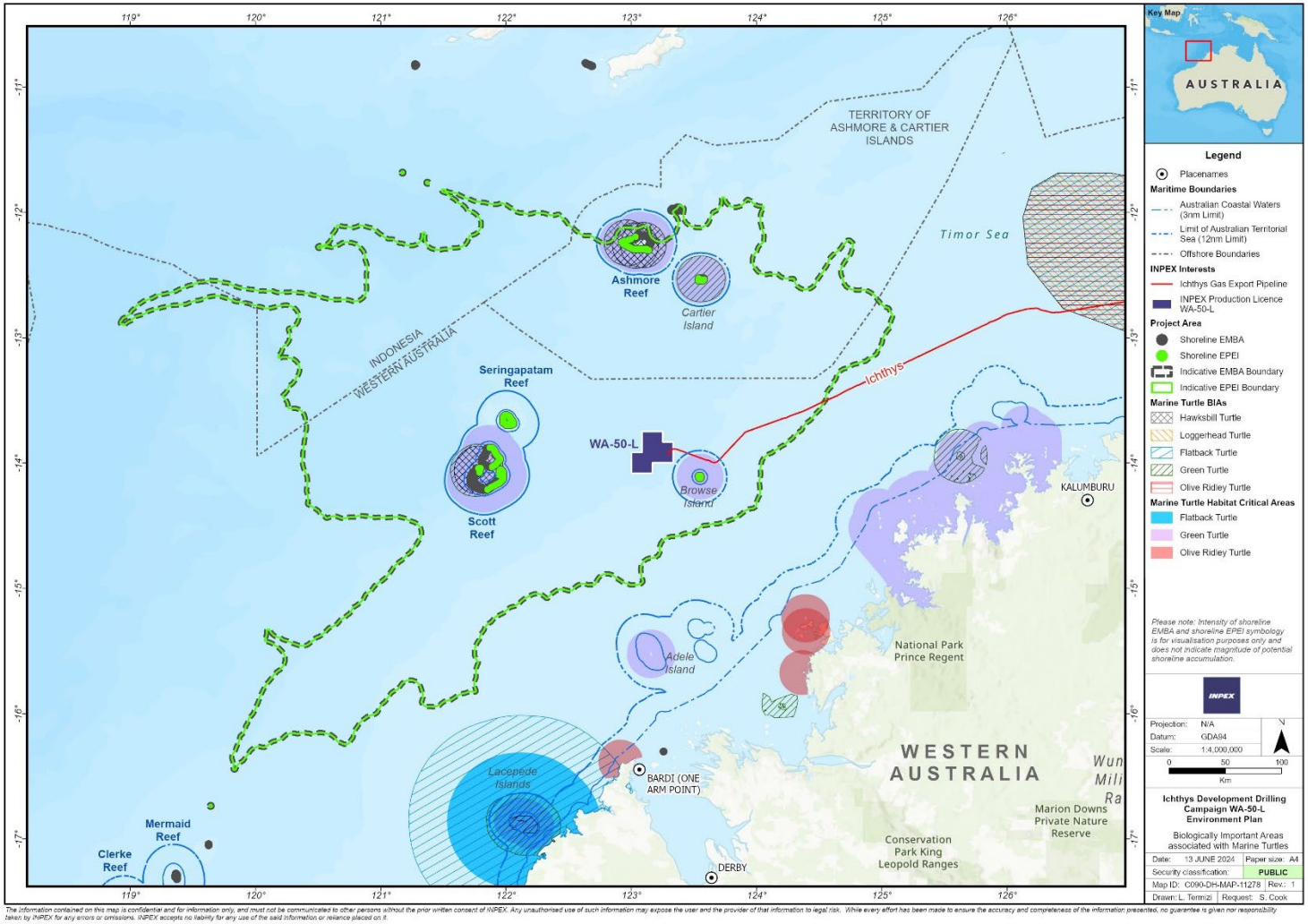



**Figure 4-5: Biologically important areas associated with marine turtles**

### Fishes and sharks

While there are no BIAs for fishes and sharks within WA-50-L, in the EMBA/EPEI a BIA exists for whale sharks (foraging) that largely follows the 125 m ancient coastline and at its closest point is approximately 10 km south-east of WA-50-L as shown in Figure 4-6. There are also BIAs for sawfish (green and freshwater) outside the EPEI located to the south-west and north-east of Broome.

Although not specifically identified as BIAs, several of the KEFs within the EPEI, as described in Section 4.2 are also known to provide important habitat for diverse fish assemblages.

Whale shark

The whale shark is a solitary planktivorous species that spends the greater part of its foraging time at water depths above 100 m, often near the surface (Brunnschweiler & Sims 2011; Wilson et al. 2006). However, whale sharks are also known to engage in mesopelagic and even bathypelagic diving when in bathymetrically unconstrained habitats (Brunnschweiler et al. 2009; Wilson et al. 2006).

Whale sharks appear to prefer different locations at different times of year, and despite a reasonable understanding of the various whale shark aggregation locations and timings, little is known about the large-scale transoceanic movements in response to seasonal abundance of planktonic prey species (Eckert & Stewart 2001). The relatively limited number and dispersed origin of dietary studies of whale sharks mean it is difficult to determine general patterns in the trophic ecology of these animals in coastal ecosystems and the degree to which they act as links between oceanic and reef environments (Marcus et al. 2019). Patterns suggest that their foraging behaviour and role in oceanic and coastal ecosystems, is likely to vary both in space and time (Marcus et al. 2019).

Whale sharks can travel over vast distances between aggregation sites. One whale shark tagged in the Seychelles was relocated after 42 days having travelled 3,000 km to south of Sri Lanka and then located again 4 months later, a further 5,000 km away in the waters of Thailand (Hsu et al. 2007). Therefore, it is possible that whale sharks may transit through the EPEI.

Whale sharks are widely distributed in tropical Australian waters. Within WA, whale sharks aggregate seasonally (March–June) to feed in coastal waters off Ningaloo Reef (Wilson et al. 2006). Taylor (1996) and Rowat & Gore (2007) examined whale shark movements at Ningaloo Reef and observed that the sharks swim parallel to the reef but found no clear evidence of a north-south migration.

While Ningaloo is the nearest aggregation to the WA-50-L, it is located over 1,300 km to the south. Research on the migration patterns of whale sharks in the western Indian Ocean, indicates that a small number of the WA (Ningaloo) population migrate through the wider vicinity of the Browse Basin region (McKinnon et al. 2002; Wilson et al. 2006; Jenner et al. 2008; Meekan & Radford 2010). Whale sharks from Ningaloo Reef fitted with satellite trackers were observed to travel either north-east towards Timor Leste, or north-west towards the Indonesia islands of Sumatra and Java, with some individuals passing through the broad vicinity of Scott Reef (McKinnon et al. 2002, Wilson et al. 2006, Meekan & Radford 2010; Sleeman et al. 2010). Aerial (Jenner & Jenner 2009a; RPS Environment and Planning Pty Ltd 2010, 2011) and vessel (Jenner et al. 2008; Jenner & Jenner 2009b) surveys conducted in 2008 and 2009, involving over 1,000 hours of observer effort, recorded one whale shark in 2008 and two whale sharks in 2010 in the Browse Basin (Jenner et al. 2008 and RPS Environment and Planning Pty Ltd 2011 respectively).

The whale shark BIA largely follows the ancient coastline at 125 m depth contour KEF and is located approximately 10 km south-east of WA-50-L at its closest point. However, based

on the levels of whale shark abundance observed in the studies listed above, the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration.

Sawfish

Four species of sawfish (largetooth/freshwater/northern, narrow, dwarf and green sawfish) were identified in the EPBC Act Protected Matters database search (Table 4-4). While sawfish are identified as being found within the EMBA/EPEI (Appendix B) due to their ecology (generally estuarine rather than open-ocean species) sawfish are not expected to occur within the open ocean location of WA-50-L and the EMBA/EPEI. BIAs for sawfish are shown on Figure 4-6.

Pipefish and seahorses

The EPBC Act Protected Matters database search identified 31 species of the family Syngnathidae potentially present within WA-50-L and the EMBA/EPEI. Syngnathidae is a group of bony fishes that includes seahorses, pipefishes, pipehorses and sea dragons. Seahorses and pipefishes are a diverse group and occupy a wide range of habitats. However, the species identified in the EPBC Act Protected Matters database search (Appendix B) generally display a preference for shallow water habitats such as seagrass and macroalgal beds, coral reefs, mangroves and sponge gardens that may be found in the shallower areas of the EMBA and EPEI (Foster & Vincent 2004; Lourie et al. 1999; Scales 2010). In WA-50-L, water depths are approximately 250 m and preclude the presence of seagrass; and hard bottom substrates, which can potentially support coral and macroalgae sponge garden communities. Therefore, pipefish and seahorses are only expected to occur in areas where suitable habitats are present, predominantly outside of WA-50-L and the EMBA/EPEI.

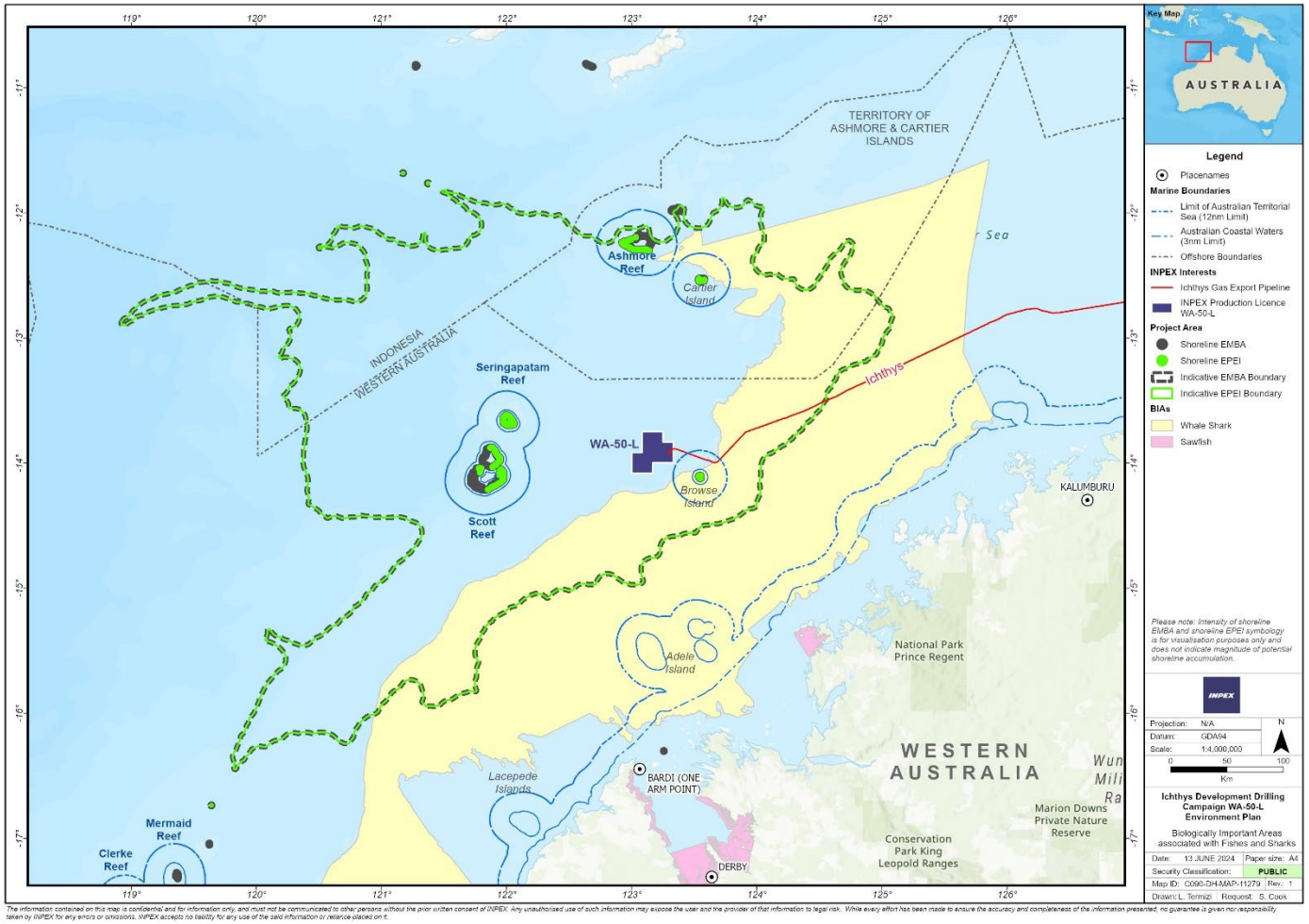



**Figure 4-6: Biologically important areas associated with fishes and sharks**

Sharks and rays

Seven shark species (including whale shark described above) and two ray species were identified as having the potential to occur within the EMBA/EPEI (Table 4-4; Appendix B).

The majority of recorded great white shark movements in Australian waters are reported to occur between the coast and the 100 m depth contour (DCCEEW 2024c). It is considered possible that larger pelagic sharks such as the great white, whale and mako sharks may transit through WA-50-L. The likelihood of these species undertaking behaviours such as breeding or feeding is expected to be very low as the licence area is not considered to provide appropriate habitat for such activities. Therefore, these species are unlikely to be common or resident within WA-50-L.

As with large pelagic sharks, listed manta rays may transit through the licence area but are also unlikely to be common or resident within WA-50-L.

**Marine avifauna**

WA-50-L is located within what is known as the East Asian–Australasian Flyway an internationally recognised migratory bird pathway that covers the whole of Australia and its surrounding waters. 'Flyway' is the term used to describe a geographic region that supports a group of populations of migratory waterbirds throughout their annual cycle. There are 54 species of migratory shorebirds that are known to specifically follow migration paths within the EAA Flyway (Bamford et al. 2008). Migratory shorebird species are mostly present in Australia during the non-breeding period, from as early as August to as late as April/May each year. After arrival in Australia at the end of long migrations, they disperse throughout the country to a wide variety of habitats including coastal wetlands, mudflats, reefs and sandy beaches (DEE 2017b).

There are no BIAs for marine avifauna within WA-50-L. However, within the EMBA/EPEI there are several BIAs for a number of different marine avifauna species (Table 4-5; Figure 4-7). These relate to breeding and resting behaviours centred at Ashmore Reef, Cartier Island, Scott Reef and Adele Island. A Ramsar site and nationally important wetland, providing important habitat for marine avifauna is present at Ashmore Reef (refer to Section 4.5).

Vessel-based surveys conducted around the Ichthys gas field, Browse Island and to the west as far as Scott Reef were conducted by the Centre for Whale Research in 2008. Seabirds observed included frigatebirds, boobies, terns, noddies, tropicbirds, petrels, shearwaters and gulls recorded. Of the species recorded during the vessel-based surveys, a number are migratory species listed under the EPBC Act, including the streaked shearwater and lesser frigatebird. These migratory species can be expected to be encountered in low numbers as they are likely to transit through the licence area and the EMBA/EPEI.

In addition to seabirds, the EPBC Act Protected Matters database search identified eleven species of migratory wetland bird species potentially present within the EMBA/EPEI. These species may migrate through the EMBA/EPEI to wetland habitats on the mainland and/or larger coastal islands (DEE 2017b). It is considered unlikely that WA-50-L would provide any significant resources to support these species.

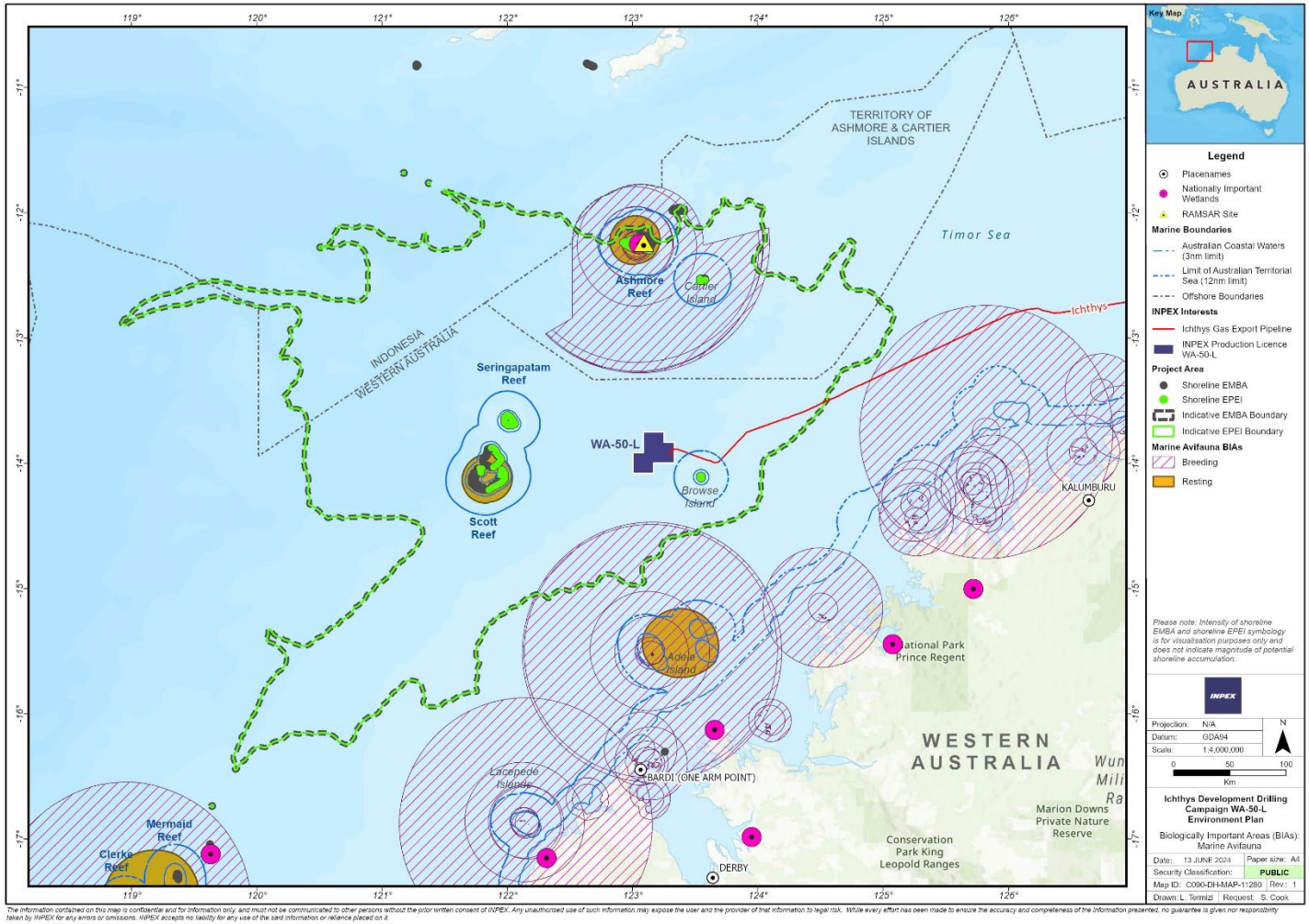



**Figure 4-7: Biologically important areas associated with marine avifauna**

## 4.8 Marine pests

Marine pests, or invasive marine species (IMS), are defined as non-native marine plants or animals that harm Australia's marine environment, social amenity or industries that use the marine environment; or have the potential to do so if they were to be introduced, established (that is, forming self-sustaining populations) or spread in Australia's marine environment (DAWR 2018). There are 60 known non-native marine species that have become established in WA waters. Most are temperate species, with only six that are exclusively tropical. The greatest number of introduced species is found in the south-west corner of WA (DoF 2016).

Not all marine species introduced into a new area become pests as not all of them will survive or may not manage to reproduce and establish a viable population. Many introduced marine species that establish self-sustaining populations cause no detectable harm. However, others have the potential to cause significant long-term economic, ecological and health consequences for the marine environment (DoF 2016).

Marine pests pose a major threat to the environment, economy and social amenity by disrupting ecological processes both directly (through predation or competition with native plants and animals) or indirectly (through habitat alteration). Once established, marine pests can rarely be eradicated, and their impacts are often long lasting (DAWR 2018).

Shallow water, coastal marine environments are most susceptible to the establishment of invasive populations, with most IMS associated with artificial substrates in disturbed shallow water environments such as ports and harbours (e.g. Glasby et al. 2007; Dafforn et al. 2009a, 2009b). The supply bases potentially supporting the drilling campaign in WA-50-L are Broome, Darwin and Dampier described in Section 4.10.3 including a summary of their IMS status.

Within WA waters the marine pest, *Didemnum perlucidum* (white colonial sea squirt) is widely established in many ports, marinas and other locations (Smale & Childs 2012; Dias et al. 2016; DPIRD 2022). *D. perlucidum* has been recorded in natural and artificial marine environments in WA from Busselton to Broome and the NT in Darwin and surrounding coastal waters (Muñoz & McDonald 2014.) First identified in WA in 2010, further monitoring confirmed the presence of separate populations along approximately 2,800 km of WA coastline. This ascidian can survive temperatures between 15 and 30 $^{o}$C and has been recorded at depths of up to 8 m; however, it is commonly found in the upper 1–3 m of the water column (Muñoz & McDonald 2014).

Eradication of this pest has not been possible, and the WA DPIRD manages *Didemnum perlucidum* only at the Montebello Islands where it is known to not have become established.

## 4.9 Cultural environment

### 4.9.1 World heritage areas

The World Heritage List is a list of places that are important to all the peoples of the world. The places on this list have special universal values above and beyond the values they hold for a particular nation. No world heritage areas were identified as overlapping WA-50-L or the EMBA.

### 4.9.2 National heritage places

The National Heritage List is Australia's list of natural, historic and Indigenous places of outstanding significance to the nation. A place may have natural, Indigenous or historic values, or a combination of all three. No National heritage places were identified as overlapping WA-50-L or the EMBA.

### 4.9.3 Commonwealth heritage areas

The Commonwealth Heritage List contains places with natural, Indigenous and historic value owned by the Australian Government and protected under provisions of the EPBC Act. No Commonwealth heritage places overlap WA-50-L; however, two sites overlap the EMBA. These two sites have natural heritage values described elsewhere in this EP, namely Ashmore Reef National Nature Reserve (Section 4.5.1) and Scott Reef Nature Reserve (Section 4.4.2).

### 4.9.4 Underwater cultural heritage

Underwater cultural heritage sites are recognised as a part of the marine environment ecosystem. Under the *Underwater Cultural Heritage Act 2018* (Cwlth), any shipwrecks, sunken aircraft or other types of cultural heritage over 75 years old are automatically afforded protection including their immediate environment and associated articles, regardless of whether or not their existence or precise location is known (DCCEEW 2024f). Under this Act, there is also a provision to provide protection zones, that can range from 200 m to 3,200 m radius, surrounding the wrecks. These zones are in place to limit disturbance of the cultural heritage and also the surrounding environment.

A search of the Australasian underwater cultural heritage database (AUCHD) and the WA Museum shipwrecks database identified no wrecks within WA-50-L.

However, in the Browse Island area several shipwrecked vessels were identified and include the:

- *Carleton* – sailing (transport) vessel wrecked in 1878
- *Runnymede* – sailing (transport with guano cargo) vessel wrecked in 1878
- *Matterhorn* – sailing (fishing/whaling) vessel wrecked in 1878
- *Selina* - sailing (transport with guano cargo) vessel wrecked in 1879
- *Berteaux* – sailing (transport with guano cargo) vessel wrecked in 1885
- *Bittern* – unknown vessel type wrecked in 1885
- *Florida* – sailing (schooner) vessel wrecked in 1887.

It is known that Browse Island was mined internationally for guano between 1878-1894 and due to storms, large tides and uncharted reefs, many vessels were lost in the area including sailing and fishing vessels (WAM 2008). Given the age of these shipwrecks the exact locations are unknown and are difficult to confirm. However, no evidence of shipwrecks or other underwater cultural heritage (aircraft or artefacts) have been recorded in previous site surveys undertaken by INPEX as part of the in Ichthys development in WA-50-L or during the exploration of other adjacent permit areas.

The *Ann Millicent*, a sailing (transport) vessel was wrecked in 1888 on an uncharted reef to the south of Cartier Island. After attempts to refloat it, the crew abandoned it and sailed for Timor. The WA Museum (2008) indicate that the ship's hull is broken up but at low tide the remains are visible with five anchors visible towards the bow and a corroded cast iron cannon that lies to the port side of the wreck. The site is accessible from the sea, but care is needed when approaching the reef.

The *Yarra*, a sailing (transport with guano cargo) was wrecked in 1884 at Scott Reef (near Sandy Islet) during a cyclone (WAM 2008). The wreck is located 70 metres inshore from the edge of Scott Reef and is partly exposed at low tide and clearly visible on low spring tides. The iron hull has slowly rusted away over time and been broken apart by waves (WAM 2008; Gilmour et al. 2013).

All wrecks over 75 years old, including those described above, have automatic protection under the *Underwater Cultural Heritage Act* 2018. However, more modern wrecks such as those used to create artificial reefs are not afforded the same protection under the legislation. There are no sites within the EMBA that have declared protection zones under the *Underwater Cultural Heritage Act* 2018.

### 4.9.5 Aboriginal and Torres Strait Islander cultural values

Australian Aboriginal and Torres Strait Islander heritage is recognised as the oldest continuing culture in the world and is central to Australia's national heritage (DCCEEW 2024d).

Aboriginal and Torres Strait Islander peoples continuing connection to country is recognised in Australia under both State/Territory and Commonwealth legislation. At a national level, the *Native Title Act 1993* (Cwlth) establishes Native title, which recognises, under Australian common law, pre-existing Indigenous rights and interests according to traditional laws and customs (Commonwealth of Australia 2024).

In WA, recognition of native title is afforded by the *Native Title Act 1993* (Cwlth) and *Land Administration Act 1997* (WA), which give rights to access, live upon, forage, harvest and hunt upon and carry out traditional cultural practises on country. The Kimberley Land Council represents native title interests for the Kimberley region of WA as do Native Title Prescribed Body Corporates where native title has been determined to exist.

A search of the National Native Title Tribunal spatial dataset confirmed that native title claims have been determined for the whole of the Kimberley coastline and that in some instances may extend over land and sea (generally out to 3 nm). Given the EMBA is located a considerable distance offshore from the Kimberley coast (over 100 km from the outer boundary), no Native Title exists within the EMBA.

#### Culture and connection to country

Aboriginal and Torres Strait Islander peoples have passed down their culture through generations for the past 65,000 years. This is demonstrated by ongoing cultural connections to their country, as well as by archaeological evidence of human occupation dated to be over 65,000 years old.

Historically, Aboriginal people lived in small family groups and were semi-nomadic, with each family group living in a defined territory, systematically moving across a defined area following seasonal changes. Aboriginal people built semi-permanent dwellings; as a nomadic society emphasis was on relationships to family, group and country.

Membership within each family or language group was based on birthright, shared language, and cultural obligations and responsibilities. Groups had their own distinct history and culture and at certain times, family groups would come together for social, ceremonial and trade purposes (WWIA 2024).

According to Aboriginal beliefs, the physical environment of each local area was created and shaped by the actions of spiritual ancestors who travelled across the landscape (WWIA 2024).

Unlike elsewhere in Australia, Aboriginal groups in northern Australia had several centuries of contact with foreign visitors before the arrival of Europeans (National Oceans Office 2004). Many coastal and island regions in WA and the NT were the scene of complex patterns of interaction, trade and exchange with outsiders including Macassan trepangers from Sulawesi from the late 1600s until early 1900s, European mariners from the mid-1600s, and Japanese pearl divers after European arrival (McCarthy et al. 2022).

Evidence of visits and interactions between Macassan and Aboriginal people include the remains of stone fireplaces and smoke houses, tamarind trees planted by Macassan people and fragments of earthenware and porcelain. Although not necessarily marine based, Aboriginal and Macassan archaeological places are important to Aboriginal people as part of their continuing culture and identity.

### Sea country and submerged historic landscapes

Over the 65,000 years of Aboriginal occupation of Australia, sea levels have fluctuated, rising from a peak low of -120 m at around 21,000 years ago relative to present levels, which resulted in the inundation of vast areas the continental shelf (Ward et al. 2022). Aboriginal and Torres Strait Islander peoples have been sustainably using and managing their sea country for tens of thousands of years, in some cases since before rising sea levels created these marine environments (DNP 2018).

Sea country or saltwater country refers to the areas of the sea that Aboriginal and Torres Strait Islander peoples are particularly affiliated with. It is an estate of sea as well as land, containing sacred sites and inhabited by ancestral beings, existing in both the physical and spiritual world. Sea country is valued for Aboriginal and Torres Strait Islander cultural identity, health and wellbeing (DNP 2018). The presence of sacred sites and stories connecting land and sea provide evidence of a connection to country through the rise and fall of sea levels over tens of thousands of years (Mayala Inninalang Aboriginal Corporation RNTBC 2019).

Although limited baseline surveys of submerged archaeology have been undertaken in Australia to date, submerged archaeological landscapes have recently been identified in WA through combined evidence of terrestrial ecology, coastal and marine geomorphology and sea-level studies (Benjamin et al. 2020; McCarthy et al. 2022).

Many AMPs are of important cultural significance with fishing, hunting and the maintenance of Aboriginal heritage through ritual and stories are considered to be important uses of nearshore and adjacent areas (DNP 2018). As described in Section 4.3, there is limited information about the cultural significance of Argo-Rowley Terrace MP, Ashmore Reef MP and Cartier Island MP to indigenous Australians (DNP 2018) potentially due to the distance from the Australian mainland (approximately 200 km). The Wunambal Gaambera, Dambimangari, Mayala, Bardi Jawi and the Nyul Nyul people's sea country extends into the Kimberley MP (DNP 2018). Typically, important heritage sites for ritual and stories, fishing and hunting are confined to nearshore and adjacent areas.

### Aboriginal sacred sites and other recognised heritage places

A search of the WA Department of Planning, Lands and Heritage, Aboriginal Heritage Inquiry System confirmed there were no registered Aboriginal cultural heritage sites or features within WA-50-L or the EMBA (Appendix B.4). Registered sites are typically located along the Kimberley coastline or islands adjacent to the WA coastline approximately 200 km from WA-50-L and approximately 100 km from the outer boundary of the EMBA at the closest points.

### Aboriginal seasonal calendars

Aboriginal and Torres Strait Islander peoples have developed an understanding of the Australian environment over many thousands of years (BOM 2024b; CSIRO 2022). Aboriginal knowledge of the seasons is highly localised and unique to each Aboriginal group. As such, the number of seasons recognised in an annual cycle, the length of each season, and how they are locally defined and understood, differs a lot depending on where the seasonal knowledge of Country has developed (CSIRO 2022).

Within specific seasons certain activities occur; these include customary activities such as ceremonies and burn offs. Resource availability is also influenced by season such as the flowering of certain plants identifying when eggs are available for collection or specific bird calls which indicate that yams are ready to eat (BOM 2024b).

Given the offshore waters of the EMBA are located over 100 km from the Kimberley coastline they do not support any traditional activities influenced by Aboriginal seasonal calendars. Within the Mayala MP (Buccaneer archipelago/West Kimberley) the seasonal calendar shows fishing occurs in Barrgana (May to July) and turtle nesting in Jalalay (July to October) (Mayala Inninalang Aboriginal Corporation RNTBC 2019)

### Traditional use of resources

The practice of traditional fishing includes taking turtles, dugong, fish and other marine life (DCCEEW 2024e), with traditional fishing methods consisting of the use of lines, hand collection, nets and spears (National Oceans Office 2004). No indigenous protected areas (IPAs) where it can be expected that traditional Aboriginal fishing activities will occur, are found within WA-50-L or the EMBA.

A National Recreational and Indigenous Fishing Survey undertaken in 2000, reported that the greatest Aboriginal traditional fishing effort focused on saltwater environments, including estuarine, coastal, inshore (less than 5 km from the coast) and offshore (greater than 5 km from the coast) with offshore fishing activities representing only 2% of total indigenous fishing effort (National Oceans Office 2004).

The traditional harvesting of marine resources (e.g. turtles, whale sharks and dugong) adjacent to the NWMR is a pressure of potential concern for the carbonate bank and terrace system of the Sahul Shelf and the Commonwealth waters surrounding Ashmore Reef and Cartier Island KEFs (DSEWPaC 2012).

## 4.10 Socioeconomic environment

### 4.10.1 Fishing

Commercially significant fish stocks, considered to be key indicator species, that may be present in the licence area are shown in Table 4-6, including spawning and aggregation times. Although potentially present, given the water depth and absence of suitable habitats these species are considered not likely to spawn or aggregate in the deep waters of WA-50-L as their preferred spawning and aggregation areas are shallow coastal habitats, reefs and headlands and around estuaries.

**Table 4-6: Commercially significant fish species**

| Key commercial fish species | Spawning/aggregation times |
|---|---|
| Goldband snapper (*Pristipomoides multidens*) | Goldband snapper typically occur in 50–200 m water depths, and often concentrated in depths from 80–150 m. They spawn throughout their range (rather than aggregating at specific locations) during November to May (extended peak spawning period). |
| Narrow-barred spanish mackerel (*Scomberomorini commerson)* | Spanish mackerel occur in continental shelf waters and congregate in coastal waters around reefs, shoals and headlands to feed and spawn, occurring typically in water depths from 1-50 m. They form spawning schools around inshore reefs with peak spawning period of September to January. |
| Rankin cod (*Epinephelus multinotatus*) | Rankin cod typically occur in water depths of 10–150 m. They spawn throughout their range (rather than aggregating at specific locations) during June to December and March (peak spawning period August to October. |
| Red emperor (*Lutjanus sebae*) | Red emperor typically occur in 10–180 m water depths, and are often concentrated in depths from 60–120 m. They spawn throughout their range (rather than aggregating at specific locations) during September to June (with bimodal peaks from September to November and January to March). |
| Bluespotted emperor (*Lethrinus erythracanthus*) | Blue spotted emperor typically occur in water depths of 5–110 m. They spawn throughout their range (rather than aggregating at specific locations) during July to March (extended peak spawning period). |
| Southern bluefin tuna (*Thunnus maccoyii*) | Southern bluefin tuna constitutes a single, highly migratory stock that spawns between September to April in the north-east Indian Ocean (off north-western Australia, around Christmas and Cocos islands, south of Indonesia) with juveniles then migrating southwards down the west coast of Australia (Butler et al. 2024) generally associated with coastal and continental shelf waters (AFMA 2024a). Southern bluefin tuna are pelagic species that can be found to depths of 500 m. Spawning is reported to occur in surface waters with surface water temperatures usually exceeding 24 ºC (Patterson et al 2008). It is thought that these surface waters may be necessary for the survival of eggs and larvae (Davis & Farley 2001). |

### Commercial fisheries– Australian waters

Within the EMBA, four Commonwealth-managed fisheries have the potential to operate, with all four fishery boundaries overlapping WA-50-L as summarised in Table 4-7.

In addition to the Commonwealth-managed fisheries, 16 State-managed commercial fisheries have the potential to operate within the EMBA. Of these, 11 fishery boundaries overlap with WA-50-L (Table 4-8). Fisheries highlighted in bold have fishing management areas that overlap with WA-50-L, it does not indicate that they are currently active within the licence area; however, there is a potential that they may be in the future.

**Table 4-7: Commonwealth-managed commercial fisheries**

| **Commercial fishery**<br>**(BOLD denotes overlap of fishery management area with WA-50-L)** | **Fishery summary** |
|---|---|
| **North West Slope Trawl Fishery** | The North West Slope Trawl Fishery predominantly targets scampi (*Metanephrops australiensis*) and deepwater prawn. The fishery is located in deep water from the coast of the Prince Regent National Park to Exmouth between the 200 m depth contour to the outer limit of the Australian Fishing Zone (AFMA 2024b; Butler et al. 2024).<br>Using predominantly demersal trawl gear, three vessels operated in 2022-23. The total catch in the fishery for 2022-23 was 85.4 tonnes, slightly down from 85.8 tonnes in 2021-22. Australian scampi made up approximately 52% of the total catch in 2022–23, with the rest made up of mixed squids, various finfish and other crustaceans (Butler et al. 2024). It is the only active fishery in the vicinity of WA-50-L with reportedly low negligible trawl-fishing in the Ichthys field. |
| **Western Tuna and Billfish Fishery** | The Western Tuna and Billfish Fishery (WTBF) targets bigeye tuna (*Thunnus obesus*), yellowfin tuna (*Thunnus albacares*), broadbill swordfish (*Xiphias gladius*) with striped marlin (*Kajikia audax*) a minor component of the catch (Butler et al. 2024; AFMA 2024c).<br>The Billfish Fishery covers the sea area west from the tip of Cape York in Queensland, around Western Australia, to the border between Victoria and South Australia. Fishing occurs in both the Australian Fishing Zone and adjacent high seas of the Indian Ocean (Butler et al. 2024).<br>In the 2023 fishing season there were 93 vessels with statutory fishing rights with only two active vessels using pelagic longline fishing gear and one active vessel using minor line fishing (Butler et al. 2024). Although the fishing management area overlaps WA-50-L and the EMBA, in recent years, including 2023, fishing effort has been concentrated off south-west WA with occasional activity off South Australia (Butler et al. 2024).<br>Tuna Australia has previously informed INPEX that a consortium of WTBF concession owners aim to fish key NW grounds in the future using specialized ultra-low temperature fishing vessels, including in areas adjacent to WA-50-L. |
| **Western Skipjack Tuna Fishery** | The Western Skipjack Tuna Fishery covers the waters around WA out to 200 nm from the coast. The fishery targets the Indian Ocean skipjack tuna (*Katsuwonus pelamis*) (AFMA 2024d). Although 14 permits were in place during the 2022-23 season, the fishery is not currently active, and no vessels have fished for skipjack tuna since 2009 (AFMA 2024d). Historically most fishing effort has been from purse seine gear (Butler et al. 2024). A small amount of skipjack tuna is caught on longline in the WTBF as a minor-line component (Butler et al. 2024). |
| **Southern Bluefin Tuna Fishery** | The Southern Bluefin Tuna Fishery covers Australian waters out to 200 nm from the coast and includes the whole Australian EEZ, therefore the fishery overlaps WA-50-L and the EMBA.<br>The fishery is managed under a quota system to ensure the species is not subject to overfishing. In the 2022-23 fishing season there were 85 statutory fishing right owners in the fishery. The SBT is a mixed method fishery, with purse seine, longline and minor line methods all used. In 2022-23 there were six active vessels using purse seine fishing gear and 24 active vessels using longline fishing gear (Butler et al. 2024). The purse |

| Commercial fishery<br>(BOLD denotes overlap of fishery management area with WA-50-L) | Fishery summary |
|---|---|
| | seine sector targets school fish to grow out in ocean cages, while adult fish are targeted by the longline sector.<br>Since 1992, most Australian catch has been taken by purse seine targeting juvenile (age 2-4 years) southern bluefin tuna (*Thunnus maccoyii*) between December and February each year. The catch is then transferred to aquaculture farming operations off the coast of Port Lincoln in South Australia (Butler et al. 2024; AFMA 2024a) and therefore does not overlap WA-50-L or the EMBA. All current SBT longline effort (generally between May and October) occurred on the east coast of Australia and around Tasmania.<br>Southern bluefin tuna constitutes a single, highly migratory stock that spawns between September to April in the north-east Indian Ocean (off north-western Australia, around Christmas and Cocos islands, south of Indonesia) with juveniles then migrating southwards down the west coast of Australia (Butler et al. 2024). |

**Table 4-8: State-managed commercial fisheries (WA DPIRD-managed)**

| Commercial fishery<br>(BOLD denotes overlap of fishery management area with WA-50-L) | Fishery summary |
|---|---|
| **Northern Demersal Scalefish Managed Fishery (WA) Area 2** | The Northern Demersal Scalefish Managed Fishery operates off the north-west coast of WA in the waters east of longitude 120°E and overlaps the WA-50-L and the EMBA.<br>Permitted fishing methods in Area 2 of the fishery include handline, dropline and fish traps, but since 2002 it has been a trap-based fishery which uses gear time access and spatial zones as the primary management measures. The main species landed by this fishery in the Kimberley subregion are goldband snapper and red emperor. In the 2022 fishing season eight vessels were active in the Kimberley with the catch for the fishery recorded as 1,458 tonnes; goldband snapper constituted 91% of the total catch (Newman et al. 2023). |
| **Mackerel Managed Fishery (WA) Area 1 (Kimberley)** | The Mackerel Managed Fishery uses near-surface trolling gear from vessels in coastal areas around reefs, shoals and headlands (WAFIC 2024a). The fishery targets Spanish mackerel (*Scomberomorus commerson)* with commercial landings in the fishery recorded as 212 tonnes in 2022 (Newman et al. 2023). Thirteen vessels were active during the 2022 season, primarily from May-November (Newman et al. 2023). Although the fishing management area overlaps the WA-50-L and the EMBA given the water depths and lack of suitable habitat no fishing activity is expected to occur. |

| **Commercial fishery**<br>**(BOLD denotes overlap of fishery management area with WA-50-L)** | **Fishery summary** |
|---|---|
| **Joint Authority Northern Shark Fishery (Cwlth/WA) Northern Zone**<br><br>**WA North Coast Shark Fishery (WA)** | The Joint Authority Northern Shark Fishery (JANSF) and WA North Coast Shark Fishery are managed by the Western Australia Fisheries Joint Authority (WAFJA) (AFMA 2024e). In 2023, a decision was made to streamline the reporting process of the WAFJA with the annual reports from 2022/23 onwards to be included as an appendix to the AFMA Annual Report.<br><br>In 2005, management measures were put in place due to unsustainable fishing mortality levels of sandbar shark (*Carcharhinus plumbeus*). These measures resulted in a substantial decline in total fishing effort and an associated decrease in total reported catch (Patterson et al. 2021). Fishing activity has not been reported in the JANSF since 2008–09 therefore no fishing activity is expected to occur in WA-50-L or the EMBA. |
| **Pearl Oyster Managed Fishery (WA) Zone 3** | The Pearl Oyster Managed Fishery is the only remaining significant wild-stock fishery for pearl oysters in the world. It is a quota-based, dive fishery operating in the shallow coastal waters along the NWS with pearl oyster fishing vessels operating from the Lacepede Islands north of Broome to Exmouth Gulf in the south (WAFIC 2024b; Newman et al. 2023). The main fishing grounds (Zone 2) are off Eighty Mile Beach, WA. In 2022, minimal levels of fishing occurred in Zone 3.<br><br>Indo-Pacific, silver-lipped pearl oysters (*Pinctada maxima)* are harvested by hand using a drift diving method, in which six to eight divers are attached to large outrigger booms on a vessel and towed slowly over the pearl oyster beds (WAFIC 2024b). Although the fishing management area overlaps the WA-50-L and the EMBA given the water depths and lack of suitable habitat no fishing activity is expected to occur. |
| **West Coast Deep Sea Crustacean Fishery (WA)** | The West Coast Deep Sea Crustacean Fishery management area extends from Onslow north along the Kimberley coast out to the Australian Fishing Zone (AFZ) and therefore overlaps the licence area and the EMBA. Catches are dominated by crystal crabs (*Chaceon albus*) using baited pots in a longline formation in shelf edge waters > 150 m (Newman et al. 2023) with vessels predominantly operating in water depths from 500-800 m (WAFIC 2024c). Five vessels were operating within the fishery during 2022 with a total catch of 133.3 tonnes taken from the West coast and Gascoyne bioregions, these bioregions do not overlap WA-50-L or the EMBA which is situated in the North coast bioregion as defined by WA DPIRD (Newman et al. 2023). The deep sea crabs are live-landed at ports between Carnarvon and Fremantle (Newman et al. 2023). |

| **Commercial fishery**<br>**(BOLD denotes overlap of fishery management area with WA-50-L)** | **Fishery summary** |
|---|---|
| **Abalone Managed Fishery (WA)**<br>**Northern Zone / Area 8** | The Abalone Managed Fishery includes the West Coast Roe's Abalone (*Haliotis roei*) resource and the South Coast Greenlip (*H. laevigata)* / Brownlip (*H. conicopora*) Abalone resource. Roe's abalone is found in commercial quantities from the South Australian/ WA border to Shark Bay. The commercial fishery harvest method is a single diver working off a 'hookah' (surface-supplied breathing apparatus) using an abalone 'iron' to prise the shellfish off rocks (WAFIC 2024d). The fishery operates in shallow coastal waters coinciding with abalone distributions (Newman et al. 2023). Although the fishing management area overlaps WA-50-L and the EMBA, no fishing effort occurs in the licence area given the water depth and lack of suitable habitat. |
| **Marine Aquarium Fish Fishery (WA)** | The Marine Aquarium Fish Fishery may operate in all WA waters but typically is more active in coastal waters south of Broome with higher levels of effort around the Capes region, Perth, Geraldton, Exmouth, Dampier and Broome (Newman et al. 2023). The fishery resource potentially includes more than 1,500 species of marine aquarium fishes under the *Marine Aquarium Fish Managed Fishery Management Plan 2018.* Operators are also permitted to take coral, live rock, algae, seagrass and invertebrates. Collection is either via hand or fishing line (Newman et al. 2023).<br>Eleven out of twelve licences were active in 2022 with a total catch of 98,694 fishes including fish, syngnathids, invertebrates and sponges (Newman et al. 2023). Catches were dominated by Spotted Blenny (*Istiblennius meleagris*), Scribbled Angelfish (*Chaetodontoplus duboulayi*) Black-axil Chromis (*Chromis atripectoralis*), Margined Coralfish (*Chelmon marginalis*), Stripey (*Microcanthus strigatus*) and Allen's Glidergoby (*Valenciennea alleni*) (Newman et al. 2023).<br>Although the fishing management area overlaps WA-50-L and the EMBA, no fishing effort occurs in the licence area given the water depth and lack of suitable habitat. |
| **Specimen Shell Managed Fishery (WA)** | The Specimen Shell Managed Fishery is based on the collection of individual shells for the purposes of display, collection, cataloguing, classification and sale. Approximately 200 different species of Specimen Shell are collected generally by hand in shallow coastal waters (Newman et al. 2023). The fishery has 30 licences with a maximum of 4 divers allowed in the water per licence at any one time with all collection to be undertaken by hand only. Total catch in 2022 was 5,074 shells. While the fishery covers the entire WA coastline, there is some concentration of effort in areas adjacent to population centres such as Broome and Exmouth. No fishing effort occurs in the licence area given the water depth and lack of suitable habitat. |

| **Commercial fishery**<br>**(BOLD denotes overlap of fishery management area with WA-50-L)** | **Fishery summary** |
|---|---|
| **Broome Prawn Managed Fishery (WA)** | The Broome Prawn Fishery predominantly targets western king prawns (*Penaeus latisulcatus*) but also catches brown tiger prawns (*Penaeus esculentus*) and blue endeavour prawns (*Metapenaeus endeavouri*) using trawling methods (Newman et al. 2023).<br>In 2021, extremely low fishing effort occurred as three vessels undertook trial fishing activities offshore Broome, to investigate whether catch rates were sufficient for commercial fishing. This resulted in negligible landings of western king prawns. No trials were undertaken in 2022 and therefore no landings recorded (Newman et al. 2023).<br>Although the fishing management area extends to overlap WA-50-L and the EMBA, no fishing effort occurs in that area due to the water depth, lack of suitable habitat and that it is classified as a prohibited fishing area. |
| **Hermit Crab Fishery (WA)** | The Hermit Crab Fishery specifically targets the Australian land hermit crab (*Coenobita variabilis*) for the domestic and international live pet trade (Newman et al. 2023). *Coenobita variabilis* is a terrestrial species found in tropical areas throughout Australia. The fishery operates throughout the year and is one of two land-based commercial fisheries in WA. The fishery is currently permitted to fish in waters north of Exmouth Gulf and the fishery management area overlaps both WA-50-L and the EMBA; however, no effort occurs in the deep waters of the licence area or EMBA.<br>The total catch in the fishery in 2022 has not been reported due to confidentiality provisions (less than three licences operated in the fishery in 2022). The catch range of Australian land hermit crabs over the last 13 years (2010-2022) is ~50,000-106,000. The catch in 2022 is stated as within the historical range (Newman et al. 2023). |
| **South West Coast Salmon Managed Fishery (WA)** | South West Coast Salmon Managed Fishery targets Western Australian salmon (*Arripis truttaceus*). The fishing management area covers the entire WA coastline and therefore overlaps WA-50-L and the EMBA. However, the fishery operates in the west coast bioregion between Kalbarri and Augusta and uses beach seine nets (WAFIC 2024e). In 2022 the total catch was 82.9 tonnes using beach seine nets (Newman et al. 2023). |

| **Commercial fishery**<br>**(BOLD denotes overlap of fishery management area with WA-50-L)** | **Fishery summary** |
|---|---|
| Kimberley Prawn Managed Fishery (WA) | The Kimberley Prawn Managed Fishery predominantly targets banana prawns (*Penaeus merguiensis*) but catch also includes western king prawns (*Penaeus latisulcatus)*, brown tiger prawns (*Penaeus esculentus*) and blue endeavour prawns (*Metapenaeus endeavouri*) using trawling methods (Newman et al. 2023).<br><br>There are two fishing periods for the season (April to mid-June, then from August to the end of November) with around 78% of the total landings taken in the first fishing period. In 2022, total prawn landings were 238.5 tonnes with all fishing effort occurring close to the WA mainland. The fishing management area does not overlap the licence area; however, it overlaps the EMBA. No fishing effort occurs in the EMBA given the water depth and lack of suitable habitat. |
| Kimberley Gillnet and Barramundi (WA) | The Kimberley Gillnet and Barramundi Fishery extends from the WA/NT border to the northern end of Eighty Mile Beach, operating in nearshore and estuarine northern zones (river systems and tidal creeks) in the Kimberley including King Sound (Newman et al. 2023). The fishery does not overlap WA-50-L or the EMBA associated with floating, entrained or dissolved hydrocarbons; however, overlaps an area of potential shoreline contact along the Kimberley coast.<br><br>It fishery encompasses the taking of any fish by gillnet in inshore waters and the taking of barramundi (*Lates calcarifer*) by any means. The principal species landed are barramundi (*Lates calcarifer*) and two species of threadfin (king threadfin *Polydactylus macrochir* and blue threadfin Eleutheronema tetradactylum).<br><br>The fishery targets barramundi (*Lates calcarifer*), during 2022 three vessels were active. Fishing is now prohibited between the southern boundary of the fishery to north of Willie Creek and in King Sound (Newman et al. 2023). Barramundi catch in 2022 was 46.7 tonnes and 13.3 tonnes of threadfin species (Newman et al. 2023). |
| Sea Cucumber Managed Fishery (WA) | Two key species targeted by the Sea Cucumber Fishery are sandfish (*Holothuria scabra*) and redfish (*Actinopyga echinites*). They are collected by hand predominantly through diving, and to a lesser extent by wading, in shallow nearshore waters along the Kimberley coastline (Newman et al. 2023). The sea cucumber resource is commonly referred to as beche-de-mer or trepang. The total annual catch of sea cucumbers in 2022 was 56.5 tonnes with two vessels active (Newman et al. 2023).<br><br>The fishery does not overlap WA-50-L or the EMBA associated with floating, entrained or dissolved hydrocarbons; however, overlaps an area of potential shoreline contact in the Mayala MP. |

| **Commercial fishery**<br>**(BOLD denotes overlap of fishery management area with WA-50-L)** | **Fishery summary** |
|---|---|
| Trochus Fishery | The Trochus Fishery is a small fishery based on a single target species (*Trochus niloticus*) harvested by hand from King Sound and the Buccaneer Archipelago. The nearshore fishery is operated by the Bardi Jawi and Mayala Aboriginal communities (Newman et al. 2023). Trochus are found on reef tops and are harvested at low tide. The annual harvest in the past decade has ranged between 2 and 15 tonnes with the product sold locally and overseas (WAFIC 2024f). The fishery does not overlap WA-50-L or the EMBA associated with floating, entrained or dissolved hydrocarbons; however, overlaps an area of potential shoreline contact in the Mayala MP. |
| North Coast Crab Fishery (Including Kimberley Mud Crab) (WA) | The North Coast Crab Fishery is a trap-based fishery which targets blue swimmer crabs (*Portunus pelagicus*) in the Pilbara (the Pilbara Crab Managed Fishery) and mud crabs (*Scylla serrata*) in the Kimberley (Kimberley Crab Managed Fishery) (WAFIC 2024g). Catch rates in 2022 were 11.2 tonnes for blue swimmer crabs and 2.4 tonnes for brown mud crabs caught in the Kimberley Crab Managed Fishery (Newman et al. 2023).<br>The fishery does not overlap WA-50-L or the EMBA associated with floating, entrained or dissolved hydrocarbons; however, overlaps an area of potential shoreline contact in the Mayala MP. |

### Recreational fishing

There is no evidence that recreational fishing occurs within WA-50-L due to the distance from land and a lack of features of interest. Recreational fishing activities peak in winter (April to October) and the recreationally important species of these coastal areas include barramundi, mangrove jack, jewfish and bream. Effort is concentrated in coastal waters along the Kimberley coastline around the population centres of Broome and Wyndham outside of the EMBA. Extended fishing charters are known to operate during certain times of the year to fishing spots off the WA coast, including Scott Reef. During consultation during the development of this EP revision, Recfishwest advised INPEX that based on the location of the activities, it is unlikely that recreational fishing activities will be impacted by the proposed activities (Appendix C.4).

### Indonesian Traditional fishing

The Australian and Indonesian governments signed a memorandum of understanding (MoU) in 1974 (DSEWPaC 2012) which permits fishing by Indonesian fishers, using traditional fishing methods only, in an area of Australian waters in the Timor Sea. The MoU area, within the Australian EEZ, known as the “MoU Box”, covers Scott Reef and its surrounds, Browse Island, Ashmore Reef, Cartier Island and various banks and shoals (Newman et al. 2023) (Figure 4-9).

The MoU requires fishers to use traditional sail-powered fishing vessels and non-motorised equipment, and prohibits them from taking protected species, such as turtles, dugongs and clams. Fishers target a range of animals, including trepang, trochus, reef fish and sharks. Indonesian fishing effort is high at Scott Reef and also takes place at Browse Island.

Although WA-50-L falls within the MoU Box, due to the nature of traditional fishing activities (non-motorised equipment etc), fishing effort generally occurs in the shallow subtidal / intertidal habitats of the reefs and islands within the MoU Box.

Indonesian fishers from Rote and Kupang in the Indonesia province of Nusa Tenggara Timur (east) have traditionally fish for sedentary reef species including sea cucumbers, using sail boats in this area of Australian waters (AFMA 2023; Newman et al. 2023) and traditional Indonesian fishing effort is intense at the Seringapatam Reef and Commonwealth Waters in the Scott Reef Complex KEF. Depending on the intensity of effort and composition of catch, the extraction of living resources from this KEF may affect trophic structures and ecological functioning (DSEWPaC 2012).

Traditional fishers operating within the MoU Box are not part of a formal commercial fishery, as such they do not require a permit or licence to be issued by the Indonesian or Australian governments to operate within the MoU Box. During consultation for another EP in 2023, INPEX confirmed that AFMA do not directly license or regulate the traditional fishers that may be operating in the MoU Box. Neither do they maintain any records to identify traditional fishers who may operate within the MoU Box.

### 4.10.2 Aquaculture

There are no aquaculture operations in WA-50-L. Aquaculture development in the region is dominated by the production of pearls from the species *Pinctada maxima.* A large number of pearl oysters for seeding are obtained from wild stocks and supplemented by hatchery-produced oysters with major hatcheries operating at Broome and the Dampier Peninsular (Newman et al. 2023). The wild shell collection occurs in shallow coastal waters (WAFIC 2024b). All the leases are within 35 m diving depth. Pearl farm sites are located along the Kimberley coast, particularly in the Buccaneer Archipelago, in Roebuck Bay and at the Montebello Islands. None of these areas lie within the EMBA.

### 4.10.3 Shipping and ports

Vessel tracking data from AMSA‘s Craft Tracking System (CTS) for January 2024 is presented in Figure 4-8. CTS collects vessel traffic data from a variety of sources, including terrestrial and satellite shipborne Automatic Identification System (AIS) data sources. Figure 4-8 highlights the presence of commonly used transit routes in the vicinity of the licence area used by supply vessels routinely supporting offshore developments in the Browse Basin including the INPEX Ichthys within WA-50-L itself, and the nearby Shell Prelude FLNG facility. The major shipping lanes linking WA to Indonesia are situated over 180 km to the west of WA-50-L (Figure 4-8).

The closest ports to WA-50-L are Derby, Broome and Wyndham. These are small ports, exporting nickel, lead, zinc and cattle, and importing products to support their local communities. The Ports of Broome and Darwin typically provide supply facilities for the petroleum industry operating in the Browse Basin.

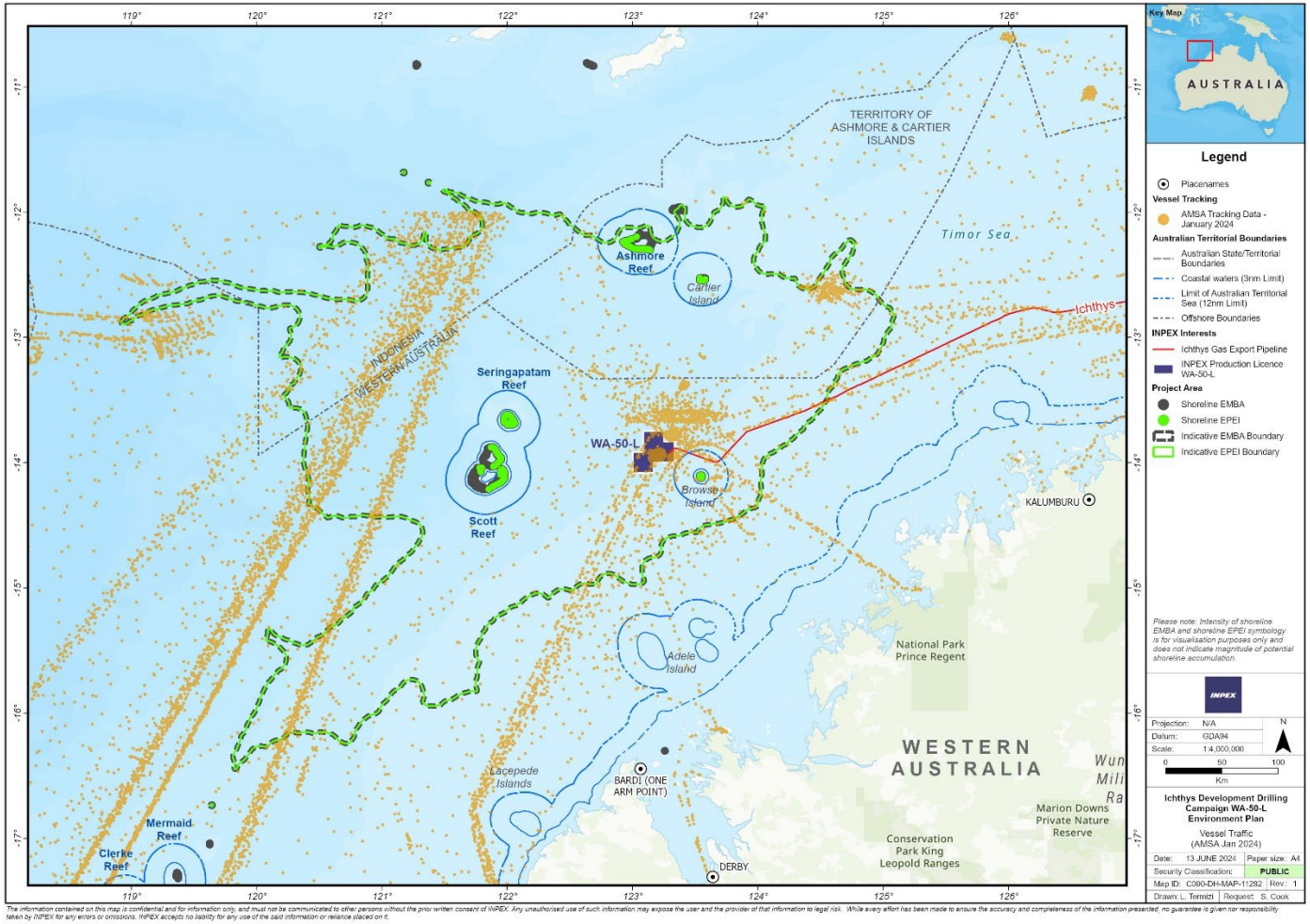



**Figure 4-8: Vessel tracking data in the Browse Basin (January 2024)**

By comparison, the ports along the north-west and north coast, such as Onslow, Dampier, Cape Lambert, Port Hedland, and Darwin handle much larger tonnages of iron ore, and petroleum exports, with shipping routes throughout the region.

The supply bases for vessels supporting the petroleum activity are Broome, Darwin and Dampier. As all vessels have the potential to act as vectors for marine pests to these ports, a brief description of the current and historical IMS status of these ports is provided below.

### Broome Port

Broome Port is the largest deepwater port in the Kimberly region of WA and is managed by the Kimberley Ports Authority. Broome Port facilities comprise a single 650 m jetty from the shore to deep-water, with almost 600 m of berth space, which is designated into 12 berths. Aside from the main jetty, there are approximately 160 moorings in the port (Bridgwood and McDonald 2014). The port is the main fuel and container hub port for the Kimberley region, and in recent years its principal exports have been livestock and offshore drilling rig equipment and materials (Kimberley Ports Authority 2023).

Broome Port waters are dominated by the tidal regime of the region, with spring tidal range in excess of 9.5 m. Substrates within Broome Port are predominantly soft mud tidal flats but some rocky substrates do occur with large expanses of substrate exposed at low tide. Submerged artificial substrates include the steel jetty piles as well as the boat moorings, although most of these are intertidal. Areas of mangroves exist within and nearby to Broome Port, particularly in Dampier Creek to the north-east, and in Willie Creek directly to the north (Bridgwood and McDonald 2014).

At Broome Port, the presence of IMS is monitored through the WA DPIRD's State-wide Array Surveillance Program (SWASP) (Kimberley Ports Authority 2023). The SWASP program involves the deployment of passive settlement arrays to monitor for growth and shoreline searches to identify potential IMS with surveillance occurring in ports every six months.

Previous incursions of IMS reported at Broome Port include black-striped mussel (*Mytilopsis sallei*) on illegal Indonesian fishing boats (McDonald 2008) and the colonial sea squirt (*D. perlucidum*) first reported in WA waters in 2010 (DPIRD 2022).

In comparison to Darwin Port, less information is available with respect to IMS that may be present in Broome Port. However, from the information presented it can be concluded that IMS have been identified in Broome Port and therefore it is not considered as a pristine environment.

### Darwin Port

Darwin Port, located in Darwin Harbour in the NT, is a major service centre for the mining and energy sectors. Darwin Port operations consist of marine traffic of non-commercial vessels (e.g. recreational anglers) and trading vessels, including commercial ships carrying cargo and passengers, PSVs and AHSVs, tankers and bulk-cargo vessels.

A number of targeted marine pest monitoring programs have been executed in Darwin Port since 2010 (Cardno 2015, Golder Associates 2010), and through the course of these programs the following IMS have been detected; however, none of these are listed as noxious species by the NTG: *Magallana gigas* (presence of one shell valve) and *Caulerpa racemosa var. lamourouxii* (Golder Associates 2010) *Amphibalanus amphitrite* (barnacle), *Bugula neritina* (bryozoan) and the ascidians *Botryllus schlosseri, Botrylloides leachi* and *D. perlucidum* (Cardno 2015). While *M. gigas* was detected during a survey, as this was based on the presence of one shell valve, Golders Associates (2010) determined it was likely to be a discarded shell from oysters imported and purchased for human consumption and therefore its presence did not confirm this species had established in Darwin Port. *C. racemosa var. lamourouxii* is common in tropical and warm temperate seas and has previously been recorded in warmer waters in Australia including Darwin Harbour (Golders Associates 2010).

Marine pest monitoring is managed by the NT Aquatic Biosecurity Unit. Artificial settlement units are located throughout Darwin Port, including on the INPEX Ichthys liquified natural gas (LNG) and liquified petroleum gas (LPG) jetties.

In 1999 an outbreak of black striped mussels was recorded in three Darwin Port marinas. Following, a national response to the outbreak this species was successfully eradicated from invaded locations (Ferguson 2000).

In summary, numerous IMS monitoring studies have been undertaken at Darwin Port with IMS identified. Therefore, Darwin Port is considered to be an operationally active environment rather than a pristine environment.

#### Dampier Port

Dampier Port is managed by the Pilbara Ports Authority with the main exports including iron ore, salt, LNG, anhydrous ammonia as well as project cargo, break bulk and general cargo. The port consists of ten port terminals with four separate navigational channels and includes inshore, relatively calm and turbid environments that are sheltered by the 42 islands of the Dampier Archipelago and Murujuga. Offshore areas of Dampier Port are influenced by clearer oceanic waters and rougher seas. With its variety of conditions, Dampier Port supports a wide range of marine habitat types including mangroves, rocky shores, sand and mud shores, macroalgal communities and coral reefs (Pilbara Ports Authority 2023).

Since 2016, Dampier Port has been part of the SWASP and undertakes surveillance every six months as part of the program. In comparison to Darwin Port and Broome Port, less information is available with respect to marine pests that may be present in Dampier Port. However, it is reasonable to conclude that given it is an operationally active port, it is not considered as a pristine environment.

### 4.10.4 Other industries

#### Oil and gas industry

The Browse Basin is subject to considerable exploration activity. The closest operational production facilities to WA-50-L, excluding the INPEX Ichthys facility, is the Shell Prelude FLNG facility located approximately 17 km to the north-east. The next closest production facility is Jadestone Energy's Montara project in the Vulcan sub-basin, approximately 130 km from WA-50-L.

### Telecommunications

The North-West Cable System (NWCS) is a purpose-built, submarine fibre cable system designed to serve Australia's onshore and offshore resources industry. The NWCS has been providing connectivity (high-speed data and voice communication services) to INPEX's Ichthys facility in WA-50-L since 2017 when the NWCS became operational.

Through consultation with relevant persons during the development of this EP, INPEX confirmed with Vocus Communications that although present within the southeastern corner of WA-50-L (servicing the Ichthys offshore facility) no submarine cables were in proximity to the drill centres associated with the proposed drilling activities covered by this EP.

### Tourism

The marine tourism industry has experienced significant growth particularly along the Kimberley coast in recent decades. As coastal access is limited, tourists generally access the coast by boat from major population centres, such as Broome and Wyndham. Activities include recreational charter fishing (Section 4.10.1), diving, snorkelling, whale, turtle and dolphin watching and sightseeing cruises (Newman et al. 2023). Based on to the distance from land and a lack of features of interest, no tourism activities are expected to occur within WA-50-L or the EMBA.

Sites of greatest interest to tourists include places to fish, areas for sightseeing and secluded locations for general relaxation which are generally outside of the EMBA. Luxury cruises take tourists along the Kimberley coastline and occasionally out to isolated coral atolls for fishing and diving. Primary dive locations include the Rowley Shoals, Scott Reef, Seringapatam Reef, Ashmore Reef and Cartier Island (Newman et al. 2023).

### International agreements

Potentially relevant to offshore petroleum activities are the treaties between Australia and Indonesia, and Australia and Timor-Leste as presented in Figure 4-9.

The Perth Treaty (1997) is a treaty between the Australian and Indonesian governments that establishes an EEZ boundary and seabed boundaries in relation to an area in the Timor Sea. Under the Perth Treaty there are agreed areas of overlapping jurisdiction where Australia exercises seabed jurisdiction including exploration for petroleum and Indonesia exercises water column jurisdiction including fishing rights. Although overlapping the EMBA/EPEI, WA-50-L is not located within areas covered by the Perth Treaty. Obligations under the Perth Treaty include that both governments must take effective measures to prevent, reduce and control pollution of the marine environment. Within Australia, consultation with the Indonesian government is managed by the Department of Foreign Affairs and Trade (DFAT).

The Treaty Between Australia and the Democratic Republic of Timor-Leste Establishing Their Maritime Boundaries in the Timor Sea (known as the Maritime Boundary Treaty) was signed by Australia and Timor-Leste in 2018 and was brought into force in 2019. The Maritime Boundary Treaty establishes permanent maritime boundaries between Australia and Timor-Leste in the Timor Sea and recognises both states' sovereign rights. WA-50-L and the EMBA/EPEI do not overlap the area covered by the Maritime Boundary Treaty.

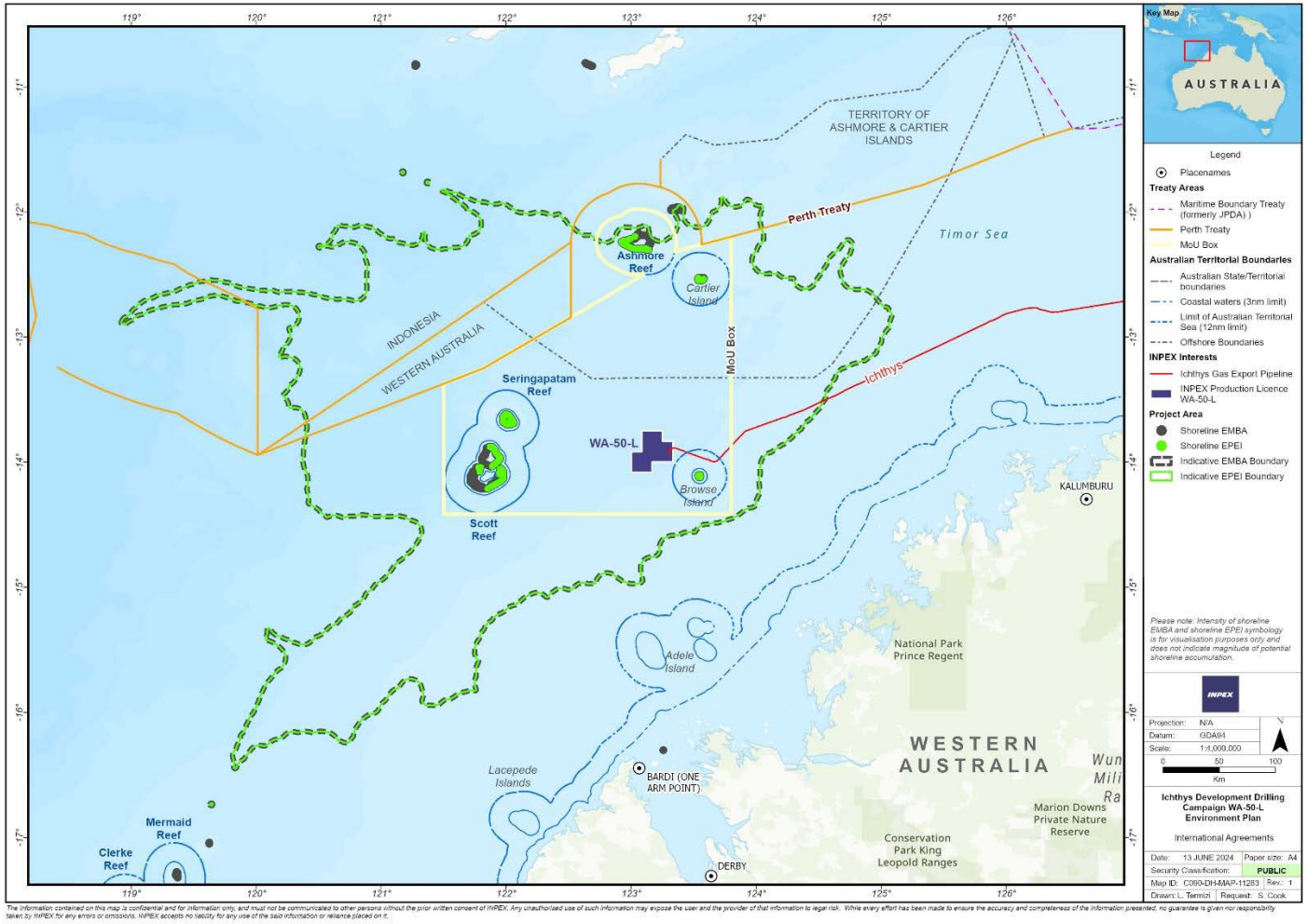



**Figure 4-9: International agreements**

## 4.11 Summary of values and sensitivities

### 4.11.1 WA-50-L

**Table 4-9: Particular values and sensitivities potentially within WA-50-L**

| Value and sensitivity | | Description |
|---|---|---|
| Receptors that are considered socially important including socio-economic and cultural heritage values. | | Fisheries both traditional (Indonesian) and commercial. |
| Benthic primary producer habitat, defined by the Western Australian Environmental Protection Authority (WA EPA) Environmental Assessment Guideline No. 3 *Environmental Assessment Guidelines for Protection of Benthic Primary Producer Habitat in Western Australia's Marine Environment* as functional ecological communities that inhabit the seabed within which algae (e.g. macroalgae, turf and benthic microalgae), seagrass, mangroves, corals, or mixtures of these groups, are prominent components. | | None identified within WA-50-L. |
| Regionally important areas of high diversity (such as shoals and banks). | | WA-50-L overlaps the continental slope demersal fish communities KEF. |
| World heritage values of a declared World Heritage property within the meaning of the EPBC Act. | | None identified within WA-50-L. |
| National heritage values of a National Heritage place within the meaning of the EPBC Act. | | None identified within WA-50-L. |
| Ecological character of a declared Ramsar wetland within the meaning of the EPBC Act. | | None identified within WA-50-L. |
| Presence of a listed threatened species or listed threatened ecological community within the meaning of the EPBC Act. | | A number of threatened species or migratory species have been identified as having the potential to transit through WA-50-L.<br>These have been categorised as marine fauna:<br>• marine mammals<br>• marine reptiles<br>• fishes and sharks<br>• marine avifauna.<br>Also refer to Appendix B (EPBC Act Protected Matters Report). |
| Presence of a listed migratory species within the meaning of the EPBC Act. | | |
| Any values and sensitivities that exist in, or in relation to, part or all of: | a Commonwealth marine area within the meaning of the EPBC Act. | Productivity and diversity associated with planktonic communities and benthic communities. |
| | Commonwealth land within the meaning of the EPBC Act. | None identified within WA-50-L. |
| BIAs associated with EPBC-listed species. | | There are no known BIAs associated with listed threatened species or migratory species within WA-50-L. |

### 4.11.2 EMBA and EPEI

**Table 4-10: Particular values and sensitivities potentially within the EMBA/EPEI**

| Value and sensitivity | Description |
|---|---|
| Receptors that are considered socially important including socio-economic and cultural heritage values. | Fisheries (commercial and traditional) |
| Benthic primary producer habitat, defined by the Western Australian Environmental Protection Authority (WA EPA) Environmental Assessment Guideline No. 3 *Environmental Assessment Guidelines for Protection of Benthic Primary Producer Habitat in Western Australia's Marine Environment* as functional ecological communities that inhabit the seabed within which algae (e.g. macroalgae, turf and benthic microalgae), seagrass, mangroves, corals, or mixtures of these groups, are prominent components. | Benthic primary producer habitats are described in Section 4.7.2 and include the KEFs listed below. |
| Regionally important areas of high diversity (such as shoals and banks). | KEFs:<br>• Continental slope demersal fish communities<br>• Ancient coastline at 125 m depth contour<br>• Ashmore Reef and Cartier Island and surrounding Commonwealth waters<br>• Carbonate bank and terrace system of the Sahul Shelf<br>• Seringapatam Reef and Commonwealth waters in the Scott Reef complex.<br>Benthic habitats:<br>• Various banks and shoals, coral reefs, seagrass (Section 4.7.2)<br>Shoreline habitats:<br>• Islands and sandy beaches (Section 4.7.3). |
| World heritage values of a declared World Heritage property within the meaning of the EPBC Act. | None identified within this area. |
| National heritage values of a National Heritage place within the meaning of the EPBC Act. | None identified within this area. |
| Ecological character of a declared Ramsar wetland within the meaning of the EPBC Act. | One Ramsar site at Ashmore Reef National Nature Reserve. |
| Presence of a listed threatened species or listed threatened ecological community within the meaning of the EPBC Act. | A number of threatened species or migratory species have been identified as having the potential to transit through the EMBA/EPEI.<br>These have been categorised as marine fauna (Section 4.7.4):<br>• marine mammals<br>• marine reptiles<br>• fishes and sharks<br>• marine avifauna.<br>Also refer to Appendix B (EPBC Act Protected Matters Report). |
| Presence of a listed migratory species within the meaning of the EPBC Act. | |

| Value and sensitivity | | Description |
|---|---|---|
| Any values and sensitivities that exist in, or in relation to, part or all of: | a Commonwealth marine area within the meaning of the EPBC Act. | Productivity and diversity associated with planktonic communities and benthic communities. |
| | Commonwealth land within the meaning of the EPBC Act. | None identified within this area. |
| BIAs associated with EPBC-listed species. | | A number of BIAs are present within the EMBA/EPEI including:<br>Marine mammals<br>• pygmy blue whale distribution<br>• Dugong foraging at Ashmore Reef.<br>Marine reptiles<br>• Turtle nesting, internesting and adjacent foraging areas including Browse Island, Cartier Island, and Sandy Islet (Scott Reef).<br>Fish and sharks<br>• whale shark foraging area<br>• KEFs associated with increased species diversity and abundance (i.e. continental slope demersal fish communities and the ancient coastline at 125 m depth contour).<br>Marine avifauna<br>• a number of breeding and foraging areas associated with shoreline habitats (e.g. Browse Island, Cartier Island, and Sandy Islet (Scott Reef). |

# 5 CONSULTATION

This section of the EP, in conjunction with Appendix C, describes consultation undertaken by INPEX between March 2024 and submission of the EP for assessment by NOPSEMA.

## 5.1 Relevant persons consultation

During the consultation process described in this section of the EP and Appendices C.1 - C.4, the following guidance was considered at various stages to reflect industry best practice:

- Consultation in the course of preparing an environment plan (NOPSEMA 2023a)
- Petroleum activities and Australian marine parks (NOPSEMA 2023b)
- Consultation with Commonwealth agencies with responsibilities in the marine area (NOPSEMA 2024b)
- Interim Engaging with First Nations People and Communities on Assessments and Approvals Under the *Environment Protection and Biodiversity Conservation Act 1999* (DCCEEW 2023b)
- Consultation approach for unplanned events (WAFIC 2023)
- INPEX's Aboriginal & Torres Strait Islander Engagement Policy (0000-A0-POL-60003) and Aboriginal & Torres Strait Islander Engagement Standard (0000-A0-STD-60006)
- AA1000 Stakeholder Engagement Standard (Accountability 2015).

### 5.1.1 Identified Relevant persons

A complete list of relevant persons applicable to the proposed activity is presented in Appendix C.2 which also includes relevant persons identified through discussions with other relevant persons or through extended enquiry (broader consultation) activities.

As described in Appendix C.1, there may be persons who have functions, interests or activities that occur within the EMBA, as calculated by the oil spill modelling included in the EP at the initial time of submission. However, those functions, interests or activities may not be affected by INPEX's activities. Where no environmental or ecological impacts are predicted within a geographical area, there can be no corresponding impacts on a person's functions, interests or activities. There may also be instances where potential environmental or ecological impacts are predicted to occur within an area; however, despite a geographical overlap this will not necessarily equate to an impact on a person's functions, interests or activities. Where a person's functions, interests or activities within the EMBA are not affected, or are only affected in an immaterial or negligible way, they have not been identified as a relevant person (as defined under OPGGS (E) Regulation 25(1)).

#### International persons

*MoU Box*

As described in Section 4.10.4 *International agreements* and Figure 4-9, WA-50-L and the EMBA/EPEI overlap the MoU Box. However, traditional Indonesian fishing effort is focussed on shallow waters such as those found at the Scott Reef complex and Browse Island where the target sedentary reef-species are generally encountered, rather than the deep waters of WA-50-L.

The MoU Box overlaps Australian waters, and the majority of traditional fishing activities occur at locations such as reefs and islands within AMPs whose values are described in Section 4.3. The AMPs are managed by the Director of National Parks with whom INPEX has consulted with on this activity during 2024.

During previous consultation with AFMA in September 2023 for another EP, INPEX confirmed that AFMA do not directly license or regulate the traditional fishers that may be operating in the MoU Box. Nor do they maintain a register of contact details for these traditional Indonesian fishers. As there is no requirement for traditional fishers to be licensed by either the Australian or Indonesian governments there is no publicly available information to identify these individuals.

### 5.1.2 Consultation approaches and activities

INPEX utilised a range of tools to consult with relevant persons in the most appropriate and effective manner and as described in Appendix C.1, noting that specific consultation approaches may be required for certain groups of relevant persons. A variety of consultation approaches and materials were used for the development of this EP and examples are presented in Appendix C.3.

#### Categorisation of relevant persons and consultation requirements

Once assessed as relevant, specific requirements for consultation were established with each relevant person categorised to ensure they received appropriate consultation materials as summarised in Table 5-1.

The categorisation process, completed during the relevant person identification workshop, described in Appendix C.1, was undertaken prior to consultation activities occurring in 2024. The outcome of the categorisation for each relevant person is presented in Appendix C.2 and was used as an initial guide for establishing expected levels and proposed methods of engagement. However, over the course of undertaking consultation for this and other INPEX EPs, based on feedback received by INPEX, some relevant persons may have requested or may have required a different level of engagement or methods of engagement than was initially expected based on their categorisation. This may include instances where some relevant persons required more information to make a decision about whether there were any consequences or impacts to their specific functions, interests or activities with regards to the proposed activity. Similarly, other relevant persons may have requested a lower level of engagement such as indicating a preference for email rather than in-person meetings.

**Table 5-1: Summary of the categories of relevant persons and consultation strategy**

| Category | Description of category |
|---|---|
| Category 1 | Relevant persons who may be affected by planned activities.<br>Relevant persons who have published / known requirements on how they wish to be consulted with. |

| Category | Description of category |
|---|---|
| Category 2 | May be affected directly or indirectly by unplanned activities (within the EMBA). Those that require information regarding unplanned activities (i.e. spills). |
| Category 3 | Anyone else who may be indirectly impacted or have interests.<br>Includes extended enquiry for persons who are not known to INPEX. |
| **Consultation strategy level** | |
| Level A | Work with relevant person to ensure targeted and tailored information is provided to enable an effective consultation process - may include meetings or presentations, scheduled phone calls and specific information. As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches. |
| Level B | Specific information based on known information needs - may require ongoing, iterative consultation over an extended period of time. As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches. |
| Level C | Broader, higher-level consultation - may include emailed factsheets or information, with access to EP specific website or similar. |
| Level D | Extended enquiry – advertisements in newspapers throughout Australia, social media/media information directing people to an EP specific website. |

### Preparation for consultation

*EP summary website*

In preparation for consultation in 2024, INPEX developed an EP summary website (https://anz.planengage.com/ichthysdrilling/page/Home) as the primary tool to convey information about the proposed activity, potential environmental risks and controls in place (INPEX 2024). A link to the website was included in INPEX's information sheet for the proposed activity (Appendix C.3), emails and a QR code included in letters sent directly to relevant persons. The QR code or a link to the website was also published in newspapers and on social media as part of the extended enquiry (broader consultation) process.

The website was published on 25 March 2024 and provided a summary of the following:

- What is an environment plan? – to provide background information on the purpose of an EP.
- EP consultation requirements – to describe how titleholders must identify and consult with relevant persons when developing or revising an EP.
- Overview of activities – to provide details on the proposed activity covered by this EP.
- Location – presented a location map with coordinates of the licence area and a video to introduce the concept of oil spill modelling and how this is used to generate the EMBA.
- Schedule, timing and duration – to provide details on the duration and expected timeframe when the activity will occur.
- Methodology – to describe the techniques to be used during the drilling activity.

- Environmental values and sensitivities – presented a selection of maps to describe environmental sensitivities in the EMBA and distances from WA-50-L to environmentally sensitive areas such as AMPs and coral reefs.
- Risk assessment process – to describe the process and risk matrix used by INPEX to undertake the assessment including consequence, likelihood and ALARP.
- Outcomes of the risk assessment process – presented a summary table of the aspects, impacts, proposed controls, residual risk and ALARP and acceptability assessments for planned and unplanned activities in WA-50-L and the EMBA.
- Oil spill response and source control capability – described INPEX's Browse Regional OPEP and Source Control Capability and Arrangements including links to access the documents.

In addition to the information about the proposed activity the website included definitions for key terms used and links to other useful websites to assist readers. Through the website, readers were able to provide feedback and comments to INPEX on the proposed activity and make suggestions for improvements. A telephone number as an alternative mechanism of contact was also included.

*In-person meetings*

In addition to the distribution of EP specific information (emails/letters/QR code to EP specific website, etc.), consultation specifically undertaken during the development of this EP included in-person meetings. Multiple meetings were held in Ardyaloon on the Dampier Peninsula during 2024 prior to the submission of this EP (Appendix C.4).

A record of all in-person meetings is presented along with the full records of all correspondence in a 'Sensitive Matters Report' that is submitted to NOPSEMA separately to this EP.

**Extended enquiry (broader consultation) activities**

INPEX recognises that there may be instances where other persons, organisations, departments or agencies may consider themselves relevant and wish to be included in the consultation process. Therefore, as an additional proactive step, INPEX undertook advertising campaigns (newspapers, social media and online) to provide information on the proposed activity. The objective of this approach was to help identify any other relevant persons that may not have already been identified. The extended enquiry activities also provided another means of broadcasting information to existing relevant persons as well as providing an opportunity to identify new relevant persons so INPEX could receive feedback that might not have otherwise been received. As previously described in Appendix C.1, the extended enquiry approach also acted as a means for sharing information to identified relevant persons and providing an ongoing mechanism for feedback.

*Newspaper advertising*

Newspaper advertisements were published in Australian regional and local newspapers as described in Table 5-2. Copies of the advertisements are presented in Appendix C.3 and included a link/QR code for the EP summary website along with contact details (email address and phone number) for readers to provide INPEX with comments on the proposed activity. This enabled INPEX to provide information to those persons already identified as relevant and also to aid in the identification of further relevant persons previously unknown to INPEX.

**Table 5-2: Newspaper advertising of the proposed activity**

| Newspaper | Coverage | Publication dates |
|---|---|---|
| The West Australian | Regional (WA) | 15 April 2024<br>29 April 2024 |
| Sunday Times | Regional (WA) | 21 April 2024<br>12 May 2024 |
| Broome Advertiser | Local (WA) | 18 April 2024<br>2 May 2024 |
| Kimberley Echo | Local (WA) | 18 April 2024<br>2 May 2024 |

*Social media advertising*

In conjunction with the newspaper advertisements, social media campaigns for the proposed activity were undertaken between 4 April to 14 April 2024 and 25 April to 19 May 2024. Advertisements were posted on Facebook, Instagram and LinkedIn platforms and included a link to the EP specific website.

The objectives were to reach a target audience of relevant persons to inform them of the EP and provide them with information about the proposed activity; and to inform them on how they can find out more and/or provide comment via the EP summary website or by phone. The campaign was geo-targeted to regional areas including the Dampier Peninsula to Broome and Derby to Kimbolton.

*INPEX Australia website*

The INPEX Australia website provides an overview of INPEX Australia activities (https://www.inpex.com.au/sustainability/environment/). INPEX posted a short summary of the proposed activity on 25 March 2024 with a link inviting members of the public to provide comment on the proposed activity via the EP summary website.

### 5.1.3 Consultation during the EP development

The consultation period described in Appendix C.1, states that consultation with relevant persons during the development of an EP will generally run for 40 business days (eight weeks). This is considered as a reasonable period for feedback to be submitted to INPEX.

Where multiple attempts have been made to contact relevant persons during a reasonable period, if no response has been received other targeted mechanisms (i.e. social media, radio and newspaper advertising) have been used to comply with INPEX's requirement to consult with relevant persons on the proposed activity. Further, relevant persons can provide feedback to INPEX via the EP summary webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation prior to the submission of the EP for the purposes of compliance with the OPPGS (E) Regulations has been completed.

*When no response is received*

In accordance with INPEX's methodology (Appendix C.1), where no response or acknowledgement of receipt of consultation materials was received by INPEX the following actions were undertaken:

- alternative methods of contact where appropriate and available were employed

- follow up after 20 business days (4 weeks) from issue of initial consultation materials
- final follow up 5 days prior to the closure of the consultation period
- in parallel to the above steps, INPEX also used other broader consultation methods (Section 5.1.2 Extended enquiry (broader consultation) activities) including newspaper and social media advertising as another means of broadcasting information to existing relevant persons.

*Specific consultation approaches*

As listed in Appendix C.2, INPEX identified a number of relevant persons for the activity which included commercial fisheries whose fishery management areas overlap WA-50-L and the EMBA.

For those commercial fisheries in WA, INPEX initially contacted the Western Australian Fishing Industry Council (WAFIC) for preliminary feedback regarding the WA commercial fisheries licence holders who INPEX identified as relevant persons. During this preliminary consultation, and consistent with WAFIC's consultation approach (WAFIC 2023) it was confirmed that the majority of the identified WA fisheries should not be engaged for this EP. WAFICs preferred approach, to avoid consultation fatigue of their members, is to undertake consultation with licence holders that would only be affected by a significant unplanned event.

WAFIC advised that the only WA fishery who should be consulted regarding the proposed drilling activity in WA-50-L was the Northern Demersal Scalefish Managed Fishery licence holders. INPEX engaged WAFIC, using their fee-for-service, to support EP consultation and distribute information via their network of contacts with the individual licence holders in the Northern Demersal Scalefish Managed Fishery.

INPEX is aware that some potentially relevant persons may have become fatigued due to an increase in industry consultation, therefore an opportunity to obtain feedback from such relevant persons was created.

### 5.1.4 Consultation outcomes

In accordance with Regulation 24(b), a consultation summary report for the proposed activity is presented as Appendix C.4. The full records of correspondence in a 'Sensitive Matters Report' that is submitted to NOPSEMA separately to this EP.

### 5.1.5 Ongoing consultation

Ongoing consultation activities post-acceptance of this EP will ensure INPEX develops and maintains a current and comprehensive view of relevant persons functions, interests and activities, and provide a forum for enquiries, objections or claims by relevant persons in the lead up to and during the conduct of the proposed activity.

Ongoing consultation for the proposed activity described in this EP is outlined in the implementation strategy (Section 9.8.3). Where any new information is received (Section 9.5), that is assessed as a new relevant matter or objection/claim with merit, the EP will be updated in accordance with the management of change (MoC) process described in Section 9.7 ensuring that risks remain managed to ALARP and acceptable levels.

# 6 ENVIRONMENTAL IMPACT AND RISK ASSESSMENT METHODOLOGY

In accordance with Regulation 21(5) of the OPGGS (E) Regulations, an environmental risk assessment was undertaken to evaluate impacts and risks arising from the activities described in Section 3. This section describes the process in which impacts and risks were identified. A summary of the outcomes from this process are included in Section 7 and Section 8.

A review of the proposed petroleum activity was undertaken to identify and confirm hazards. The review was conducted by environmental, engineering, compliance, health, safety, and emergency response personnel.

The review was undertaken in accordance with INPEX health, safety and environment (HSE) Risk Management processes. The approach generally aligned to the processes outlined in ISO 31000:2009 *Risk Management – Principles and guidelines* (Standards Australia/Standards New Zealand, 2009) and Handbook 203:2012 *Managing environment-related risk* (Standards Australia/Standards New Zealand 2012).

The environmental impact and risk evaluation process has been undertaken in nine distinct stages:

1. the establishment of context
2. the identification of aspects, hazards and threats
3. the identification of potential consequences (severity)
4. the identification of existing design safeguards and control measures
5. proposal of additional safeguards (ALARP evaluation)
6. an assessment of the likelihood
7. an assessment of the residual risk
8. an assessment of the acceptability of the residual risk
9. the definition of environmental performance outcomes, standards and measurement criteria.

## 6.1 Establishment of context

The first stage in the process involved a review of legislative requirements including government policies and guidelines (Section 2 *Environmental Management Framework*). Following this the scope of the activity was defined and the existing environment reviewed to identify particular values and sensitivities of that environment. The outcomes of these exercises are presented in Section 3 *Activity Description* and Section 4 *Existing Environment*, of this EP.

## 6.2 Identification of aspects, hazards and threats

An assessment was undertaken to identify the aspects associated with the petroleum activity. An aspect is defined by ISO 14001: 2015 *Environmental Management Systems (EMS)* as:

“An element or characteristic of an activity, product, or service that interacts or can interact with the environment”.

The aspects were grouped to align with the INPEX BMS environment standards. A summary of the aspects identified for the petroleum activity were as follows:

- emissions and discharges

- waste management
- noise and vibration
- loss of containment
- biodiversity and conservation protection
- land disturbance (or seabed disturbance)
- social and cultural heritage protection.

Hazards are defined by the *INPEX HSE Hazard and Risk Management Standard* as:

"A physical situation with the potential to cause harm to people, damage to property, damage to the environment".

As the definition suggests, for an environmental risk or impact to be realised, there needs to be a chance of exposing an environmental value or sensitivity to a hazard. If there is no credible exposure of the value or sensitivity, there is no risk of harm or damage. Subsequently, there is no potential for impact (or consequence).

Given the various receptors present in the environment, they have been refined to environmentally sensitive or biologically important receptors (values and sensitivities). They have been selected using regulations, government guidance and stakeholder feedback.

For the purposes of the evaluation, environmental values and sensitivities to be considered include the following:

- receptors that are considered socially important including socio-economic and cultural heritage values
- benthic primary producer habitat, defined by the Western Australian Environmental Protection Authority (WA EPA) Environmental Assessment Guideline No. 3 *Environmental Assessment Guidelines for Protection of Benthic Primary Producer Habitat in Western Australia's Marine Environment* as functional ecological communities that inhabit the seabed within which algae (e.g. macroalgae, turf and benthic microalgae), seagrass, mangroves, corals, or mixtures of these groups, are prominent components
- regionally important areas of high diversity (such as shoals and banks)
- particular values and sensitivities as defined by Regulation 21(3) of the OPGGS(E) Regulations 2023:
  - the world heritage values of a declared World Heritage property
  - the national heritage values of a National Heritage place
  - the ecological character of a declared Ramsar wetland
  - the presence of a listed threatened species or listed threatened ecological community
  - the presence of a listed migratory species
  - any values and sensitivities that exist in, or in relation to, part or all of:
    - a Commonwealth marine area– Note that this value and sensitivity includes receptors (e.g. planktonic and benthic communities) that, when exposed, have the potential to affect regionally significant ecological diversity and productivity from benthic and planktonic communities
    - Commonwealth land.
- biologically important areas associated with EPBC-listed species.

## 6.3 Identify potential consequence

In sections 7 and 8, for each aspect, the greatest consequence (or potential impact) of an activity, is evaluated with no additional safeguards or control measures in place. This allows the assessment to be made on the maximum foreseeable exposure of identified values and sensitivities to the hazard taking into account the extent and duration of potential exposure. The consequence is defined using the INPEX Risk Matrix (Figure 6-1).

Given that the receptors, identified as particular values and sensitivities are the most regionally significant or sensitive to exposure, these are considered to present a credible worst-case level of consequence to assess against for environmental impact and impacts to cultural and social heritage.

## 6.4 Identify existing design safeguards/controls

Control measures associated with existing design are then identified to prevent or mitigate the threat and/or its consequence(s). These controls may relate to the implementation strategy of this EP and have relevant environmental performance outcomes and standards presented in Section 9.

## 6.5 Propose additional safeguards (ALARP evaluation)

Where existing safeguards or controls have been judged during the evaluation as inadequate to manage the identified hazards (on the basis that the criteria for acceptability is not met as defined in Section 6.8), additional safeguards or controls are proposed.

The INPEX *HSE Hazard and Risk Management Standard* describes the process in which additional engineering and management control measures are identified, taking account of the principle of preferences illustrated in Figure 6-2. The options were then systematically evaluated in terms of risk reduction. Where the level of risk reduction achieved by their selection was determined to be grossly disproportionate to the “cost” of implementing the identified control measures, the control measure will not be implemented, and the risk is considered ALARP. Cost includes financial cost, time or duration, effort, occupational health and safety risks, or environmental impacts associated with implementing the control.

## 6.6 Assess the likelihood

The likelihood (or probability) of a consequence occurring was determined, taking into account the control measures in place. The likelihood of a particular consequence occurring was identified using one of the six likelihood categories shown in Figure 6-1.

## 6.7 Assess residual risk

Once any additional controls/safeguards are identified, the residual risk is then evaluated and ranked.

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# Risk Matrix

Refer to the Risk Management Guideline [0000-A0-GLN-60010] for guidance on how to apply the risk matrix.

## CONSEQUENCE TABLE

| Severity Level | | Financial NPV (USD) | Health & Safety | Environment | Reputation | Cultural & Social Heritage | Legal |
|---|---|---|---|---|---|---|---|
| | | CONSEQUENCES | | | | | |
| | A | >$1B | >20 fatalities or permanent total disabilities | Regional scale event, permanent impact on environment. Eradication of local populations of protected species | Prolonged international multi-NGO and media and by public protests. Loss of host government support and/ or social licence to operate. Company reputation severely tarnished | Permanent, long-term impact on social structure, and destruction of highly valued heritage, aesthetic, economic or recreational items | Criminal prosecution, potential jail sentences for directors and senior officers. Civil prosecution, class actions. Heavy fines, threat to licence to operate or future approvals |
| | B | $100M – $1B | 2 – 20 fatalities or permanent total disabilities | Large scale event, long term impact on environment. Extensive impact on populations of protected species | International multi-NGO and media condemnation. Host government registers concerns. Prolonged large protests. Company reputation seriously impacted | Widespread disruption to a number of communities with damage to highly valued heritage, aesthetic, economic or recreational items | Criminal prosecution for directors and senior officers. Civil prosecution and class actions. Heavy fines, threat to licence to operate |
| | C | $10M – $100M | Single fatality or Permanent Total Disability | Medium to large scale event, medium term impact on environment. No threat to overall population viability of protected species | Serious public or national media outcry. Damaging NGO campaign. Large protests. Company reputation impacted | Significant impact to regional communities, and to heritage, aesthetic, economic or recreational items of significant value | Significant, multiple breaches of regulation or licence conditions. Significant litigation and fines |
| | D | $1M – $10M | Major injury or illness, permanent partial disability, lost time injury | Local to medium scale event with short to medium term impact on environment. No threat to overall population viability of protected species | Major adverse national media, public or NGO attention. Significant protests. Asset reputation impacted | Regional community disruption with moderate impact on heritage, aesthetic, economic or recreational values | Serious breach of regulation. Investigation by regulatory authorities. Potential litigation and moderate fines |
| | E | $100K– $1M | Minor injury or illness, alternative duties injury, medical treatment injury | Local scale event with short term impact on the environment. Minor and temporary impact on a small portion of the population of protected species | Attention from regional media with heightened concern with local community. Criticism by community or NGOs | Isolated community disruption with limited adverse impact on heritage, aesthetic, economic or recreational values | Minor legal issues. Report provided to regulatory authorities. Potential for minor fines |
| | F | <$100K | Slight injury or illness, first aid injury | Local scale event with temporary impact on environment. Behavioural responses inconsequential ecological significance to protected species | Short term local concern or complaints. Low level media or regulatory issue | Minor impact on heritage, aesthetic, economic or recreational values | Breach of internal standards. Potential scrutiny by regulatory authorities |

## LIKELIHOOD TABLE

| | | | | | | |
|---|---|---|---|---|---|---|
| **Time Frame** Could be experienced | 100 year timeframe or less | 50 year timeframe | 10 - 20 year timeframe | 5 year strategic planning time frame | 1 - 2 year budget timeframe | Once or more during the next year |
| **Experience** History of occurrence in Company or Industry | Unheard of in the industry or in Projects | Has occurred once or twice in the industry or rarely occurs in Projects | Has occurred many times in the industry but not in the company or in <1 out of 100 Projects | Has occurred once or twice in the company or in <1 out of 10 Projects | Has occurred frequently in the company or in many Projects | Has occurred frequently at the location or in every Project |
| **Frequency** Continuous Operation | Once every 10 000 – 100 000 years at location | Once every 1,000 – 10 000 years at location | Once every 100 - 1000 years at location | Once every 10 - 100 years at location | Once every 1 - 10 years at location | More than once a year at location or continuously |
| **Probability** Single activity | 1 in 100 000 – 1 000 000 | 1 in 10 000 – 100 000 | 1 in 1000 – 10 000 | 1 in 100 - 1000 | 1 in 10 - 100 | >1 in 10 |

| Severity | Likelihood Level 6 Remote | 5 Highly Unlikely | 4 Unlikely | 3 Possible | 2 Likely | 1 Highly Likely |
|---|---|---|---|---|---|---|
| A Catastrophic | 6 | 5 | 4 Critical Risk | 3 | 2 | 1 |
| B Major | 7 | 6 | 5 | 4 | 3 | 2 |
| C Significant | 8 | 7 | 6 High Risk | 5 | 4 | 3 |
| D Moderate | 9 | 8 | 7 | 6 | 5 | 4 |
| E Minor | 10 | 9 | 8 Moderate Risk | 7 | 6 | 5 |
| F Insignificant | 10 | 10 | 9 Low Risk | 8 | 7 | 6 |

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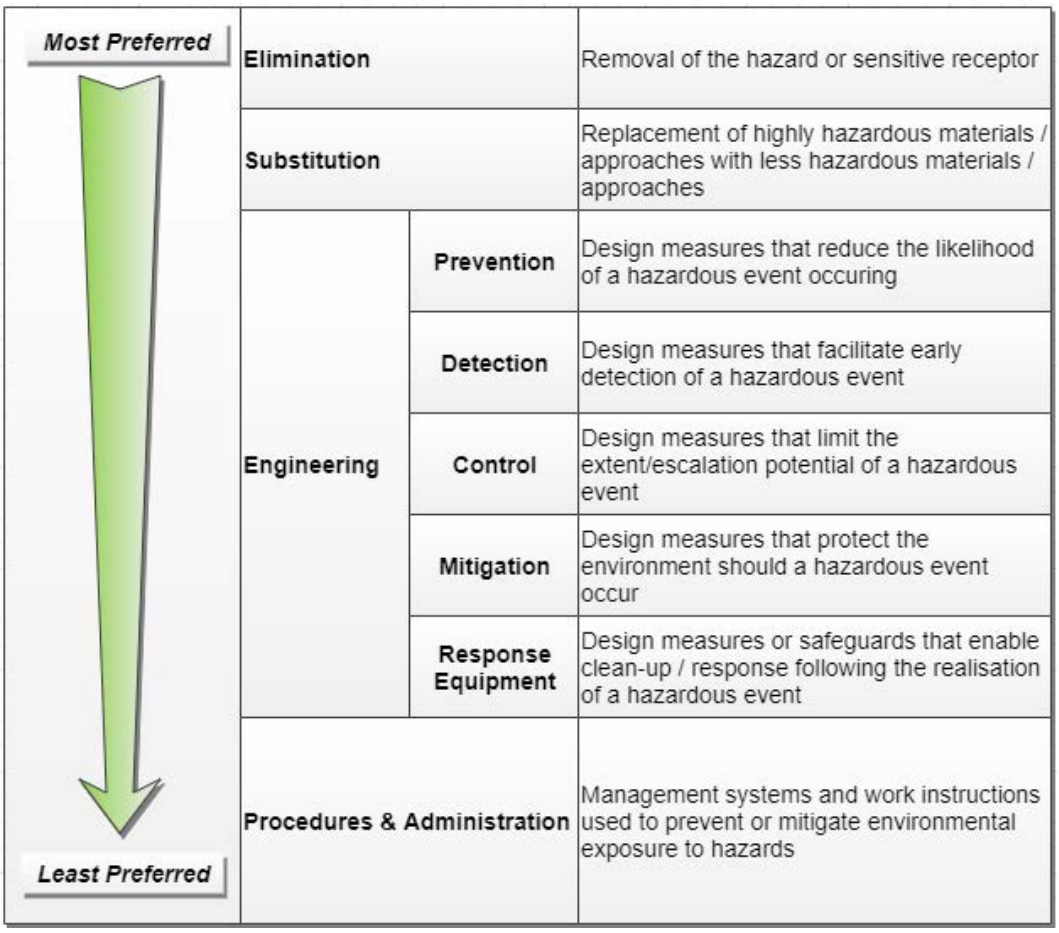
**Figure 6-1: INPEX risk matrix**




| | | |
|---|---|---|
| **Elimination** | | Removal of the hazard or sensitive receptor |
| **Substitution** | | Replacement of highly hazardous materials / approaches with less hazardous materials / approaches |
| **Engineering** | **Prevention** | Design measures that reduce the likelihood of a hazardous event occuring |
| | **Detection** | Design measures that facilitate early detection of a hazardous event |
| | **Control** | Design measures that limit the extent/escalation potential of a hazardous event |
| | **Mitigation** | Design measures that protect the environment should a hazardous event occur |
| | **Response Equipment** | Design measures or safeguards that enable clean-up / response following the realisation of a hazardous event |
| **Procedures & Administration** | | Management systems and work instructions used to prevent or mitigate environmental exposure to hazards |

**Figure 6-2: ALARP options preferences**

## 6.8 Assess residual risk acceptability

Potential environmental impacts and risks are only deemed acceptable once all reasonably practicable alternatives and additional measures have been taken to reduce the potential impacts and risks to ALARP.

INPEX has determined that risks rated as “Critical” are considered too significant to proceed and are therefore, in general, unacceptable. In alignment with NOPSEMA’s *Environment Plan Decision Making Guideline* (NOPSEMA 2024a), INPEX considers that when a risk rating of “Low” or “Moderate” applies, where the consequence does not exceed “C” (Significant) and where it can be demonstrated that the risk has been reduced to ALARP, that this defines an acceptable level of impact.

Through implementation of this EP, impacts to the environment will be managed to ALARP and acceptable levels and will meet the requirements of Section 3A of the EPBC Act (principles of ecologically sustainable development; ESD) as shown in Table 6-1.

**Table 6-1: Principles of ecological sustainable development (ESD)**

| Principles of ESD | Demonstration |
|---|---|
| a) decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations; | The INPEX health, safety, security, environment and quality policy (Figure 9-2), INPEX *HSE Hazard and Risk Management Standard* and the INPEX BMS (Section 9) consider both long-term and short-term economic, environmental, social and equitable considerations. |
| b) if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; | No threat of serious or irreversible environmental damage is expected from the activity. Scientific knowledge is available to support this, and processes are in place to ensure that INPEX remains up-to-date with scientific publications (Section 9.13). |
| c) the principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations; | The health, diversity and productivity of the environment shall be maintained and not impacted by the activity. |
| d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision making; | Biological diversity and ecological integrity will not be compromised by the proposed activity. |
| e) improved valuation, pricing and incentive mechanisms should be promoted. | N/A |

Consequently, the potential environmental impacts and risks associated with implementing the activity were determined to be acceptable if the activity:

- complies with relevant environmental legislation and corporate policies, standards, and procedures specific to the operational environment
- takes into consideration relevant person feedback
- takes into consideration conservation management documents where acceptable levels of impact and risks are informed by relevant species recovery plans, threat abatement plans and conservation advices
- does not compromise the relevant principles of ESD; and
- the predicted level of impact does not exceed the defined acceptable level, in that the environmental risk has been assessed as “Low” or “Moderate”, the consequence does not exceed “C – Significant” and the risk has been reduced to ALARP.

## 6.9 Definition of performance outcomes, standards and measurement criteria

As defined in Regulation 5 of the OPGGS (E) Regulations 2023, INPEX has used environmental performance outcomes and performance standards to address potential environmental impacts and risks identified during the risk assessment.

Environmental performance outcomes, standards, and measurement criteria that relate to the management of the identified environmental impacts and risks are defined as follows:

- environmental performance outcome (EPO) means a measurable level of performance required for the management of environmental aspects of an activity to ensure that environmental impacts and risks will be of an acceptable level
- environmental performance standard (EPS) means a statement of the performance required of a control measure
- measurement criteria are used to determine whether each environmental performance outcome and environmental performance standard has been met.

# 7 IMPACT AND RISK ASSESSMENT

Following the environmental impact and risk assessment methodology described in Section 6, the aspects, hazards and threats have been systematically identified. The aspects (and associated hazards) with the potential for impact or risk in relation to the relevant identified values and sensitivities are discussed in this section and in Section 8.

## 7.1 Emissions and discharges

### 7.1.1 Light emissions

**Table 7-1: Impact and risk evaluation – change in ambient light levels from flaring and navigational lighting on MODU and vessels**

| Identify hazards and threats | |
|---|---|
| Light emissions have the potential to disturb light-sensitive marine fauna, specifically marine turtles, seabirds and migratory bird species, through localised attraction to light that may result in behavioural changes.<br><br>Flaring will occur during well clean up (completions) and flow back operations (Section 3.2.1 Well flow back) for each well. Following well clean up (involving the unloading of the base oil cushion, prior to the arrival of reservoir gas and fluids at the surface), a multi-rate well test will be conducted at various flow rates. The estimated duration for well flow back operations is approximately 24 hours per well, although this will be subject to reservoir characteristics and other factors. As gas flow rates will vary during the 24-hour test period, flaring will also occur at a range of flow rates throughout this time. The scope of this EP also includes potential well intervention or workovers. In general, light interventions carried out from a LWI vessel are not typically planned with flaring operations. Well interventions or workovers performed using a MODU are more likely to involve flaring operations as part of the process. The requirements and durations of any such flaring is dependent on the specifics of the intervention or workover being conducted. In addition to flaring, light emissions will also be generated from MODU and vessel lighting (necessary for navigational and safe working condition requirements).<br><br>It should be noted that the INPEX Ichthys interlinked facility (CPF and FPSO) is also present within WA-50-L. The facility is equipped with flares that are permanently lit with a limited amount of pilot gas. During normal production operations, continuous operational flaring does not occur. However, there are some circumstances under which flaring is required in order to protect the integrity of the facility and to prevent harm to personnel, the environment and equipment. For context, the levels of flaring (gas flow rates and duration) associated with the drilling activity to be undertaken on the MODU in WA-50-L is considerably lower than flaring events associated with process upset/manual or emergency blowdown at the Ichthys facility. | |
| Potential consequence | Severity |
| The particular values and sensitivities identified as having the potential to be impacted by light emissions from flaring and navigational lighting are:<br>• marine turtles (including the 20 km internesting green turtle BIA at Browse Island)<br>• marine avifauna. | Insignificant (F) |

| | |
|---|---|
| Behavioural changes reported in marine turtles exposed to increases in artificial lighting can include disorientation and interference during nesting (Pendoley 2005; DCCEEW 2023a). Disorientation of adult marine turtles or hatchlings has been known to result in risks to the survival of some individuals through excess energy expenditure or increased likelihood of predation (Witherington & Martin 2000; Limpus et al. 2003). The effect of light emissions resulting in disruption to turtle orientation and behaviour has been observed from up to 18 km away (DCCEEW 2023a) and the National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) recommends that a 20 km buffer for assessment of impacts be considered around important habitat for turtles. Browse Island (listed as a C-class reserve) is the closest turtle-nesting area (located approximately 26 km south-east of WA-50-L at the closest point) and is surrounded by a 20 km internesting buffer for green turtles between November and March (DEE 2017a) as described in Section 4.7.4. The location of the drill centres (Figure 3-1) where the drilling activity will be occurring are located throughout WA-50-L, with the drill centres ranging from 38 – 50 km from Browse Island at the closest points. Therefore, although light may be visible to green turtles within the internesting buffer it isn't expected to result in any behavioural responses given the light source will be approximately 18-30 km from the boundary of the BIA. Satellite tracking data reviewed in recent studies (Ferreira et al 2020; Thums et al, 2021; Ferreira et al. 2023) concluded that the spatial extent of internesting areas was adequately covered by the defined internesting buffers and therefore afforded an appropriate level of protection. However, the spatial extents of foraging BIAs are considered to potentially underestimate the distribution of foraging turtles. The closest turtle foraging BIAs relate to Ashmore Reef, Cartier Island and Scott Reef (Figure 4-5).<br><br>Shell (2009) estimated that light from production flaring activities can be detected as far as 51 km from the source. Similarly, an assessment by Woodside (2014) for the Browse FLNG development reported that the maximum distance at which production flaring under routine operational conditions was detectable was 47.9 km. However, in the event of emergency flaring, Woodside's assessment reported that light may be visible up to ten kilometres further than during normal operating conditions. The potential effect of direct light from a flare tip is mitigated by the reduction in intensity of light, which diminishes with the square of the distance (i.e. light is reduced to one-hundredth of the initial intensity after 10 m, one ten thousandth after 100 m, etc.) and by the spectral range of the emitted light. Gas flares emit measurable light energy over the whole range of visible and near infrared wavelengths, with peak intensities in the spectral range from 750 to 900 nanometers (Hick 1995), while the most disruptive wavelengths to turtles are reported to be in the range of 300 to 600 nanometers (Tuxbury & Salmon 2005; Witherington 1992; DCCEEW 2023a). Therefore, light emissions that may be visible to turtles at Browse Island or in the surrounding 20 km internesting BIA from temporary flaring during the activity (well completion, well flow back and well intervention/work over) is primarily of the wrong spectral range to cause any disturbance and is not expected to affect the behaviour of the marine turtle population in this area.<br><br>Turtle hatchlings primarily use light cues to orient to water but may also use other secondary cues such as beach slope (DCCEEW 2023a), once in the water they generally maintain seaward headings by using wave propagation direction as an orientation cue (Lohmann & Fittinghoff-Lohmann 1992). Adult turtles undertaking internesting, migration, mating or foraging activities do not use light cues to guide these behaviours and there is no evidence, published or anecdotal, to suggest that internesting, mating, foraging or migrating turtles are impacted by light emissions (Woodside 2020). | |

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| The primary source of light emissions associated with flaring will be during well flow back operations, which are conducted on an infrequent basis (once per well) and short duration (approximately 24 hours). As with light emissions generated from flaring, MODU and vessel navigational and deck lighting is also not expected to cause any discernible effect on adult turtles' or hatchlings' abilities to orientate to water at Browse Island. The potential for light from flaring on the MODU to attract marine turtles once they are at sea is expected to be temporary with an inconsequential ecological significance (Insignificant F).<br><br>The light emissions associated with flaring during well flow back operations (infrequent and short duration < 24 hours) is considered to be several orders of magnitude lower than those that may result from the operation of the Ichthys interlinked facility. The closest distance between the MODU and the facility in WA-50-L is expected to be approximately 5 km. If concurrent drilling operations were to occur during the drilling campaign in WA-50-L, increased light emissions would be associated with MODU/vessel lighting or flaring (short duration < 24 hours) and is not expected to result in significantly increased light emissions. The Recovery Plan for Marine Turtles in Australia (DEE 2017a) states that based on the long-life span and highly dispersed life history requirements of marine turtles, they may be subject to multiple threats acting simultaneously across their entire life cycle, such as increases in background noise levels and vessel strike. In considering cumulative impacts of threats on small or vulnerable stocks of marine turtles, it is possible that light emissions may act as contributor to a stock level decline.<br><br>As described in Section 4.7.4, WA-50-L located within the EAA Flyway, an internationally recognised migratory bird pathway that covers the whole of Australia and its surrounding waters. The migration of marine avifauna through the EAA Flyway generally occurs at two times of year, northward between March and May and southward between August and November (Bamford et al. 2008; DEE 2017b). Artificial light can attract and disorient seabirds, disrupt foraging and potentially cause injury and/or death through collision with infrastructure (DCCEEW 2023a). Adult seabirds are less impacted by artificial lighting than fledglings (Commonwealth of Australia 2020). Nocturnal birds are at much higher risk of impact (Wiese et al. 2001; DCCEEW 2023a); however, there are no threatened nocturnal migratory seabirds that use the EEA Flyway (DEWHA 2010). Marine avifauna are highly, visually orientated and where bird collision incidents have been reported by industry, low visibility weather conditions (cloudy, overcast and foggy nights) are usually implicated as the major contributing factor and there are seldom collision incidents on clear nights (Wiese et al. 2001). Conditions in WA-50-L are not conducive to fog formation with most rainfall associated with the monsoon season between December and March which is outside the periods of bird migration (Bamford et al. 2008).<br><br>Where there is important habitat for seabirds within 20 km of a project, the National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) recommends that consideration be given as to whether light is likely to have an effect on those birds. There are no BIAs for marine avifauna that overlap WA-50-L and the closest locations within the EMBA/EPEI are located over 50 km away from WA-50-L at the closest points (Figure 4-7). The EMBA overlaps a Ramsar site at Ashmore Reef located approximately 155 km north of WA-50L (Section 4.5). While not an identified BIA, the closest habitat for seabirds from the licence area is Browse Island located approximately 26 km south-east. Browse Island is not a regionally significant habitat for seabirds, with previous surveys finding a lack of diversity of seabirds breeding there (Clarke 2010). Colonies of nesting crested terns (>1,000 birds) have been observed on Browse Island (Olsen et al. 2018). | |

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| Migratory shorebirds travelling the EAA Flyway may fly over the licence area, before moving on to the mainland (south) in the spring or Indonesia/Australian External Territories (north) in the autumn. It is possible that migratory birds may use ships and other offshore facilities in order to rest. However, the possibility of this occurring on the MODU or vessels associated with the drilling activity in WA-50-L is considered to be low due to the short duration of flaring and the presence of alternative habitat for resting and foraging at Browse Island and Ashmore Reef/Cartier Island, resulting in minimal deviation from migratory pathways and limited potential for behavioural disruption. Therefore, any impact to seabirds or migratory birds from light emissions associated with the MODU (including flaring) and vessels is considered to be of inconsequential ecological significance (Insignificant F). | |

Identify existing design and safeguards/controls measures

- MODU/vessel personnel will receive an induction/training to inform them of the requirements to minimise external artificial lighting in accordance with Table 9-3.

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
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| Elimination | Do not use lighting at night-time. | No | Lighting is required for navigational and safety purposes and cannot be eliminated. This is in accordance with the *Navigation Act 2012* and associated Marine Orders (which are consistent with COLREGS requirements). Unnecessary outdoor/deck lighting is already eliminated. |
| | No flaring during well completions, well flow back or well intervention/workovers. | No | Given the expected gas flow rates resulting during the well flow back, there is no other mechanism for the safe disposal of gas on the MODU other than flaring. The gas could be disposed by venting; however, this is considered to have a higher environmental impact than flaring with respect to GHG emissions. |
| Substitution | Exclude vessel lighting during sensitive periods for marine avifauna and turtles (internesting November – April). | No | In general, bird migrations occur over several months of the year: between March and May (northward) and between August and November (southward) (Bamford et al., 2008). Internesting at Browse Island (20 km buffer) occurs between November to March for green turtles (DEE 2017a). |

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| | | | Lighting of MODU/vessels is required year-round to ensure the safety of workers and the environment and cannot be eliminated for certain periods during the year. Therefore, substituting the timing of activities would offer no benefit as it is possible that there will be sensitive periods for marine avifauna and turtles on a year-round basis. |
| | Exclude flaring during key periods for bird migration. | No | Flaring during the drilling activity is required to safely dispose of gas/well fluids, with the primary source of flaring being well flow back operations. The duration of each well's flow back test is limited (approximately 24 hours per well) and is relatively short-term. The timing of well flow back operations will be dictated by the MODU drilling schedule and it is not considered practicable to exclude flaring during bird migrations (March and May (northward) and between August and November (southward)) based on the short duration of flaring and inconsequential ecological significance. |
| | Exclude flaring during key periods for marine turtles. | No | The effect of light emissions resulting in disruption to turtle orientation and behaviour has been observed from up to 18 km away (DCCEEW 2023a). The drill centres in WA-50-L range from approximately 38 - 50 km from Browse Island and there is limited overlap with the 20 km internesting buffer surrounding the island. Although light from flaring in WA-50-L may be visible to turtles in the internesting BIA at Browse Island, research has indicated that turtles generally stay within 10 km of their nesting beaches and given the short duration of flaring (approximately 24 hours) any impacts to green turtles in the BIA are expected to be temporary. Therefore, excluding flaring during key periods (November to March) is not considered practicable given the requirement to flare as a mechanism for the safe disposal of gas. |
| Engineering | Reduce light intensity and/or frequencies which may attract turtles. | No | Lighting will be designed in accordance with the relevant Australian and international standards to ensure that worker and MODU/vessel safety is not compromised. |

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| | | | Most wildlife are sensitive to short-wavelength (blue/violet) light (DCCEEW 2023a). The deployment of low-pressure sodium vapour lamps or other technologies which reduce/eliminate frequencies (short wavelength) which have been shown to attract turtles would not result in any significant benefit regarding turtle hatchling attraction from the nesting beaches given the wave-front orientation cues (rather than light cues) of hatchlings once they are in the ocean. Adult turtles undertaking internesting, migration, mating or foraging activities are reported to not use light cues to guide these behaviours with no evidence to suggest adult turtles (internesting) are attracted to artificial light from offshore MODU/vessels. |
| | Use light shielding. | No | As described in the National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) MODU and vessel operators should avoid direct light shining onto nesting beaches or out into the ocean adjacent to nesting beaches. The deployment of light shielding on MODUs/vessels to reduce light spill would not result in any significant benefit regarding turtle hatchling attraction from the nesting beaches given the distance (approximately 38 – 50 km) and wave front orientation cues (rather than light cues) of hatchlings once they are in the ocean. Similarly, for adult turtles, foraging behaviours are not known to be influenced by light cues with no evidence that adult turtles (internesting) are attracted to light from offshore MODU/vessels.<br><br>WA-50-L does not overlap any avifauna BIAs and the outer boundaries of the closest BIAs are over 50 km away therefore this control is not considered necessary. |

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| | Use adaptive smart controls and LED technology to manage light timing, intensity and colour. | No | As described in the National Light Pollution Guidelines for Wildlife (DCCEEW 2023a), through the implementation of smart controls and LED technology, light emissions can be controlled through a number of ways including the use of timers, dimmers and motion sensors. All of which aim to minimise unnecessary lighting. As described MODU and vessel lighting will be designed in accordance with the relevant Australian and international standards to ensure that worker vessel safety is not compromised. As there is no evidence to suggest adult turtles (internesting) are attracted to light from offshore MODU/vessels and the distances to the nearest avifauna foraging BIAs (>50 km) this control is not considered necessary. |
| Procedures & administration | Limit the duration and frequency of planned night-time-based activities such as flaring associated with well flow back operations during key sensitive periods for marine turtles and avifauna. | No | The timing of well flow back operations will be dictated by the MODU drilling schedule and it is not considered practicable to exclude night-time flaring during key sensitive periods for marine turtles and avifauna as it is possible that there will be sensitive periods for these receptors on a year-round basis.<br><br>Flaring during well flow back is already limited to one test per well and for a short duration (approximately 24 hours). The duration of flaring cannot be scheduled to only occur during daylight hours (thereby avoiding light emissions at night) as flaring may need to be continuous in order to evaluate the rate dependent skin, which is key information for gas-condensate development. At least three consecutive flow periods with different flow rates are required for the firm evaluation and this data cannot be collected if flaring is limited to daylight hours only. |
| | Premobilisation review and planning of MODU/vessel lighting to be undertaken prior to activities commencing. | Yes | MODUs/vessels will maintain the minimum navigational and deck lighting to provide safe working conditions. The worst-case consequence of light impacts for all identified receptors at all times of the year has been assessed as Insignificant (F). |

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| | | | Given artificial light sources in proximity to the proposed activity, such as the permanently located Ichthys facility and the lighthouse on Browse Island (Section 4.4.1), flaring or external MODU/vessel lighting will not result in additional light impacts. Nevertheless, a review of deck lighting will be undertaken premobilisation HSE inspection of MODU/vessels to ensure external lighting is minimised where practicable. |
| | Lighting is directed to working areas (rather than overboard) to minimise light spill to the ocean. | Yes | To reduce potential light spill to the ocean surrounding the MODU and vessels, that may attract marine fauna, all lighting on vessel decks will be directed to work areas as required for safe working conditions. |
| | Reduce light spill from internal light sources by using blinds on windows. | Yes | Indoor light sources on the MODU/vessels are not expected to reach any sensitive habitats and are of much lower intensity than those required on the vessel decks for safe working conditions. However, this control from the National Light Pollutions Guidelines for Wildlife (DCCEEW 2023a) will be implemented as it requires little effort or cost and there may be some environmental gain from reducing the potential for the attraction of marine fauna in close proximity to the MODU/vessels. |
| | Implementation of a seabird management plan to prevent seabird landings on MODUs/vessels due to attraction from artificial lighting. | No | A seabird management plan to prevent seabird landings on MODUs/vessels and to help manage birds appropriately is a recommendation as a consideration for vessels working in seabird foraging areas during breeding season (DCCEEW 2023a).<br><br>As shown in Figure 4-7, WA-50-L does not overlap any avifauna breeding/foraging or resting areas and the closest areas are situated at least 50 km away specifically around Ashmore Reef/Cartier Island to the north, Adele Island to the south and Scott Reef to the west. There have been no reported issues with seabirds interacting with Ichthys facilities in WA-50-L. Therefore, this control is not considered necessary. |

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| | Implementation of a light management plan to prevent impacts to marine turtles from artificial lighting on MODU/vessels. | No | The effect of light emissions resulting in disruption to turtle orientation and behaviour has been observed from up to 18 km away (DCCEEW 2023a). The location of the drill centres and hence the proposed drilling activity in WA-50-L is located approximately 38 - 50 km from Browse Island at its closest point. Although light from flaring and MODU/vessels in WA-50-L may be visible to turtles in the internesting BIA at Browse Island, research has indicated that turtles generally stay within 10 km of their nesting beaches. Therefore, any potential impacts to green turtles in the BIA are expected to be of inconsequential ecological significance and this control is not considered necessary. |

| Identify the likelihood |
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| Although light may potentially be visible, specifically during flaring, given the distance between the drill centres within WA-50-L and the closest turtle nesting beaches (approximately 38 - 50 km to Browse Island) and short duration of the activities (flaring during well flow back approximately 24 hours), impacts to turtles from light emissions is Highly Unlikely (5).<br><br>While impacts to seabirds from lighting of offshore platforms and vessels have been reported in the industry, given the presence of nearby alternative resting/foraging habitat (Browse Island) and that there are several other permanently moored offshore installations in the vicinity such as the Ichthys facility, with no records published on the attraction of seabirds or negative impacts to migratory seabirds from lighting, the likelihood of impact to these receptors from the lighting of the MODUs/vessels is considered Highly Unlikely (5). |
| Residual risk summary |
| Based on a consequence of Insignificant (F) and a worst-case likelihood of Highly Unlikely (5) the residual risk is Low (10). |

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Highly Unlikely (5) | Low (10) |

| Assess residual risk acceptability |
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| Legislative requirements |

Navigational lighting is required under the *Navigation Act 2012* (which is consistent with COLREGS requirements) for the safe operation of facilities and vessels. The MODU and vessels have been designed to meet Australian and international standards for safety purposes, including the requirements of the *Navigation Act 2012*. The National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) have been used to ensure that the activities covered by this EP align with the guidelines (see below conservation management plans/threat abatement plans).

Relevant person consultation

There were no relevant person concerns raised regarding potential impacts and risks from light emissions due to flaring or MODU/vessel lighting.

Conservation management plans / threat abatement plans

Several conservation management plans have been considered in the development of this EP (refer Appendix B). As described in Section 6.8, an acceptable level of impact can be defined through a number of factors including taking into consideration any relevant species recovery plans, threat abatement plans and conservation advices. The National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) states that “natural darkness has a conservation value in the same way that clean water, air and soil has intrinsic value” and that artificial light has the potential to stall the recovery of a threatened species. The activities covered by this EP align with the recommendations in the National Light Pollution Guidelines for Wildlife.

Additionally, for marine turtles, the Recovery Plan for Marine Turtles in Australia (DEE 2017a) identifies prioritised actions for the protection of all turtle species. Specific to the turtle species and proposed activity described in this EP, the Recovery Plan states that artificial light within or adjacent to habitat critical to the survival of marine turtles should be managed such that marine turtles are not displaced from these habitats. As the drilling operations will occur at drill centres within WA-50-L located approximately 38-50 km from Browse Island, no displacement of turtles from within the internesting buffer surrounding Browse Island is expected. Therefore, the proposed drilling activity will be managed in a manner that is consistent with the actions described in the Recovery Plan and will result in an acceptable level of impact to marine turtles from light emissions.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the risk of impacts is managed to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD

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| • the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
| Activities are managed in a manner that minimises potential light impacts to marine avifauna and turtles. | Premobilisation HSE inspections confirm that MODU and vessel lighting is reviewed to reduce unnecessary lighting. | Premobilisation HSE inspection records. |
| | Lighting onboard MODU/vessels is directed to working areas (rather than overboard) to minimise light spill to the ocean. | Checks incorporated into weekly MODU/vessel inspection/environmental checklist to confirm lighting is directed inboard where practicable. |
| | Blinds will be lowered on MODU/vessel portholes and windows at night. | Checks incorporated into weekly MODU/vessel inspection/environmental checklist to confirm that blinds are drawn overnight. |

### 7.1.2 Atmospheric emissions

**Table 7-2: Impact and risk evaluation – atmospheric emissions from MODU, vessels and flaring during well flow back**

| Identify hazards and threats | |
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| Atmospheric emissions (GHG such as $CO_2$ and $CH_4$; non-GHG such as sulphur dioxide and nitrogen oxides) will be generated through flaring during well flow back operations (approximately 24 hours per well), the use of combustion engines, compressors, steam generators and ODS containing equipment on board the MODU and vessels. In addition to these sources, emissions associated with venting of gas from the reservoir may occur during drilling operations (Section 3.2.2), venting may also occur to avoid emergency conditions e.g. in the event of a well-kick.<br><br>Atmospheric emissions from the petroleum activity will contribute to overall global GHG concentrations and have the potential to result in localised changes in air quality and subsequent exposure of marine avifauna to air pollutants. Expected direct GHG emissions have been estimated for the activity and are presented in Section 3.4. | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by atmospheric emissions are:<br>• climate<br>• marine avifauna.<br>The various sources of atmospheric emissions generated from the activity will add to overall global GHG concentrations. The contribution arising from vessels and the MODU (such as from fuel use) and from flaring will be relatively short term and temporary in duration and insignificant in volume on a global scale. Therefore, the potential consequence is considered to be Insignificant (F).<br><br>As described in Section 4.7.4, WA-50-L is located within the East Asian–Australasian Flyway, an internationally recognised migratory bird pathway that covers the whole of Australia and its surrounding waters. The migration of marine avifauna through the EAA Flyway generally occurs at two times of year, northward between March and May and southward between August and November (Bamford et al. 2008; DEE 2017b). There are no BIAs for marine avifauna that overlap WA-50-L; however, the EMBA overlaps several resting and breeding BIAs for marine avifauna species (Figure 4-7). Ashmore Reef, located approximately 155 km north of WA-50-L, is listed as a National Nature Reserve and a nationally important wetland. It has been designated a Ramsar site due to the importance of the islands in providing a resting place for migratory shorebirds and supporting large breeding colonies of seabirds (Hale & Butcher 2013). While not an identified BIA, the closest habitat for seabirds from the licence area is Browse Island (approximately 26 km away). Browse Island is not a regionally significant habitat for seabirds, with previous surveys finding a lack of diversity of seabirds breeding there (Clarke 2010). Colonies of nesting crested terns (>1,000 birds) have been observed on Browse Island (Olsen et al. 2018). Browse Island has also been recognised, through previous INPEX stakeholder consultation with WA DBCA, as an important location for marine avifauna. | Insignificant (F) |

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| In the absence of air quality standards or guidelines specifically for marine avifauna, human health air quality standards and guidelines have previously been used as a proxy for the assessment of atmospheric emissions from offshore production facilities and potential impacts to marine avifauna. The outcome of such assessments concluded that $NO_2$ concentrations may typically exceed long term (annual average) concentrations within a few kilometres of the emissions source and that short-term (1-hour average) exposure levels may be exceeded within a few hundred metres (i.e. 200-400 m) of the emission source (RPS APASA 2014). This assessment was undertaken for a production facility and therefore any changes in air quality resulting from the MODU, vessels and equipment emissions in WA-50-L are also predicted to be highly localised given the nature of the emissions are less than those from a production facility.<br><br>There may be temporary increases in emissions (e.g. hydrocarbon gases and $H_2S$) as a result of venting during drilling and well flow back operations or a well-control event. This is not expected to result in a significant increase in exposure to marine avifauna as emissions will rapidly disperse following release in the open marine environment and the potential for exposure remains limited to the immediate vicinity of the vents.<br><br>A review of the human health and environmental effects of the various air pollutants, as described in the National Pollutant Inventory, indicates that short-term exposures to significant concentrations of pollutants such as CO, $NO_X$, $SO_2$, VOCs, and fine particles, could cause symptoms such as irritation to eyes and respiratory tissues, breathing difficulties, and nausea (Manisalidis et al. 2020). Limited literature has been published on the vulnerability of avian species to air pollutants. The avian respiratory system, unlike the mammalian respiratory system, is characterised by unidirectional airflow and cross-current gas exchange, features that improve the efficiency of respiration. Therefore, birds are more likely to be susceptible to high concentrations of reactive gases, aerosols and particles in the air than mammals; and are considered to be useful indicators of air quality (Sanderfoot & Holloway 2017). Exposure to air pollutants may cause respiratory distress in birds, increasing their susceptibility to respiratory infection and may impair the avian immune response (Sanderfoot & Holloway 2017). As a worst case, it is conservatively assumed that a small number of individual marine avifauna may develop some short-term symptoms if they remain in the immediate vicinity of an emissions source where the pollutants are most concentrated. However, rapid recovery is expected after individuals move away from the source and any symptoms are not expected to occur. Chronic exposures are not considered plausible given that marine avifauna would move away (i.e. continue migration or undertake foraging activities elsewhere).<br><br>If concurrent drilling operations were to occur, given the distance (minimum distance of 3 km) maintained between operating MODUs, localised atmospheric emissions are not expected to result in cumulative impacts to marine avifauna. If marine avifauna are exposed at all, they are only expected to be exposed to changes in air quality for short periods as they pass close to emissions sources. Chronic exposures are not considered plausible.<br><br>Overall, the consequence of temporary, localised changes in air quality may result in short-term, sublethal effects to a small number of transient marine avifauna individuals and is therefore considered Insignificant (F). | |
| Identify existing design and safeguards/controls measures | |

- MODUs and vessels will comply with the air emission requirements of Marine Order 97 (as applicable to vessel and engine size, type and class) including sulfur content of fuel oil
- MODUs and vessels (as applicable to vessel, engine/propulsion size, type and class) will comply with energy efficiency requirements of Marine Order 97
- MODUs and vessels (as applicable to vessel and engine size, type and class) will comply with ODS requirements of Marine Order 97
- Measurement and monitoring of emissions data to enable legislative reporting requirements under the NGER Act to be met for the petroleum activity.

| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
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| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | Eliminate the use of MODU/vessels. | No | The use of MODU/vessels to undertake the activity cannot be eliminated. |
| | No flaring during well flow back operations. | No | Given the expected gas flow rates resulting during well flow back operations, there is no other mechanism for the safe disposal of gas on the MODU other than flaring. The gas could be disposed by venting; however, this is considered to have a higher environmental impact than flaring with respect to GHG emissions. |
| Substitution | Replace any ODS systems. | No | In accordance with MARPOL Regulation 12, no CFC or halon containing system or equipment is permitted to be installed on ships constructed on or after 19 May 2005 and no new installation of the same is permitted on or after that date on existing ships. Similarly, no HCFC containing system or equipment is permitted to be installed on ships constructed on or after 1 January 2020 and no new installation of the same is permitted on or after that date on existing ships.<br><br>Therefore, only older vessels are considered to potentially have ODS systems installed as confirmed on the IAPP certificate. The costs to retrofit ODS equipment and replace systems are not considered to be warranted given they are being phased out in accordance with MARPOL and it may restrict MODU/vessel selection and availability in the short term. |

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| | Select a moored MODU, rather than a DP MODU or drillship, based on fuel consumption and potential for emissions reduction. | No | INPEXs MODU selection criteria prioritises technical capability considering drilling location water depth, top drive and mud pump capacity. When considering mooring, capability for demobilisation in extreme weather events is also a consideration. Regional market availability may limit the ability to contract a suitable MODU based on its mooring system. The MODU may be a moored or DP semi-submersible or alternatively a drillship (DP). |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | Preventative maintenance system. | Yes | MODU/vessel contractors have a preventative maintenance system in place to ensure diesel powered, power generation equipment is maintained and operated within original equipment manufacturers' (OEM) specification. The implementation of this control will result in greater energy efficiency and therefore contribute to a reduction in emissions associated with the petroleum activity. |
| | Implement International Finance Corporation (IFC) Environment, Health and Safety (EHS) Guidelines – Offshore Oil and Gas Development (2015) applicable for flaring activities. | Yes | INPEX will verify that the MODU contractor will comply with IFC EHS guidelines with respect to maximising flaring efficiency and thereby reducing potential atmospheric emissions associated with flaring during well flow back operations. The implementation of this control will contribute to a reduction in emissions associated with the petroleum activity. |
| | Well flow back procedure (well test package) implemented for flaring operations. | Yes | This procedure includes a continuous 24/7 flare watch to observe and monitor flaring operations and function testing of ignition and pilot systems to ensure burning efficiency thereby reducing potential atmospheric emissions. Function testing of continuous ignition system and pilot system is also covered by the procedure. |
| | NOPSEMA accepted WOMP and accepted MODU safety case and safety case revision includes aspects relevant to controls in place to minimise gas venting in the event of a well-kick. | Yes | INPEX and MODU contractor will comply with the regulatory requirements of the OPGGS (Resource Management and Administration) Regulations 2011 (Cwlth) and the OPGGS (Safety) Regulations 2009 by ensuring the drilling activity is carried out in accordance with the accepted WOMP and safety case. |

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| | MODU contractor Well Control Manual will cover all aspects of primary and secondary well control for drilling operations that includes aspects relevant to controls in place to minimise gas venting in the event of a well-kick. | Yes | INPEX will ensure the Well Control Bridging Document aligns requirements of the contractor's Well Control Manual with the requirements of the INPEX Well Integrity Standard and INPEX Well Operations Standard. This will ensure that in the event of a requirement to vent gas (e.g. from a well-kick), the influx volume can be minimised and therefore reduce the overall volume of gas vented to atmosphere. |
| | INPEX Australia will support relevant and appropriate contractor emissions reduction programs so contractors can identify and implement areas where they can reduce their emissions. | Yes | INPEX Australia supports the implementation of contractor emissions reduction programs by working with relevant contractors and suppliers to establish a GHG emissions baseline position and to review appropriate opportunities that when implemented will reduce emissions produced in relation to activities undertaken in service to INPEX.<br><br>To reduce the carbon footprint of its supply chain during the invitation to tender phase for the selection of contractors, INPEX Australia requests that tenderers provide details that may include:<br>• estimated GHG emission volume per annum for the scope of the contract<br>• details on GHG emissions management procedures (e.g. fuel monitoring equipment and reporting)<br>• initiatives in place to reduce its carbon footprint and evidence of reduction achieved.<br><br>During the tender evaluation process, GHG emissions reduction is one of a number of review criteria forming part of the technical evaluation matrix and is integrated into the overall sourcing strategy. However, INPEX notes that ultimately MODU/vessel selection needs to factor in many other technical aspects and GHG emissions reduction performance alone may not be the primary deciding factor. |
| Identify the likelihood | | | |

The likelihood of marine avifauna approaching and/or resting on exhaust vents on the vessel during the activity and remaining in close enough proximity to be exposed to concentrations of air pollutants that result in symptoms such as irritation of eyes and respiratory tissues and breathing difficulties is considered Unlikely. Marine avifauna that may pass by near the MODU and vessels during the activity are unlikely to be in close enough proximity to be exposed to the emissions sources and are therefore unlikely to have any discernible symptoms. It is considered likely that they would move away from any emissions sources if they began to experience discomfort or symptoms. No marine avifauna BIAs overlap WA-50-L.

Given the presence of alternative resting/foraging habitat (Browse Island) and with the control measures described above in place, the potential for changes to air quality and associated impacts to marine avifauna are reduced. Therefore, the likelihood of the described consequences to marine avifauna occurring is considered Unlikely (4).

Residual risk summary

Based on a consequence of Insignificant (F) and a likelihood of Unlikely (4) the residual risk is Low (9).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Unlikely (4) | Low (9) |

Assess residual risk acceptability

Legislative requirements

The activities and proposed management measures are compliant with industry standards, relevant international conventions and Australian legislation, specifically AMSA Marine Order 97: Marine Pollution Prevention – Air Pollution, the POTS Act, the *Navigation Act* 2012, and MARPOL, Annex VI. The above controls are aligned to the IFC EHS Guidelines – Offshore Oil and Gas Development (2015) with respect to flaring.

Emissions, energy consumption and energy production data will be reported annually to the Clean Energy Regulator by MODU/vessel contractors in accordance with NGER requirements. The Paris Agreement provides the international framework and context around Australia's NDC (43% below 2005 levels by 2030) and the long-term aspirational goal of net zero emissions by 2050.

Relevant person consultation

No specific concerns have been raised regarding potential impacts and risks associated with atmospheric emissions in WA-50-L.

Conservation management plans / threat abatement plans

Several conservation management plans have been considered in the development of this EP (refer Appendix B). None of the recovery plans or conservation advice documents have specific threats relating to atmospheric emissions from MODUs and vessels operating offshore. However, many of the recovery plans or conservation advices identify climate change as an emerging threat to protected species with research priorities and actions identified to obtain a greater understanding of the impacts of climate change. Other actions are predominantly focused on Australia's international commitments regarding NDC, to reduce GHG emissions.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| Planned emissions and discharges from MODU and vessels undertaking the petroleum activity are in accordance with MARPOL requirements and industry good practice. | MODU and vessels pre-mobilisation audits undertaken by a registered organisation confirm that marine diesel engines on board MODUs and vessels >400 GT meet the requirements of Marine Order 97, (as applicable to the vessel, engine/propulsion size, type and class). | EIAPP certificate<br>IAPP certificate<br>Bunker delivery notes<br>IMO type approval for waste incinerators where installed<br>Training records for personnel responsible for operating waste incinerators<br>IEE certificate<br>SEEMP |

| | | |
|---|---|---|
| | Fuel oil and marine diesel with 0.5% m/m sulfur content will be used. | INPEX fuel specification records confirm that fuel provided to the facility and vessels has 0.5% m/m sulfur content |
| | Where present equipment or systems on board MODUs or vessels >400 GT which contain ODS will be recorded and managed in accordance with MARPOL, Annex VI, Regulation 12 (as appropriate to vessel size, type and class. | ODS Record book. |
| | MODU and vessel contractor has a preventative maintenance system to ensure diesel powered, power generation equipment is maintained and operated within OEM specification. | Preventative maintenance system records. |
| | INPEX and the MODU contractor will comply with IFC EHS guidelines relating to flaring, specifically:<br>• maintenance program to ensure maximum flare efficiency<br>• use of a reliable pilot ignition system<br>• minimum volume of hydrocarbons required for well flow back to be flared and durations reduced to the extent practical. | Well flow back records and pre-flow checklist. |
| | Well flow back procedure (well test package) implemented including:<br>• continuous (24/7) flare watch during flaring operations<br>• function testing of continuous ignition system and pilot system. | Pre-flow checklist. |

| | | |
|---|---|---|
| | INPEX and the MODU contractor will comply with the requirements of the OPGGS (Resource Management and Administration) Regulations 2011 (Cwlth) and the Offshore Petroleum and Greenhouse Gas Storage (Safety) Regulations 2009, including:<br>• NOPSEMA accepted WOMP<br>• preparation and acceptance of the MODU Safety Case and Safety Case Revision. | WOMP approval received from NOPSEMA.<br>MODU Safety Case acceptance received from NOPSEMA. |
| | INPEX will verify that the MODU contractor complies with the requirements of the approved Well Control Bridging Document which aligns requirements (and clarifies if conflicts exist, which standard takes precedence) between the Contractor Well Control Manual, and INPEX policies and standards including INPEX Well Integrity Standard (0000-AD-STD-60003), Well Operations Standard (0000-AD-STD-60004) and Well Operations Manual (0000-AD-MAN-60002), which covers primary and secondary well control for drilling operations, including:<br>• planned mud weight overbalance to stop ingress potential (i.e. inflow of formation fluids) into the well.<br>• leak off or limit testing to confirm that the formation has sufficient strength for planned mud weight with adequate kick tolerance.<br>• two independent well barriers in place at all times and tested in situ to ensure the system is capable of holding pressure in the well-bore or annulus. | Summary of compliance with primary and secondary well control in the Well Integrity Standard (0000-AD-STD-60003); Well Operations Standard (0000-AD-STD-60004) and Well Operations Manual (0000-AD-MAN-60002) reported in the daily drilling report. |
| INPEX Australia will work with its contractors and suppliers to support the reduction of GHG emissions. | The selection of contractors and suppliers by INPEX Australia will consider GHG emissions reduction performance and opportunities to further reduce GHG emissions associated with the activity. | INPEX Australia tender technical evaluation matrix. |

| | | |
|---|---|---|
| | INPEX will provide emissions data to MODU/vessel contractors to enable legislative reporting requirements under the NGER Act to be met for the petroleum activity. | Data provided to MODU/vessel contractors to enable NGER reporting to the Clean Energy Regulator. |

### 7.1.3 Routine discharges to sea

#### Sewage, grey water and food waste

**Table 7-3: Impact and evaluation –MODU and vessels sewage, grey water and food waste discharges**

| Identify hazards and threats | |
|---|---|
| Discharging treated sewage effluent, grey water and food waste has the potential to expose planktonic communities to changes in water quality from the introduction of nutrients. Such a decline in water quality has the potential to result in reduced ecosystem productivity or diversity. These intermittent discharges will occur in WA-50-L, which is located in the open ocean and more than 12 nm from the nearest land.<br><br>The average volume of sewage and greywater expected from the MODU and vessels (including domestic wastewater) generated by a person per day is approximately 230 L (based on calculations in Huhta et al 2009), therefore based on the maximum personnel on board (POB) of up to 180 on the MODU would equate to approximately 41 $m^3$ per day. | |
| Potential consequence | Severity |
| The particular values and sensitivities identified as having the potential to be impacted by sewage, grey water and food waste discharges are:<br>• planktonic communities.<br><br>A study undertaken to assess the effects of nutrient enrichment from the discharge of sewage in the ocean found that the influence of nutrients in open marine areas is much less significant than that experienced in enclosed, poorly mixed water bodies. The study also found that zooplankton composition and distribution in areas associated with sewage dumping grounds were not affected (McIntyre & Johnston 1975).<br><br>When sewage effluent, grey water and food waste is discharged there is the potential for localised and temporary, changes in water quality within WA-50-L. The potential consequence on planktonic communities is a localised impact on plankton abundance in the vicinity of the point of discharge. If concurrent drilling operations were to occur, sewage effluent, grey water and food waste discharge plumes associated with the MODU and support vessels would not overlap based on the distance (minimum distance of 3 km) maintained between operating MODUs in WA-50-L. Therefore, no cumulative impacts to planktonic communities from such discharges are expected. Given the deep water (approximately 250 m) location, oceanic currents will result in the rapid dilution and dispersion of these discharges. Therefore, the consequence is considered to be of inconsequential ecological significance (Insignificant F). | Insignificant (F) |
| Identify existing design and safeguards/controls measures | |
| • MODU and vessels will manage the discharge of sewage effluent and grey water in accordance with Marine Order 96 (as appropriate to class)<br>• MODUs will be equipped with an approved sewage treatment plant (STP) compliant with Marine Order 96 | |

- MODUs and vessels will manage the discharge of garbage in accordance with Marine Order 95 (as appropriate to class)
- MODUs and vessels will macerate food waste to a particle size of <25 mm before disposal.

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Eliminate discharges from the MODU and vessels by storing of sewage, grey water and food waste on board and shipping to the mainland for disposal. | No | The significant financial cost and health risks associated with storing sewage, grey water and food waste on board the MODU and vessels, and transporting it to the mainland is grossly disproportionate to the low level of risk associated with this discharge, permitted under legislation. Additional environmental impacts would also be generated in terms of air emissions and onshore disposal. In the event that food waste cannot be macerated it will be transferred for onshore disposal. No unmacerated food waste will be disposed at sea. |
| Substitution | None identified | N/A | N/A |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | Preventative maintenance system | Yes | MODU and vessel contractors will have a preventative maintenance system in place to ensure sewage treatment plant (STP) and macerator equipment is maintained and operated within OEM specification. |

Identify the likelihood

Sewage and garbage discharges from the MODU and vessels will be in accordance with legislative requirements (Marine Orders 95 and 96). Maceration of sewage and food waste to a particle size <25 mm prior to disposal will increase the ability of the discharges to disperse rapidly.

The effects of sewage discharged to the ocean have been relatively well studied (Gray et al. 1992; Weis et al. 1989) and toxic effects generally only occur where high volumes are discharged into small and poorly mixed waterbodies. The volumes discharged within the licence area are unlikely to cause toxic effects, especially considering the rapid dilution provided by the deep water and ocean currents.

Based on the expected high dispersion due to the open-ocean environment of WA-50-L, localised impacts to plankton at the point of the planned discharge are considered to be Unlikely (4).

Residual risk summary

Based on a consequence of Insignificant (F) and a likelihood of Unlikely (4) the residual risk is Low (9).

| Consequence | Likelihood | Residual risk |
|---|---|---|

| | | |
|---|---|---|
| Insignificant (F) | Unlikely (4) | Low (9) |
| Assess residual risk acceptability | | |
| Legislative requirements<br><br>Sewage, grey water and food waste discharges are standard practice in the offshore environment and the disposal at sea is permitted under AMSA (2013) Marine Orders – Part 96: Marine Pollution Prevention – Sewage, which gives effect to MARPOL, Annex IV and Marine Orders – Part 95: Marine Pollution Prevention – Garbage, which gives effect to MARPOL, Annex V.<br><br>Relevant person consultation<br><br>No relevant person concerns have been raised regarding potential impacts and risks from planned discharges (sewage, grey water and food waste).<br><br>Conservation management plans / threat abatement plans<br><br>Several conservation management plans have been consulted in the development of this EP (refer Appendix B). Emissions and discharges are listed as threatening processes; however, none of the recovery plans or conservation advice documents has specific actions relating to discharges of sewage, grey water and food waste. The macerators will assist in reducing potential impacts from the discharge stream, consistent with the intent of the conservation management documents.<br><br>ALARP summary<br><br>Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.<br><br>Acceptability summary<br><br>Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:<br>• the activity demonstrates compliance with legislative requirements/industry standards<br>• the activity takes into account relevant person feedback<br>• the activity is managed in a manner that is consistent with the intent of conservation management documents<br>• the activity does not compromise the relevant principles of ESD<br>• the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
| Planned emissions and discharges from MODU and vessels | Comply with Marine Order 96 including: | ISPPC |

| | | |
|---|---|---|
| undertaking the petroleum activity are in accordance with MARPOL requirements and industry good practice. | • Current ISPPC. | |
| | Comply with Marine Order 95 including:<br>• Garbage that has been ground or comminuted to particles <25 mm discharged >3 nm from the nearest land.<br>• Garbage disposal record book maintained. | Garbage disposal record book |
| | MODU contractor has a preventative maintenance system to ensure STP is maintained. | Preventative maintenance system records. |

### Deck drainage, bilge, PW and firefighting foam

**Table 7-4: Impact and evaluation – MODU and vessels deck drainage, bilge, PW and firefighting foam discharges**

| Identify hazards and threats | |
|---|---|
| Contaminated deck drainage and bilge discharges or failure to treat oily water to suitable OIW concentrations before discharge, have the potential to expose marine fauna to changes in water quality and/or result in impacts through direct toxicity. Deck drainage discharge volumes on the MODU and vessels will be intermittent and are dependent on weather conditions and frequency of deck washing. Volumes of bilge water from engines and other mechanical sources found throughout the machinery spaces will also vary over time.<br><br>In general, the capacities of oil-water separators (OWS) on vessels range from 100–1000 litres per hour. Therefore, conservatively based on maximum rates, each vessel present in the licence area could potentially discharge 1 $m^3$ per hour.<br><br>During well flow back operations, reservoir fluids (hydrocarbons and PW) are sent to the flare resulting in atmospheric emissions. In the event PW cannot be sent to the flare due to poor burn and potential drop out, it is separated and treated prior to overboard discharge.<br><br>The MODU and vessels are equipped with firefighting foam that is a safety critical requirement. Currently, foam systems supply either 3% alcohol resistant aqueous film-forming foam (AR-AFFF) and 3% film forming fluoroprotein foam (FFFP) or polyfluoroalkyl substances (PFAS) - free firefighting foam variant concentrates which will be used in the event of an incident. During an incident two systems onboard the MODU may be used to provide firefighting foam deployment namely, via helideck monitors and mobile units for deck and general use. For the helideck monitors, foam released will be routed to the open-drains system for discharge to sea. For mobile units, any foam released will be routed to deck drains for overboard discharge.<br><br>Routine testing and maintenance/repairs of firefighting foam systems may occur when the MODU is in WA-50-L. During any testing or maintenance/repairs of the firefighting foam systems, no foam containing per-and polyfluoroalkyl substances (PFAS) will be discharged to sea as helideck drains will be routed to an isolated containment tank to capture and contain foams for onshore disposal. | |
| Potential consequence | Severity |
| The particular values and sensitivities identified as having the potential to be impacted by deck drainage and bilge are:<br>• EPBC listed species<br>• planktonic communities<br>• fish (demersal fish communities KEF and commercial species). | Insignificant (F) |

| | |
|---|---|
| Discharges of oily water will be treated to <15 ppm (v) in accordance with MARPOL requirements. Temporary PW discharge during well flow back operations may be required due to the poor burn quality observed during flaring. PW will be treated using a PW filtration system to an OIW concentration of <30 ppm prior to discharge to the marine environment. These discharges could introduce hazardous substances (mixture of water, oily fluids, lubricants, cleaning fluids etc.) into the water column, albeit in low concentrations. This could result in a reduction in water quality, and impacts to transient, EPBC-listed species, plankton and other pelagic organisms such as fish species (demersal fish community KEF or those species targeted by commercial fisheries).<br><br>Given the highly mobile and transient nature of marine fauna and the absence of any known BIAs in the licence area, the potential exposure is likely to be limited to individuals close to the discharge point at the time of the discharge. The closest BIA to WA-50-L relates to the 20 km green turtle internesting buffer at Browse Island (26 km away at the closest point). Additionally, a whale shark foraging BIA is located approximately 10 km south-east from the licence area at its closest point (Figure 4-6); however, based on the levels of whale shark abundance observed in numerous studies (as described in Section 4.7.4), the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration.<br><br>Worst case impacts to exposed marine fauna may include direct toxic effects, such as damage to lungs and airways, and eye and skin lesions from exposure to oil at the sea surface (Gubbay & Earll 2000). Considering the low concentrations of oil and the location of the discharges in the dispersive open ocean environment, a surface expression is not anticipated; therefore, impacts are considered to be of inconsequential ecological significance to transient, EPBC listed species and are therefore considered Insignificant (F).<br><br>Planktonic communities in close proximity to the discharge point may be affected if exposed to oily water. Such exposure may result in lethal effects to plankton. The potential consequence on planktonic communities is a localised impact on plankton abundance in the vicinity of the point of discharge with inconsequential ecological significance (Insignificant F).<br><br>There is the potential for individual fishes to be exposed to the oily water discharge; however, this would be limited to those fish present at the sea surface in close proximity to the discharge point, rather than those associated with the demersal fish community KEF. Such exposure is not expected to result in any significant impacts to fishes based on the low toxicity, low volume and high dilution levels of the discharge; in addition, fishes are highly mobile in nature and have the ability to move away. The potential consequence on the demersal fish community KEF or commercially targeted fish species will be short-term and highly localised with inconsequential ecological significance (Insignificant F).<br><br>Toxicological effects from foams are associated with frequent or prolonged exposures, and any discharges during the activity will be as a result of an incident or infrequent maintenance/regulatory testing and are expected to rapidly disperse. Subsequently, it is not expected that any impacts will occur to EPBC-listed species or fish. It is also expected that effects on planktonic communities, if any, would be localised and of a short-term nature (Insignificant F). Additionally, the potential consequences are also considered to be countered by the net environmental benefit that would be achieved through mitigating the potential for a fire resulting in harm to people and the environment. | |

| | |
|---|---|
| If concurrent drilling operations were to occur, deck drainage, bilge, PW and firefighting foam discharges associated with the MODU and support vessels are not expected to overlap based on the minimum distance between operating MODUs (3 km). Therefore, no cumulative impacts to EPBC listed species, planktonic or fish communities from such discharges are expected. | |

Identify existing design and safeguards/controls measures

- MODU and vessels are equipped with OWS, which remove traces of oil from the bilge and drainage water prior to discharge to sea.
- MODU and vessels will have equipment to ensure OIW discharges meet <15 ppm in accordance with Marine Order 91. Bilge water and wastewater that does not meet the discharge requirements will be retained onboard for controlled disposal at a port reception facility.
- Spill kits will be available on-board MODU and vessels.
- Vessel crew will receive an induction/training to inform them of deck spill response requirements in accordance with Table 9-3.
- INPEX chemical, assessment and approval procedure for selection of rig wash and firefighting foam in accordance with Section 9.6.1 and Table 9-5.
- Well test packages used during well flow back operations will include equipment to separate PW from the reservoir fluid and treat to <30 ppm prior to discharge.

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | No discharges of contaminated deck drainage or bilge to sea. | No | Discharge of deck drainage, stormwater runoff, or bilge discharges cannot be eliminated from the MODU or vessels. There is not sufficient space on board for storage, and onshore disposal is not practicable given the distance to the mainland (24-hour transit time to the closest port facility). Further, the associated emissions and discharges associated with such frequent transfers would have a negative impact. Discharges of OIW are permitted under legislation. |
| | No discharge of PW to sea. | No | Reservoir fluids (hydrocarbons and PW) are sent to the flare; however, for wells with poor quality burn this may result in hydrocarbon drop out. To mitigate this risk, PW will be separated and treated for overboard discharge. |

| | | | |
|---|---|---|---|
| | Storage and backload of PW to avoid discharge to sea. | No | MODU safety case requirements and personnel safety considerations do not permit for PW to be returned to the MODU mud pits for temporary storage. |
| | No discharge of PFAS containing firefighting foams to sea during an incident. | No | Firefighting foams are safety critical and are required in the event of a fire to prevent potential loss of human life or the occurrence of a significant environmental incident. By 1 January 2026, the changeout to PFAS-free firefighting foams will be implemented. It cannot be guaranteed that PFAS-free firefighting foams will be available for use prior to this date. |
| Substitution | Use of alternative firefighting foams | Yes | The maintenance of Safety Critical Systems is the responsibility of the MODU contractor and INPEX has limited control of the equipment used. However, it is expected that by 1 January 2026 all MODUs and vessels will transition to only having PFAS-free firefighting foams onboard. It cannot be guaranteed that PFAS-free firefighting foams will be available for use prior to this date. |
| Engineering | Treatment of PW to <15 ppm OIW | No | Industry standard for PW discharge is currently <30 ppm OIW. Treatment via any MODU OIW separator equipment is not permitted under the MODU safety case. Available deck space for additional filtration equipment is limited. |
| Procedures & administration | MODU/vessel contractors will implement specific procedures to reduce the potential for deck spills reaching the sea. | Yes | To reduce potential for deck spills entering the marine environment contractors will ensure deck drainage systems are in place and maintained. This includes implementation of maintenance procedures and the use of plugs/scuppers, etc. |
| Identify the likelihood | | | |
| Deck drainage and bilge discharges are treated to a maximum concentration of 15 ppm (v) OIW prior to discharge as specified in MARPOL, Annex 1. PW is treated by a PW filtration system to a concentration of <30 ppm OIW prior to discharge. Impacts to the abundance of plankton in the vicinity of the discharge (oily water and firefighting foam) are not expected and are considered Unlikely (4) and will be ecologically insignificant based on the naturally high spatial and temporal variability of plankton distribution in Australian tropical waters. | | | |

Given the mobile nature of fish and EPBC-listed species, including the absence of any known BIAs in the licence area, the likelihood of impacts from the discharges after treatment and subsequent dilution and dispersion is considered Unlikely (4) and is not expected to result in a threat to population viability of protected species.

Residual risk summary

Based on a consequence of Insignificant (F) and a worst-case likelihood of Unlikely (4) the residual risk is Low (9).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Unlikely (4) | Low (9) |

Assess residual risk acceptability

Legislative requirements

MODU and vessels OWS meet relevant international regulatory requirements, including MARPOL; Marine Order 91: Marine Pollution Prevention - Oil. For MODU and vessel bilge the discharge of OIW of <15 ppm (v) is permitted under MARPOL. Discharge of treated PW (<30 ppm) is standard industry practice. Although the previous regulations regarding OIW concentrations have been withdrawn. This limit aligns with other countries, including the USA and those covered by OSPAR (North-East Atlantic). There are no other relevant Australian environmental legislative requirements that relate specifically to the discharge of PW. From 1 January 2026, PFAS containing firefighting foams will be prohibited in accordance with IMO requirements.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from deck drainage, bilge, PW or firefighting foam discharges.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B). Emissions and discharges are listed as threatening processes; however, none of the recovery plans or conservation advice documents has specific actions relating to deck drainage/bilge/PW/firefighting foam discharges. Managing oily water discharges in accordance with legislative requirements is consistent with the intent of the conservation management documents.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as "low", the consequence does not exceed "C – significant" and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| Planned emissions and discharges from MODU and vessels undertaking the petroleum activity are in accordance with MARPOL requirements and industry good practice. | MODU and vessel contractors will comply with the *Navigation Act 2012* – Marine Order 91 including:<br>• MODUs and vessels (of appropriate class) to have IOPP certificate to show they have passed structural, equipment, systems, fittings, and arrangement and material conditions.<br>• OWS tested and approved as per IMO resolutions MARPOL (Annex I). | Record of current IOPP certificate.<br>Calibration and maintenance records of the OWS. |
| | MODU and vessel liquids from drains will only be discharged if the OIW content does not exceed 15 ppm. | Documented use of oil record book to record all oil disposal. |
| | MODU/vessel contractors will manage deck drainage systems including:<br>• facility for plugging or closing of outboard drains.<br>• inboard drains routed to oil water separator units, as required.<br>• maintain MODU drainage systems to restrict leakages and small spills overboard. | Deck drainage plans confirm inboard/outboard drainage<br>Documentation of operational status of MODU deck drainage systems |

| | | |
|---|---|---|
| | Where AFFF or PFFF foams exist on MODU / vessels, changeout for PFAS-free foams will be implemented by 1 January 2026. Where required for testing and/or maintenance, any PFAS containing firefighting foams used will be captured onboard the MODU and not disposed overboard. | Records of PFAS-free foams used on MODU / Vessels.<br>Testing/maintenance records confirm firefighting foam was captured onboard and not discharged to sea. |
| | Spill kits will be located on MODU and vessels to allow clean-up of any spills to the deck. | Inspection records confirm spill kits are available and stocked. |
| Zero discharges of untreated PW to the marine environment. | PW discharged to the marine environment will achieve an OIW concentration of <30 ppm. | Records demonstrate that PW has met discharge specification. |

## Cooling water

**Table 7-5: Impact and evaluation – MODU and vessels cooling water discharges**

| Identify hazards and threats | |
|---|---|
| Sea water will be used as a heat exchange medium for the cooling of machinery engines on the MODU and vessels. It is pumped aboard and may be treated with biocide (e.g. hypochlorite) before circulation through heat exchangers. It is subsequently discharged from the MODU/vessels to the sea surface. Cooling water (CW) discharges to the marine environment will result in a localised and temporary increase in the ambient water temperature surrounding the discharge point. Elevated discharge temperatures may cause a variety of effects, including marine fauna behavioural changes and reduced ecosystem productivity or diversity through impacts to planktonic communities.<br><br>CW discharge rates vary largely depending on the vessel type. However, as a worst-case, the rate of CW discharge from the MODU during drilling is estimated to be approximately 10,000 – 20,000 $m^3$ per day on a continuous basis. The temperature of the CW discharge will be approximately 40 °C, in contrast to ambient surface-water temperatures of 26 °C to 30 °C as recorded in the Ichthys Field (Section 4.6.4). | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by cooling water discharges are:<br>• EPBC listed species<br>• planktonic communities.<br><br>Effects of elevation in seawater temperature may include a range of behavioural responses in transient, EPBC-listed species including attraction and avoidance behaviour. There are no known BIAs or aggregation areas that would result in sedentary behaviour in WA-50-L, and EPBC listed species with the potential to be present in the licence area (within close enough proximity to the discharge to be affected) are considered to be transient in nature (Section 4.7.4). The closest BIA to WA-50-L relates to the 20 km green turtle internesting buffer at Browse Island (26 km away) between November and March. Additionally, a whale shark foraging BIA is located approximately 10 km south-east from the licence area at its closest point; however, based on the levels of whale shark abundance observed in numerous studies (as described in Section 4.7.4; Figure 4-6), the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration. The activity will occur in a water depth of approximately 250 m in a dispersive, high current environment. Therefore, potential consequences to transient, EPBC listed species are potentially localised avoidance of thermally elevated water temperatures, with an inconsequential ecological significance to protected species (Insignificant F).<br><br>Elevated seawater temperatures are known to cause alterations to the physiological (especially enzyme-mediated) processes of exposed biota (Wolanski 1994). These alterations may cause a variety of effects and potentially even mortality of plankton in cases of prolonged exposure. In view of the high level of natural mortality and the rapid replacement rate of many plankton species, UNEP (1985) indicates that there is no evidence to suggest that lethal effects to plankton from thermal discharges are ecologically significant. The potential consequence on planktonic communities is a localised impact on plankton abundance in the vicinity of the point of discharge with inconsequential ecological significance (Insignificant F). | Insignificant (F) |

| | |
|---|---|
| The use of biocide (hypochlorite) for the control of biofouling in considered an established and efficient technology for use in offshore environments and is used throughout the world (Khalanski 2002). The effects of chlorination on the marine environment have been summarised by Taylor (2006) who, based on a review of applications using hypochlorite as an antifoulant for the seawater cooling circuits, concluded that:<br>• the chlorination procedure itself does cause the mortality of a proportion of planktonic organisms and the smaller organisms entrained through a cooling water system; however, only in very rare instances, where dilution and dispersion were constrained, were there any impacts beyond the point of discharge<br>• long term exposure to chlorination residues on fish species did not impose any apparent ecotoxicological stress<br>• studies of the impact of chlorination by-products on marine communities, population, physiological, metabolic and genetic levels, indicate that the practice of low-level chlorination on coastal receiving water is minor in ecotoxicological terms.<br>These findings indicate that the toxicity of the CW discharge is negligible at the point of discharge, therefore impacts from CW discharges are limited to thermal effects only.<br>If concurrent drilling operations were to occur, cooling water discharge plumes associated with the MODUs and support vessels are not expected to overlap based on the minimum distance between operating MODUs (3 km). Therefore, no cumulative impacts to EPBC listed species or planktonic communities from such discharges are expected. | |

| Identify existing design and safeguards/controls measures |
|---|
| None identified |

| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
|---|---|---|---|
| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | No discharges of CW to sea | No | Engines and machinery require cooling to operate safely and efficiently, therefore CW cannot be eliminated. Storage and containment of CW to allow cooling on board the MODU and vessels prior to discharge is not considered practicable given the size/space requirements (i.e. large surface areas are required to sufficiently cool the water). Onshore disposal was also not considered practicable given the distance to the mainland, frequency of trips required, and the associated emissions and discharges generated by such transfers. |

| | | | |
|---|---|---|---|
| Substitution | Substitute hypochlorite with an alternative biofouling control/mechanism. | No | Hypochlorite is an established and efficient technology for use in offshore environments and is a recommended technique in the application of best available techniques (BAT) to industrial cooling systems (European Commission 2001). The retrofitting of alternative biofouling control mechanisms to all MODU/vessels is not considered to be practicable given the low environmental impact from cooling water discharges. |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | None identified | N/A | N/A |

Identify the likelihood

CW discharges are expected to rapidly disperse in the open-ocean environment of WA-50-L. These discharges may result in temporary, localised and ecologically insignificant avoidance behaviour in transient, EPBC-listed species in response to elevated water temperatures. However, any avoidance or behavioural changes are not expected to result in a threat to the population viability of protected species and is considered to be Unlikely (4).

Localised impacts to the abundance of plankton within the vicinity of the CW discharges are considered to be Unlikely (4) based on the naturally high spatial and temporal variability of plankton distribution in Australian tropical waters.

Residual risk summary

Based on a consequence of Insignificant (F) and a worst-case likelihood of Unlikely (4) the residual risk is Low (9).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Unlikely (4) | Low (9) |

Assess residual risk acceptability

Legislative requirements

The discharge of return seawater from cooling water systems to the marine environment is considered to be standard practice in industry and there are no relevant Australian environmental legislative requirements that relate specifically to the discharge specifications of cooling water. IFC EHS Guidelines – Offshore Oil and Gas Development (2015) state that cooling water discharges should be no more than 3 °C above the ambient seawater temperature at 100 m from the discharge point. CW discharge modelling for the Ichthys offshore facility also located in WA-50-L, predicted a maximum 1.6 ºC at 100 m from discharge point (this is based on higher discharge temperatures and greater discharge rates than would apply to a MODU/vessels undertaking the proposed drilling activity).

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from CW discharges.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B), none of the recovery plans or conservation advice documents have specific threats or actions relating to discharges of cooling water in remote offshore waters.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls have been identified that can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the risk of impacts is managed to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| N/A no controls identified | | |

## Desalination brine

**Table 7-6: Impact and evaluation – MODU and vessels desalination brine discharges**

| Identify hazards and threats | |
|---|---|
| Potable water will be generated on the MODU and vessels using a RO plant which is supplied with sea water. Potable water is primarily supplied to the MODU and vessel accommodation and domestic services areas. It is also supplied for other purposes such as the eyewash and safety shower systems and utilities water systems. Desalination brine produced from the RO process will be discharged to sea on a continuous basis.<br><br>Discharging desalination brine has the potential to cause changes in water salinity. The estimated volume of brine discharge for the vessels and MODU is estimated to be in the order of 60 - 140 $m^3$ per day with salinity in the order of 45 to 50 parts per thousand (ppt) in comparison to ambient seawater with a salinity of 34 to 35 ppt (Section 4.6.4). | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by desalination brine discharges are:<br>• planktonic communities.<br><br>The discharge of desalination brine from the MODU/vessels has the potential to result in increased salinity within the receiving environment. Exposure to increased levels of salinity has the potential to result in impacts to planktonic communities. Azis et al. (2003) reported that effects on planktonic communities in areas of high mixing and dispersion, such as those found in the licence area, are generally limited to the point of discharge only.<br><br>Given the water depths in WA-50-L (approximately 250 m) and the dynamic marine environment (i.e. tides and currents) it is expected that the brine discharge would rapidly disperse relatively close to the point of discharge. Therefore, the effects of a temporary and highly localised increase in salinity are not expected to result in any significant ecological impacts to planktonic communities (Insignificant F).<br><br>If concurrent drilling operations were to occur, desalination brine discharge plumes associated with the MODUs and support vessels are not expected to overlap based on the minimum distance between operating MODUs (3 km). Therefore, no cumulative impacts to planktonic communities from such discharges are expected. | Insignificant (F) |
| Identify existing design and safeguards/controls measures | |
| None identified | |
| Propose additional safeguards/control measures (ALARP Evaluation) | |

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Eliminate brine discharges from MODU and vessels. | No | The significant financial cost and health risks associated with providing fresh water to the MODU/vessels from the mainland via vessel transfer or transiting directly to port for resupply is grossly disproportionate to the low level of risk associated with this discharge. This would also generate additional environmental impacts in terms of air emissions and increased demands to the onshore supply. |
| Substitution | None identified | N/A | N/A |
| Engineering | Use of a diffuser on MODU/vessels to increase mixing in the receiving environment. | No | Given the water depth and oceanic currents in WA-50-L and the small volumes of discharges, retrospective installation of a diffuser on all MODU/vessels is not considered practicable, given the insignificant consequence from brine discharges. |
| Procedures & administration | None identified | N/A | N/A |
| Identify the likelihood | | | |
| Direct effects on plankton from desalination brine discharges may occur in WA-50-L near the point of discharge but are not expected to result in an ecological impact to planktonic communities in the wider region. Therefore, the likelihood of impact to planktonic communities from these planned discharges is considered Highly Unlikely (5). | | | |
| Residual risk summary | | | |
| Based on a consequence of Insignificant (F) and a likelihood of Highly Unlikely (5) the residual risk is Low (10). | | | |
| Consequence | Likelihood | Residual risk | |
| Insignificant (F) | Highly Unlikely (5) | Low (10) | |
| Assess residual risk acceptability | | | |

Legislative requirements

The discharge of desalination brine to the marine environment is considered to be standard practice in industry and there are no relevant Australian environmental legislative requirements that relate specifically to the discharge of desalination brine.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from desalination brine discharges.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B), none of the recovery plans or conservation advice documents have specific threats or actions relating to discharges of desalination brine in remote offshore waters.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls have been identified that can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the risk of impacts is managed to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| N/A no controls identified | | |

## Drilling fluids, well completion fluids and drill cuttings

**Table 7-7: Impact and evaluation – discharges of drill fluids, well completion fluids and drill cuttings**

| Identify hazards and threats | |
|---|---|
| During drilling operations, drill cuttings consisting of crushed rock fragments are generated. Along with the cuttings, drill fluids (used to lubricate/ cool the drill bit, stabilise the borehole and control pressure) are brought to the surface. The main constituents of drill fluids are either WBM or SBM, and a weighting material (typically barite) (Section 3.2.1). Barium sulphate (barite) is considered to be relatively inert in the marine environment, and unlikely to be toxic (Neff 2002). The acute toxicity of WBM is also considered to be low (Neff 1987). Various additives may also be added to improve the technical performance of the drill fluids such as viscosifiers, emulsifiers and pH control agents. The chemicals used as additives in the drill fluids are mostly classified as PLONOR (Pose Little or No Risk to the Environment) by OSPAR Commission (2012). It is intended that any unused bulk barite, remaining at the end of each well will be used for subsequent wells being drilled in the licence area. At the end of the drilling campaign unused dry bulk products will be subject to an options assessment and barite will not be discharged to the marine environment.<br><br>During well completions, SBM will be displaced from the well with a filtered and inhibited sodium chloride brine or base oil. The brine may contain several inhibitors such as a biocide, oxygen scavenger and lubricant. Well completion fluids (non-oily surfactant) will be water-based and will be used to remove oil film from the pipe. All oil contaminated fluids (approximately <15 $m^3$ per well) will be contained and returned to shore for suitable disposal. Any of the surfactant that is not contaminated with oil will be discharged to the marine environment (approximately <80 $m^3$ per development well).<br><br>Routine discharges of well completion fluids, drill fluids and drill cuttings will occur during the drilling activity. Sources of discharge are listed below, and approximate quantities to be discharged are shown in Table 3-1:<br>• WBM drill cuttings and drilling fluid discharge at the seabed<br>• WBM drill cuttings discharge at the sea surface (overboard from the MODU) including bulk discharges of WBM fluid and cuttings at the end of drilling/pit washing and cleaning<br>• SBM drilling cuttings with ≤5.9% oil-on-dry cuttings (OoDC).<br>• Well completion fluids discharged at the sea surface (overboard from the MODU).<br><br>Discharged well completion fluids and drill cuttings/fluids may impact benthic communities, water quality and associated pelagic receptors within the discharge plume (Bakke et al. 2013). | |
| Potential consequence | Severity |
| The particular values and sensitivities with the potential to be impacted by drilling discharges (fluids/cuttings) are:<br>• benthic communities<br>• fish (demersal fish community KEF and commercial species). | Minor (E) |

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|---|---|
| The main impact pathways from the discharge of drill fluids and drill cuttings are associated with smothering of benthic communities and an increase in turbidity within the water column potentially impacting on water quality. Cuttings in suspension may also affect pelagic organisms, sponges, corals and other sessile fauna within the discharge plume (Bakke et al. 2013).<br><br>Smothering<br><br>Smothering of benthic fauna may occur in locations where the rate of cuttings deposition exceeds the rate at which in situ fauna are able to move up through the sediments. There is generally no agreed threshold point for tolerance to sedimentation as it depends on the species and the structure of the accumulating material. Smit et al. (2008) conducted an extensive literature review of species sensitivity distributions for sediment burial in the marine environment. They reported that the 50% hazardous level for burial of deep-water epibenthic fauna, such as found in WA-50-L, was 54 mm.<br><br>The discharge of drill fluids and cuttings may result in the smothering of benthic communities in the immediate vicinity of the wells in WA-50-L. This may result in burial and low sediment oxygen concentrations caused by increased oxygen consumption and organic enrichment (Neff 2008). Monitoring in the North Sea has not revealed any in situ effects of WBM cuttings on sediment macrofauna community structure, implying that any such effects, if present, will be confined to within 25–250 m from the discharge point (Bakke et al. 2013 and references within). Effects on filter feeding bivalves were reported to be limited to within a distance of 0.5 - 1 km from the discharge (Bakke et al. 2013). Further studies also indicate impacts from drilling (fluids/cuttings) discharges are localised to within 1 km of the wells (Ellis et al. 2012; Purser 2015).<br><br>Concurrent drilling operations, although unlikely, may occur during the drilling campaign in WA-50-L with up to two MODUs potentially operating. The minimum distance between concurrently operating MODUs will be at least 3 km and the two MODUs would not operate at the same drill centre in WA-50-L. The discharge of drill fluids and cuttings resulting in smothering of benthic communities is considered to be relatively localised to within 1 km of the wells (Bakke et al. 2013; Ellis et al. 2012; Purser 2015) and therefore no cumulative impacts from smothering are predicted from concurrent drilling operations in WA-50-L.<br><br>Parts of the ancient coastline KEF, particularly where it exists as a rocky escarpment, are thought to provide biologically important habitats in areas otherwise dominated by soft sediments (DSEWPaC 2012a). It is considered that the hard substrate of the escarpment is likely to support a range of sponges, corals, crinoids, molluscs, echinoderms and other benthic invertebrates (DSEWPaC 2012a). The ancient coastline at 125 m depth contour KEF runs diagonally in a north-easterly direction, approximately 20 km south of WA-50-L, at its closest point. Therefore, benthic communities associated with the KEF are not expected to be impacted by drilling discharges as any silt plumes generated would have dissipated over this distance in the presence of near-seabed currents and it is not expected that sedimentation/smothering impacts would occur to benthic communities. | |

| | |
|---|---|
| While complete smothering of corals in sediment or drill cuttings will cause suffocation, conditions typically generated during the discharge of drill cuttings are unlikely to cause coral death, although this will be dependent on coral morphology (branching) and the capacity to shed sediment through the release of mucus (Allers et al. 2013). The nearest submerged coral communities to WA-50-L are located at Echuca and Heywood Shoals, located approximately 65 and 90 km respectively, and as such these are not expected to be impacted by smothering effects due to the drilling discharges. The closest coral reef to WA-50-L is located at Browse Island (26 km); however, this includes an intertidal reef platform and fringing reef and is therefore not expected to be contacted by drilling fluids/cuttings discharges given the distance from the licence area. As described in Section 4.6.3, seabed conditions in WA-50-L are suggestive of strong near-seabed currents and mobile sediments that do not favour the development of diverse epibenthic communities. The presence of sand waves are also expected to limit the development of infaunal communities in this habitat due to substrate instability associated with changes in the currents. Any potential impacts to benthic communities from drilling discharges are expected to be at a local scale and short-term, therefore the consequence is considered to be Minor (E); particularly given the expected re-colonisation through the recruitment of new colonists from planktonic larvae and adjacent sediments.<br><br>As part of the Ichthys Project Environmental Impact Statement (2010), INPEX made a commitment to investigate potential impacts of drill cuttings discharges on benthic communities in the offshore project area through environmental monitoring. A baseline 'before' study, conducted in June 2018 indicated the seabed in WA-50-L comprised of flat and unconsolidated sand/mud substrate with sparse biota (BMT 2019a). These results are similar to other studies in the Northwest Shelf and Timor Sea (BMT 2019b). Follow up 'after' ROV video surveys were undertaken in October 2018 and in July 2019, following the drilling of a well. The benthic substrate surrounding the well was classified as unconsolidated sand/mud (<2 mm) in both the before and after drilling surveys (BMT 2019b). Distribution of drill cuttings was wider during the 'after' survey, which was to be expected post-drilling, with cuttings observed up to 100 m from the well centre (BMT 2019 b, c). Biota were sparsely distributed during the surveys (before and after) but differences in abundance may have been due to natural factors such as temporal variability or the natural movement pattern of biota in the area (BMT 2019b). Sediment sampling undertaken in 2019 indicated that post drilling the concentration of metals and hydrocarbons had increased and therefore this may also have had an influence on the abundance of biota (BMT 2019c).<br><br>Turbidity and water quality<br><br>Disposal of well completion fluids, drill fluids and cuttings discharge overboard at the sea surface may affect other parts of the marine ecosystem such as pelagic organisms and other submerged receptors that may be present within the discharge plume. Discharged drill cuttings and fluids will create a temporary and localised turbid plume, which will gradually dilute as it disperses through the water column as a result of the action of currents. Field observations from drilling campaigns on the NWS have found that plumes associated with drilling discharges at the seabed and sea surface were visible in the upper water column for up to approximately 1 km from the discharge location and for a short time (approximately 24 hours) after discharge (INPEX 2010). Exposure to increased turbidity and potential toxicity is expected to be short term, and intermittent depending on plume behaviour (Bakke et al. 2013). | |

| | |
|---|---|
| The seabed in WA-50-L is below the photic zone (water depths approximately 250 m) and benthic communities are expected to be largely unaffected from the presence of a discharge plume (reducing light exposure levels), due to the high dispersion and mixing of the drilling cuttings and fluids within the water column.<br><br>Pelagic species including the demersal fish community KEF (which overlaps WA-50-L), fish species targeted by commercial fisheries, and EPBC-listed species transiting the area, are unlikely to be significantly impacted as they are likely to exhibit avoidance behaviour. There is the potential for individual fishes to be exposed to the discharge; however, this would be limited to those fish present at the sea surface rather than those associated with the demersal fish community KEF. Commercially targeted southern bluefin tuna have spawning grounds that overlap WA-50-L, therefore eggs, larvae and juveniles could be exposed to drilling discharges. Reported to spawn in surface waters, southern bluefin tuna, produce very large numbers of eggs, and therefore larvae, to overcome natural losses (such as through predation by other animals or adverse hydrographical and climatic conditions). Given the small size of the licence area in relation to the extensive spawning grounds that extend off north-western Australia, around Christmas and Cocos islands, south of Indonesia, impacts to spawning are not expected to have detrimental impacts to commercial fish species stock levels. Pelagic receptors may be impacted by increased suspended solids in the water column as an increase in particle load could adversely affect the respiratory efficiency of fish. However, most visual orientated fish/fauna species would likely relocate to an unaffected area to avoid the plume or simply pass unaffected through turbid waters. There is limited evidence that drilling discharges affect fishes in the natural environment, other than references to laboratory experiments, such as those undertaken by Gagnon & Bakhtyar (2013) that reported that acute toxicity of SBMs was generally low for pink snapper (*Pagrus auratus*). The barite to be used for the wells in WA-50-L has very low concentrations of mercury and cadmium (less than 1 mg/kg and 3 mg/kg respectively). A study investigating barite solubility and the release of trace metal compounds to the marine environment recorded that <1% of the mercury and 15% of the cadmium dissolved from the barite after one-week exposure in sea water (Crecelius et al. 2007). Considering the low levels of these metals released to sea, and the small initial amounts of these metals present in the barite, it is considered that the discharge of drilling fluids will not have a significant environmental impact on water quality and the marine fauna present within the water column.<br><br>While turbidity and potential associated toxicity in WA-50-L is likely to increase, up to approximately 1 km from the point of discharge, the plume is expected to rapidly disperse, and any impacts will be localised and of short-term duration (Minor E).<br><br>The discharge of drill fluids and cuttings will generate discharge plumes in the water column that may extend up to 1 km from the discharge location. Distances between the drill centres in WA-50-L, range from 3.6 km at the closest to over 18 km. Based on the minimum distance between any concurrently operating MODUs (3 km) the discharge plumes are not expected to overlap resulting in cumulative impacts to pelagic organisms or other submerged receptors from discharges associated with concurrent drilling operations in WA-50-L. | |
| Identify existing design and safeguards/controls measures | |
| • INPEX chemical, assessment and approval procedure for selection of drill and completion fluids in accordance with Section 9.6.1 and Table 9-5. | |

| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
|---|---|---|---|
| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | Do not use drilling/well completion fluids. | No | Drilling and well completion fluids are a critical component for drilling development wells in order to maintain a stabilised well-bore, and therefore cannot be eliminated. |
| | Do not discharge drill cuttings. | No | Containment of cuttings and centrifuge solids and shipping for onshore disposal was discounted due to excessive logistical costs, significant safety implications and transfer of potential environmental impact to an onshore location rather than reducing it. |
| | Reinject cuttings to avoid discharge to sea. | No | In cuttings reinjection, the cuttings are crushed and blended with water to create slurry. Typically, the slurry is then pumped to a suitable geological structure with an appropriate seal below the seabed through an annulus or tubing. This method of disposal is only an option if a suitable disposal well or disposal annuli are available. |
| Substitution | Only use WBM in preference to SBM | No | Due to the expected high temperature and high-pressure conditions in the wells, it is not technically feasible to only use WBM. In well sections with highly reactive claystones, the use of WBM is known to result in borehole breakout and collapse of the well-bore. The use of SBM results in a less reactive down-hole environment and lowers the potential for destabilisation of the well-bore. |
| Engineering | Use of solids control equipment (SCE) that is appropriately maintained for effective operation | Yes | Quantities of drilling fluids discharged will be minimised through the use of SCE, which includes recirculation of the mud where possible. |
| | Treatment of SBM cuttings to ≤5.9% OoDC | Yes | The proposed discharge of WBM and treatment for SBM is considered to align with current industry benchmarks. The additional control measure of installing a cuttings dryer to further reduce the concentration of oil on cuttings provides assurance that a suitable buffer can be maintained to ensure that the average concentration of SBM OoDC is no greater than 5.9% wt/dry wt (averaged over the SBM sections of the well). |

| | | | |
|---|---|---|---|
| | Treatment of SBM cuttings to <1% OoDC | No | Drilling operations use a combination of cuttings dryers and dryer centrifuges to further reduce the amount of oil on cuttings leaving the shale shakers. Additional cuttings dryers and dryer centrifuges could further reduce the average concentration of oil on cuttings to 6–8% wt/dry wt. However, drying down to <1% would use significant amounts of energy and requires significant MODU deck space. Treating from <6-8% down to <1% to reduce cuttings pile biodegradation time is therefore not considered ALARP due to the energy consumption and resulting air emissions.<br><br>Another option considered is the use of thermal desorption using a rotomill to pulverise and process the cuttings further. While this option reduces the discharge of residual SBM cuttings to the seabed, it is energy-intensive (i.e. consumes significant amounts of diesel fuel) and entails significant costs. Therefore, thermal desorption creates additional environmental impacts and has considerable practicability constraints associated with its use and has been discounted for this activity. |
| Procedures & administration | Concentrations of mercury and cadmium in stock barite will meet IFC EHS guidelines (2015) effluent levels. | Yes | The barite used for drilling operations in WA-50-L will have low concentrations of mercury and cadmium (less than 1 mg/kg and 3 mg/kg respectively) in accordance with IFC EHS guidelines. |
| | Return SBM to vendor at end of each well | Yes | To avoid bulk discharge of SBM to the marine environment reclaimed SBM will be retained on board for disposal onshore or recycled into the mud system. At the end of each well, all recaptured SBM will be returned to the vendor for reuse. |
| | Unused dry bulk products at the end of the drilling campaign will be subject to an options assessment and barite will not be discharged to the marine environment. | Yes | Unused dry bulk products will be retained for use on subsequent wells in WA-50-L. At the end of the drilling campaign, should any dry bulk products remain, INPEX will conduct an options assessment to determine feasible options to avoid the discharge of residual dry bulk products to the marine environment.<br><br>The dry bulk options assessment will determine a range of feasible options for the management of dry bulk products, which will include (but is not limited to):<br>• Retain on-board MODU or supply vessel for use by the next titleholder<br>• Transfer to alternative INPEX operated activity |

| | | | |
|---|---|---|---|
| | | | • Transfer onshore for vendor return/disposal<br>• Minimise volumes through consumption.<br>A demobilisation work scope will be developed prior to the end of the campaign and will include feasible options, associated actions and timelines. A combination of one or more options may be implemented prior to demobilisation. |

| Identify the likelihood |
|---|
| Smothering of benthic communities may occur adjacent to the well sites albeit limited to an extent ranging to within a couple of hundred metres. With the reported limited benthic community diversity in WA-50-L (Section 4.6.3) and distances to sensitive benthic communities (Echuca Shoal 65 km; Heywood Shoal 90 km) any localised loss of benthic communities in the vicinity of the wells from smothering are predicted to be relatively temporary based on the expected recovery of benthic communities through recolonisation aided by seabed currents. Therefore, with the controls in place to minimise toxicity by selecting the least hazardous chemicals coupled with the likely recolonisation within WA-50-L, impacts to benthic communities from smothering are considered to be Highly Unlikely (5).<br>Based on the highly dispersive environment in WA-50-L, short-term and intermittent nature of the discharges, the low levels of associated toxicity and the localised scale of potential impact (<1 km) it is Highly Unlikely (5) that drill/completion fluids and drill cuttings will have a significant environmental impact on water quality, submerged receptors and marine fauna present within the water column. |
| Residual risk summary |
| Based on a consequence of Minor (E) and a likelihood of Highly Unlikely (5) the residual risk is Low (9). |

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Minor (E) | Highly Unlikely (5) | Low (9) |

| Assess residual risk acceptability |
|---|
| Legislative requirements |

The Minamata Convention covers all aspects of the life cycle of mercury, controlling and reducing mercury across a range of products, processes and industries. Australia ratified the Minamata Convention on 7 December 2021. Countries that have ratified the Convention are bound by international law to put controls in place to manage emissions, releases and disposal of mercury and mercury compounds. Unused barite will remain on the MODU for use in future wells. At the end of the drilling campaign any unused bulk barite remaining will be subject to a dry bulk options assessment and will not be discharged to the marine environment. This control aligns with the objective of the Minamata Convention. The discharge of drill fluids, well completion fluids and drill cuttings to the marine environment is considered to be standard practice in industry. Potential barite contamination, with mercury and cadmium, is also managed in accordance with IFC EHS Guidelines – Offshore Oil and Gas Development (2015) that represents good international industry practice.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from planned discharges of drill fluids, well completion fluids and drill cuttings.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B). Emissions and discharges are listed as threatening processes; however, none of the recovery plans or conservation advice documents has specific actions relating to discharges of drill fluids or cuttings in remote offshore waters.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|

| | | |
|---|---|---|
| All discharges to the marine environment of SBM drill cuttings will be ≤5.9% wt/dry wt oil on cuttings (averaged over the SBM sections). | Oil-on-cuttings for SBM cuttings will be ≤5.9% wt/dry wt. | Daily OoDC results recorded in the daily drilling report. |
| Limit planned discharges from drilling activities so that impacts to receptors will be localised. | All oil contaminated well completion fluids will be contained and returned to shore for suitable disposal.<br>Any of the surfactant pill that is not contaminated with oil will be discharged to the marine environment. | Records of oil contaminated fluids return to shore as recorded in the daily drilling report.<br>Records of measurement of oil in surfactant pill as recorded in the daily drilling report. |
| | Volumes of drill fluids discharged will be minimised through the use of SCE, which includes recirculation of the mud where possible. | Records of all operational discharges (planned and unplanned) of drilling fluids and cuttings are recorded on the MODU and demonstrate compliance with all requirements for operational discharge. |
| | Maintenance of SCE in accordance with the MODU preventive maintenance system. | Documentation of planned and completed maintenance and testing of SCE in accordance with the MODU preventive maintenance system. |
| | INPEX will verify that the MODU contractor adheres to the following with respect to limits on mercury and cadmium concentration in drilling fluids including:<br>Mercury (Hg) – 1 mg/kg dry weight in stock barite (WBM and SBM)<br>Cadmium (Cd) – 3 mg/kg dry weight in stock barite (WBM and SBM). | Drilling fluids will have concentrations of mercury and cadmium less than 1 mg/kg and 3 mg/kg respectively in stock barite.<br>Documentation of QA/QC acceptance process undertaken for all individual batches of barite used. |
| | At the end of each well, all recaptured SBM will be returned to the vendor for reconditioning and reuse. | Drilling fluids report.<br>Request for transport docket for return to shore base.<br>End of well report. |

| | | |
|---|---|---|
| | At the end of the drilling campaign unused dry bulk products will be subject to an options assessment and barite will not be discharged to the marine environment. | Post-campaign dry bulk options assessment will be conducted including all feasible options to be implemented.<br><br>Dry bulk product fate/transfer records demonstrate implementation of feasible options. |

## Cement, cementing fluids and additives

**Table 7-8: Impact and evaluation – discharges of cement, cementing fluids and additives**

| Identify hazards and threats | |
|---|---|
| Planned cement discharges at the seabed during the cementing of conductors and casing, and in the event of any well abandonment operations, will occur as part of the drilling activity in WA-50-L. Small volumes (1–2 $m^3$ of cement per section) may also be discharged as a slurry at the sea surface from circulating cement with the riser installed, or from cleaning of cementing tanks and equipment on the MODU. Contingency discharges of cement may also be required if a cementing job does not meet technical and safety standards. It is intended that any bulk cement remaining at the end of each well will be used for subsequent wells being drilled in the licence area. Unmixed dry bulk cement remaining at the end of the campaign will be subject to a dry bulk options assessment.<br><br>As described in Section 3.2.1, it is standard practice to allow some excess cement slurry to overflow when cementing the top-hole section of a well to visually confirm that the annular space between the hole and the casing has been filled. This may typically cover an area of up to 10 $m^2$ per well.<br><br>The discharge of cement, cementing fluids and additives has the potential to reduce water quality through increasing turbidity or toxicity which may affect organisms within the water column, although typically cement does not contain mercury contamination. Seabed cement discharges may result in smothering of benthic communities in the vicinity of each well. | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities with the potential to be impacted by cementing discharges (fluids/additives) are:<br>• benthic communities<br>• fish (demersal fish community KEF and commercial species).<br><br>Impact pathways associated with the discharge of cement during drilling operations are associated with smothering of benthic communities in close proximity to the wells, and an increase in turbidity or toxicity within the water column potentially impacting on water quality.<br><br>Smothering<br><br>As described in Table 7-7, discharges at the seabed may result in the smothering of benthic communities in the immediate vicinity of the wells in WA-50-L. Discharges of cement (potentially covering up to approximately 10 m from each well) will result in burial and loss of benthic communities immediately adjacent to the well, particularly for sessile epifauna. | Insignificant (F) |

| | |
|---|---|
| As described in Section 4.6.3, seabed conditions within the licence area are suggestive of strong near-seabed currents and mobile sediments that do not favour the development of diverse epibenthic communities. The presence of sand waves are also expected to limit the development of infaunal communities in this habitat due to substrate instability associated with changes in the currents. Any potential impacts to benthic communities and loss of benthic habitat due to cement discharges are expected to be at a local scale, therefore the consequence is considered to be Insignificant (F); particularly given the context of the potential area impacted < 10 $m^2$ per well, in comparison to the total area of WA-50-L. There are no sensitive or unique benthic habitats that would be impacted by seabed cement discharges.<br><br>Concurrent drilling operations, although unlikely, may occur during the drilling campaign in WA-50-L with up to two MODUs potentially operating at a minimum distance apart of 3 km. The discharge of cement, cementing fluids and additives may result in smothering of benthic communities in the immediate vicinity surrounding the wells (up to approximately 10 m from each well) and therefore no cumulative impacts from smothering due to cement discharges are predicted from concurrent drilling operations in WA-50-L.<br><br>Turbidity<br><br>Disposal of cement discharges overboard at the sea surface may affect other parts of the marine ecosystem such as pelagic organisms and other submerged receptors that may be present within the discharge plume. Intermittent discharges of cement, albeit at small volumes (1–2 $m^3$) may create a temporary and localised turbid plume, which will gradually dilute as it disperses through the water column as a result of the action of currents. Data on the longevity of cement discharge plumes is not available; however, plumes associated with drilling muds have been reported to be visible in the upper water column for up to approximately 1 km from the discharge location and for a short time (approximately 24 hours) after discharge (INPEX 2010). Therefore, low volume cement discharges would also be expected to dissipate within this timeframe and exposure to increased turbidity and potential toxicity associated with the discharge is expected to be short term, and intermittent.<br><br>The seabed in WA-50-L is below the photic zone (water depths approximately 250 m) and benthic communities are expected to be largely unaffected by the presence of a discharge plume (reducing light exposure levels), due to the high dispersion and mixing of the cement discharge within the water column. | |

| | |
|---|---|
| Pelagic species including the demersal fish community KEF which overlaps the licence area; fish species targeted by commercial fisheries; and EPBC-listed species transiting the area, are unlikely to be significantly impacted as they are likely to exhibit avoidance behaviour. There is the potential for individual fishes to be exposed to the discharge; however, this would be limited to those fish present at the sea surface rather than those associated with the demersal fish community KEF. Pelagic receptors may be impacted by increased suspended solids in the water column as an increase in particle load could adversely affect the respiratory efficiency of fish. However, most visual orientated fish/fauna species would likely relocate to an unaffected area to avoid the plume or simply pass unaffected through turbid waters. The potential for toxicity effects to fish and pelagic organisms is expected to be limited given toxicity is mainly associated with cement additives that are used in minor quantities. Given the dispersive environment in WA-50-L and expected high level of dilution, any exposure is expected to be limited a few individuals within the immediate vicinity of the discharge. Therefore, the discharge of cement/cement slurry will not have a significant environmental impact on water quality and the marine fauna present within the water column (Insignificant F).<br><br>The discharge of cement, cementing fluids and additives will generate discharge plumes that may extend up to 1 km from the discharge location. Distances between the drill centres in WA-50-L, range from 3.6 km at the closest to over 18 km. Based on the minimum distances between operating MODUs (3 km apart) the discharge plumes are not expected to overlap resulting in cumulative impacts to pelagic species including the demersal fish community KEF from such discharges associated with concurrent drilling operations in WA-50-L. | |

Identify existing design and safeguards/controls measures

- INPEX chemical, assessment and approval procedure for selection of drill and completion fluids in accordance with Section 9.6.1 and Table 9-5.
- Records of all operational cement discharges will be monitored and maintained as part of the campaign cement program.

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Do not cement well casing | No | Cementing of the well casing is required and cannot be eliminated. The wells in WA-50-L are to be long-term production wells with an estimated life span of 40 years, therefore sufficient cementing is required during well construction to maintain integrity. Only the 36" conductor section will result in the discharge of cement to the seabed. Through casing design of the lower well sections, no cement will be discharged to the seabed from the lower casings. |

| | | | |
|---|---|---|---|
| Substitution | None identified | N/A | N/A |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | Dye used to provide a pre-indicator of cement overflow to seabed | Yes | A dye is used during cementing operations to indicate cement overflow, therefore minimising the volume discharged at the seabed. |
| | Unused dry bulk cement at the end of the drilling campaign will be subject to an options assessment | Yes | Unused dry bulk cement is retained for use on subsequent wells in WA-50-L. At the end of the drilling campaign, should any dry bulk cement remain, INPEX will conduct an options assessment and implement feasible options to avoid the discharge of residual bulk cement to the marine environment.<br><br>The dry bulk options assessment will determine a range of feasible options for the management of dry bulk products which include (but is not limited to):<br>• Retain on-board MODU or supply vessel for use by the next titleholder<br>• Transfer to alternative INPEX operated activity<br>• Transfer onshore for vendor return/disposal<br>• Minimise volumes through consumption.<br><br>A demobilisation work scope will be developed prior to the end of the campaign and will include feasible options, associated actions and timelines. A combination of one or more options may be implemented prior to demobilisation. |
| Identify the likelihood | | | |
| Localised smothering of benthic communities and habitats may occur immediately adjacent to the well site from seabed cement returns for an area of up to 10 m from each well. With the reported limited benthic community diversity in WA-50-L (Section 4.6.3) and the controls in place to minimise toxicity, the loss of sensitive benthic communities from smothering due to cement discharge is considered Highly Unlikely (5).<br><br>Based on the highly dispersive environment in WA-50-L, the short-term and intermittent nature of the discharges, the low levels of associated toxicity and the localised scale of potential impact (<1 km), it is Highly Unlikely (5) that cement discharges will have a significant environmental impact on water quality and the marine fauna present within the water column. | | | |
| Residual risk summary | | | |

| Based on a consequence of Insignificant (F) and a likelihood of Highly Unlikely (5) the residual risk is Low (10). | | |
|---|---|---|
| Consequence | Likelihood | Residual risk |
| Insignificant (F) | Highly Unlikely (5) | Low (10) |

Assess residual risk acceptability

Legislative requirements

The Minamata Convention covers all aspects of the life cycle of mercury, controlling and reducing mercury across a range of products, processes and industries. Australia ratified the Minamata Convention on 7 December 2021. Countries that have ratified the Convention are bound by international law to put controls in place to manage emissions, releases and disposal of mercury and mercury compounds. Typically, cement does not contain mercury contamination; however, through implementation of the dry bulk options assessment control no unused bulk cement will be discharged to the marine environment at the end of the campaign which aligns with the objective of the Minamata Convention.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from planned discharges of cement.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B). Emissions and discharges are listed as threatening processes; however, none of the recovery plans or conservation advice documents has specific actions relating to discharges of cement in remote offshore waters.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD

| | | |
|---|---|---|
| • the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
| Limit planned discharges from drilling activities so that impacts to receptors will be localised. | Volumes of cement discharged will be minimised through the implementation of the campaign cement program. | Records of all operational discharges (planned and unplanned) of cement are recorded on the MODU and demonstrate compliance with all requirements for operational discharge. |
| | Use dye to provide a pre-indicator of cement overflow to seabed surface which is selected in accordance with the chemical assessment and selection process. | Documentation of chemical assessment confirms that CHARM and OCNS ratings have been used as selection criteria for dye operationally discharged to environment |
| | At the end of the drilling campaign unused dry bulk products will be subject to an options assessment. | Post-campaign dry bulk options assessment will be conducted including all feasible options to be implemented.<br>Dry bulk product fate/transfer records demonstrate implementation of feasible options. |

## Subsea discharges

**Table 7-9: Impact and evaluation – subsea discharges**

| Identify hazards and threats | |
|---|---|
| Subsea discharges to the marine environment during drilling operations and IMR activities within WA-50-L may result in a change in ambient water quality potentially impacting transient, EPBC-listed species, fish and benthic communities. The range of subsea discharges and expected volumes associated with the activity are presented in Table 3-5 and include:<br>• water-based BOP control fluids from function and pressure testing of BOP<br>• subsea control fluids from function and pressure testing of EDP/LRP, well intervention package and use of ROV and THS/XT valve actuations<br>• hydraulic control fluids from use of ROV, RMR, THS/XT valve actuations and open-water CWOR<br>• leak detection/fluid displacement fluorescein dye (non-toxic fluorescein with a CHARM rating of Gold) from subsea installation of THS and XT<br>• IMR discharges including marine growth removal chemicals and MEG. Contingent MEG discharges during manifold flushing may contain residual hydrocarbons<br>• well intervention discharges including MEG, methanol, hydraulic control fluid, wire-line grease and fluorescein dye<br>• well suspension fluids including corrosion inhibitors, biocide and MEG (any WBM, SBM and completion fluids present during a well suspension will be discharged in accordance with the controls detailed in Table 7-7).<br>BOP function testing is undertaken approximately weekly or fortnightly during the drilling activity. BOP control fluid generally consists of water mixed with a glycol based detergent, or equivalent water based, anti-corrosive additive suitable for open hydraulic systems. BOP control fluid is ranked as a Group E product by the OCNS and, therefore, considered PLONOR. Subsea control fluids, typically glycol based are ranked as Group E product by the OCNS and, therefore, considered PLONOR. Other control fluids such as water-based hydraulic fluids will also be discharged subsea during the drilling activity which may result in a temporary and localised reduction in water quality.<br>Small quantities (<1 $m^3$ per activity) of weak acid (acetic acid/vinegar) may be used in marine growth / lime-scale removal as an IMR activity. These discharges have the potential to expose marine fauna to changes in water quality through changing ambient pH levels. MEG (< 5 - 20 $m^3$) may also be routed from the SPS to the MODU for disposal, this is typically discharged subsea; however, it may require to be discharged at the sea surface if no subsea flow path can be identified.<br>During well intervention activities, MEG (< 5 $m^3$ per activity) will be discharged to the marine environment and potentially also methanol (if required for hydrate removal). Other MEG discharges include well suspension fluids, where residual biocide and corrosion inhibitors may also be present. MEG is considered to pose little or no risk to the environment (PLONOR) by OSPAR (2012). Subsea discharges of methanol, biocide and corrosion inhibitor may result in a change in ambient water quality. | |
| Potential consequence | Severity |

| | |
|---|---|
| The particular values and sensitivities with the potential to be impacted by subsea discharges are:<br>• EPBC-listed species<br>• fish (demersal fish community KEF and commercial species)<br>• benthic communities.<br><br>Subsea discharges could introduce hazardous substances into the water column, albeit in low concentrations and in the majority of cases the chemicals are classified as PLONOR. However, this could result in a reduction in water quality, and impacts to EPBC-listed species and other pelagic organisms such as fish species (demersal fish community KEF or those species targeted by commercial fisheries) and benthic communities given some discharges may occur at or near the seabed.<br><br>There are no known BIAs or aggregation areas that would result in sedentary behaviour in WA-50-L. Given the highly mobile and transient nature of marine fauna and the absence of known BIAs in the licence area, the potential exposure is likely to be limited to individuals close to the discharge point at the time of the discharge. Any individual turtles associated with the 20 km green turtle internesting buffer at Browse Island (26 km away) are not expected to be present in the vicinity of the discharge. Similarly, whale sharks present in the foraging BIA approximately 10 km south-east of WA-50-L are not expected to be exposed to any subsea discharges. Considering the low volumes and low levels of associated toxicity of the subsea discharges in the dispersive, deep waters of the licence area, impacts are considered to be of inconsequential ecological significance to transient, EPBC-listed species and are therefore considered Insignificant (F).<br><br>There is the potential for individual fishes, directly adjacent to the discharge point to be exposed to the intermittent subsea discharges. Such exposure is not expected to result in any significant impacts to fishes based on the high dilution levels, low toxicity, low volumes and in consideration of the highly mobile nature and ability of fishes to move away. The potential consequence on the demersal fish community KEF and any species targeted by commercial fisheries will be short-term and highly localised with inconsequential ecological significance (Insignificant F).<br><br>As described in Section 4.6.3, seabed conditions in WA-50-L are suggestive of strong near-seabed currents and mobile sediments that do not favour the development of diverse epibenthic communities. The presence of sand waves is also expected to limit the development of infaunal communities in this habitat due to substrate instability associated with changes in the currents. Subsea discharges are expected to be highly influenced by natural dispersion and dilution processes associated with the currents experienced in the offshore environment. Potential impacts on benthic communities may include lethal and sub-lethal effects; however, impacts are expected to be limited both spatial and temporally due to small volumes and low toxicity. Therefore, the consequence of the exposure of benthic communities would be at a local scale with a temporary impact and is ranked as Insignificant (F).<br><br>If concurrent drilling operations were to occur, based on the localised, small volumes of subsea discharges and the minimum distances between operating MODUs (3 km) no overlapping discharge plumes are considered possible. Therefore, no cumulative impacts to EPBC listed species, fish or benthic communities from subsea discharges are expected. | Insignificant (F) |
| Identify existing design and safeguards/controls measures | |

- INPEX chemical, assessment and approval procedure for selection of drill and completion fluids in accordance with Section 9.6.1 and Table 9-5.
- Records of subsea discharges will be monitored and maintained.

| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
|---|---|---|---|
| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | No subsea discharges | No | Function and pressure testing of key equipment (BOP, EDP/LRP) is required to ensure safe and effective operation. Therefore, these subsea discharges cannot be eliminated. Hydraulic fluid (water-based) discharges are inherent for the use of subsea equipment e.g. ROVs. There are no practicable ways to eliminate these small volume discharges (< 1 $m^3$).<br><br>During well intervention and IMR activities there are no practicable ways to capture the small volumes of potential subsea discharges and based on the chemical composition (predominantly water/glycol based) these discharges are considered to PLONOR when discharged to the marine environment. |
| Substitution | None identified | N/A | N/A |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | None identified | N/A | N/A |
| Identify the likelihood | | | |
| Impacts to the EPBC-listed marine fauna, fish and benthic communities in the vicinity of the subsea discharges are not expected to occur and are considered Unlikely (4). This is largely due to the water depth, absence of any known BIAs for EPBC-listed species in the licence area and the low toxicity and low volumes of the discharged fluids. The open-ocean, highly dispersive environment in the licence area will also result in high levels of dilution further reducing the likelihood of exposure to the identified receptors. | | | |
| Residual risk summary | | | |

| Based on a consequence of Insignificant (F) and a worst-case likelihood of Unlikely (4) the residual risk is Low (9). | | |
|---|---|---|
| Consequence | Likelihood | Residual risk |
| Insignificant (F) | Unlikely (4) | Low (9) |
| Assess residual risk acceptability | | |

Legislative requirements

Open-loop subsea control systems are an industry standard. The majority of subsea control fluids are based on fresh water with additives, such as MEG as well as lubricants, corrosion inhibitors, biocides and surfactants. Subsea discharges to the marine environment are considered to be standard practice in industry and there are no relevant Australian environmental legislative requirements that relate specifically to these discharges.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from planned subsea discharges.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B). Emissions and discharges are listed as threatening processes; however, none of the recovery plans or conservation advices has specific actions relating to discharges of BOP control/hydraulic fluid discharges in remote offshore waters.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD

| | | |
|---|---|---|
| • the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
| Limit planned discharges from drilling activities so that impacts to receptors will be localised. | Records of subsea discharges will be monitored and maintained. | Daily drilling report |

## 7.2 Waste management

**Table 7-10: Impact and evaluation – waste management**

| Identify hazards and threats | |
|---|---|
| The MODUs and vessels associated with the activity will generate a variety of non-hazardous and hazardous wastes, which will not be intentionally discharged to the marine environment. Unsecured or incorrectly stored waste may be windblown or displaced into the ocean where it has the potential to negatively affect marine ecosystems. Wastes can cause contamination of the ocean resulting in changes to water quality e.g. through the leaching of chemicals from wastes, which can cause changes to ecosystem productivity and diversity. Additionally, certain types of waste can cause injury to marine fauna through entanglement or may affect the health of marine fauna if waste materials are ingested. | |
| Potential consequence | Severity |
| The particular values and sensitivities identified as having the potential to be impacted by improper waste management are:<br>• EPBC listed species<br>• planktonic communities.<br><br>Improper management of wastes on MODUs and vessels may result in pollution and contamination of the environment. There is also the potential for secondary impacts on marine fauna that may interact with wastes, such as packaging and binding, should these enter the ocean. These include physical injury or death of marine biota (as a result of ingestion, or entanglement of wastes).<br><br>A change to water quality has the potential to impact planktonic communities found at the sea surface. Impacts associated with the accidental loss of hazardous waste materials to the ocean as a result of leaching from waste would be localised and limited to the immediate area. These are further likely to be reduced due to the dispersive open ocean offshore environment. While plankton abundance in close proximity to the accidental loss location, or leaching waste items may be reduced, this is expected to be of insignificant ecological consequence (Insignificant F).<br><br>Marine fauna can become entangled in waste plastics, which can also be ingested when mistaken as prey (Ryan et al. 1988), potentially leading to injury or death. For example, due to indiscriminate foraging behaviour, marine turtles have been known to mistake plastic for jellyfish (Mrosovsky et al. 2009). Seabirds foraging on planktonic organisms, generally at, or near, the surface of the water column may eat floating plastic (DEE 2018). Other items (e.g. discarded rope) have also been found to entangle fauna, such as birds and marine mammals. The accidental loss of waste to the ocean may result in injury or even death to individual transient EPBC listed species, but this is not expected to result in a threat to population viability of a protected species (Insignificant F). | Insignificant (F) |
| Identify existing design and safeguards/controls measures | |

- Spill containment and recovery equipment
- MODUs and vessels will manage waste in accordance with Marine Order 95, specifically maintain and implement a garbage management plan.

| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
|---|---|---|---|
| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | None identified | N/A | N/A |
| Substitution | None identified | N/A | N/A |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | HSE inspections of MODU/vessel and waste contractors | Yes | HSE inspection conducted pre-mobilisation and ongoing during the activity will confirm correct storage, labelling and handling of wastes including presence of netting to prevent windblown waste. |
| | Use of licensed onshore waste facility or contractor to receive / dispose of waste. | Yes | The use of licensed onshore waste receiving facilities/contractors provides assurances that wastes will be correctly handled and disposed of once unloaded from vessels. |
| | Reporting of equipment or materials lost to sea | Yes | Any equipment or materials and waste lost to the marine environment will be reported and records maintained in the garbage management plan. |

| Identify the likelihood |
|---|
| During previous INPEX drilling activities with MODUs and associated vessels, the accidental release/loss of waste or equipment overboard has occurred on several occasions often through incorrect storage and handling. Therefore, impacts to EPBC-listed species and planktonic communities from the unplanned release of waste to the ocean are considered Possible (3). However, this is considered to be ecologically insignificant given the absence of any known BIAs that overlap WA-50-L and the dispersive open ocean environment. |
| Residual risk summary |
| Based on a consequence of Insignificant (F) and a worst-case likelihood of Possible (3) the residual risk is Low (8). |

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Possible (3) | Low (8) |
| Assess residual risk acceptability | | |

Legislative requirements

The existing preventative and mitigation measures outlined to prevent accidental release of hazardous and non-hazardous wastes are consistent with, and typical of, good industry practice. Procedures for managing waste (i.e. handling, storage, transfer and disposal) will be outlined in the MODU/vessel garbage management plan, in accordance with Marine Order 95 requirements.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from improper waste management.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B). Injury and fatality to vertebrate marine life caused by ingestion of, or entanglement in, harmful marine debris was listed in August 2003 as a key threatening process under the EPBC Act as detailed in the 'Threat abatement plan for impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans' (DEE 2018). The entanglement and ingestion of marine debris is also identified as a threat in the "Recovery Plan for Marine Turtles in Australia" (DEE 2017a). Specific actions which contribute to the long-term prevention of marine debris (Objective 1 of the 'Threat abatement plan for marine debris on vertebrate marine life' (DEE 2018)) have been adopted including compliance with applicable legislation in relation to the improvement of waste management practices, such as MARPOL Annex V,

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD

| | | |
|---|---|---|
| • the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
| No unplanned loss of equipment, materials or wastes to the marine environment during the activity. | Spill kits will be available on board the MODUs and vessels. | Inspection records confirm spill kits are available and stocked. |
| | Garbage management plans will be maintained and implemented on MODUs and vessels in accordance with Marine Order 95, and will specifically include:<br>• procedures for collecting, storing, processing and disposing of all waste types (including segregation and labelling)<br>• the use of waste storage and transfer equipment<br>• the use of food waste macerators/comminuters<br>• garbage record keeping requirements, including discharges, and disposals of waste in a Garbage Record Book<br>• communication of waste management practices and awareness materials for crew. | HSE inspection records confirm garbage management plans are implemented on MODUs and vessels.<br>Incident report of waste lost overboard. |
| | HSE inspections of MODU/vessel and waste contractors confirm capability for the correct storage, labelling and handling of wastes. | Premobilisation and ongoing HSE inspection records. |
| | Onshore transfer/disposal of MODU/vessel waste will be completed using a licensed waste facility or contractor. | Garbage Record Book demonstrates onshore transfer/disposal of facility/vessel waste via a licensed waste facility or contractor. |
| | Loss of equipment or materials lost to sea will be reported. | Incident report of equipment or material lost overboard. |

## 7.3 Noise and vibration

**Table 7-11: Impact and risk evaluation – underwater noise**

| Identify hazards and threats | |
|---|---|
| Marine fauna may be exposed to several sources of noise emissions during the activity, as summarised below:<br><br>Operation of the MODU (including power generation and drilling) has the potential to expose sound sensitive marine fauna to localised changes in underwater noise levels. Machinery positioned on the deck is above the waterline and therefore the overall noise levels will be low. The level of underwater noise associated with MODUs while not drilling are reported to decrease rapidly with distance from the MODU. In a study by McCauley (1998), it is reported that during non-drilling operations sound levels of 117 dB re 1µPa were recorded at a distance of 125 m from the wellhead and were audible over a distance of 1-2 km. This noise was reported to be associated with the discharging of fluids and the operation of pumping systems and mechanical plant, etc. While actively drilling, sound levels of 115 dB re 1µPa were recorded at a distance of 405 m from the wellhead (McCauley 1998). Other studies have reported measured sound levels of 136 dB re 1 µPa at 100 m distance from drilling activities (Nedwell & Edwards 2004) and Greene (1986) reported 117 dB re 1 µPa at 185 m and 110 dB re 1µPa at 926 m. The noise generated during drilling activities was primarily associated with the use of the drill string.<br><br>Vessels associated with the activity (support vessels and LWI) have the potential to expose sound sensitive marine fauna to localised changes in underwater noise levels. Vessel engines and dynamic positioning thrusters are capable of generating sound at levels between 108 and 182 dB re 1 µPa at 1 m at dominant frequencies between 50 Hz and 7 kHz (Simmonds et al. 2004; McCauley 1998). | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by underwater noise are:<br><br>• EPBC listed species<br>• fish (demersal fish community KEF and commercial species).<br><br>The generation of underwater sound from the drilling activities and vessel movements in WA-50-L has the potential to impact EPBC-listed marine fauna, specifically marine mammals and turtles. Sudden exposure to very high sound levels or exposure for prolonged periods can result in a permanent threshold shift (PTS) or temporary threshold shift (TTS) in hearing. Noise impact thresholds proposed by the U.S. National Oceanic and Atmospheric Administration and National Marine Fisheries Service (NMFS 2018) for cetaceans, suggest that, for the types of cetacean with the potential to occur in the licence area, PTS could occur as a result of peak sound pressure levels of 219 – 230 dB re 1 µPa or prolonged exposure to sound exposure levels of 198 – 199 dB re 1 µPa2·s. TTS could occur at peak sound pressure levels of 213 - 224 dB re 1 µPa or prolonged exposure to sound exposure levels of 168 - 170 dB re 1 µPa2·s (NMFS 2018). Popper et al. (2014) propose conservatively protective sound pressure thresholds of 207 - 213 dB re 1 µPa for potential injury to various types of fish and for marine turtles. | Insignificant (F) |

| | |
|---|---|
| No sources of underwater noise associated with the activity are expected to have the potential to result in PTS or TTS. However, a range of behavioural changes can occur in cetaceans in response to sound pressure levels as low as 120 dB re 1 µPa (Southall et al. 2007). This may include minor responses, such as a momentary pause in vocalisation or reorientation of an animal to the source of the sound, or avoidance responses (Southall et al. 2007). For cetaceans, NMFS (2019) propose a behavioural response threshold of 160 dB re 1 µPa for impulsive sound sources and 120 dB re 1 µPa for continuous sound sources (NMFS 2019). Marine turtles are not reported to use sound for communication; however, it is proposed that they may use sound for navigation, avoiding predators and finding prey (Dow Piniak 2012). For received sound pressure levels above 166 dB re 1 µPa, turtles have shown some increased swimming activity and above 175 dB re 1 µPa can become more agitated (McCauley et al. 2000). The 166 dB re 1 µPa level is used as the threshold level for a behavioural disturbance response by turtles (NSF 2011).<br><br>A limited number of commercially significant fish stocks may be present in WA-50-L that may be exposed to underwater noise emissions (Table 4-6). Given the deep waters, commercially significant fish stocks in the licence area are primarily limited to highly mobile pelagic species such as tuna and billfish with WA-50-L overlapping the furthest eastern boundary of the extensive southern bluefin tuna spawning grounds in the Indian Ocean (Butler et al. 2024). Spawning of southern bluefin tuna is reported to occur from September to April in surface waters where water temperatures above 24 ºC are thought to influence the survival of eggs and larvae (Patterson et al 2008; Davis & Farley 2001). The water depths and absence of suitable habitats mean WA-50-L is not considered to offer spawning or aggregation habitat for commercially targeted demersal species which occur in the shallower waters on the continental shelf (typically less than 200 m water depth) (Section 4.10.1). Deep water scampi (*Metanephrops australiensis*), targeted by the North West Slope Trawl Fishery, may occur on the continental slope in water depths found in WA-50-L. Scampi may be fished on the slope in water depths deeper than 200 m but are most commonly found at depths of 420 - 500 m (AFMA 2024f; Harte & Curtotti 2018). Timing of scampi spawning is uncertain, but studies of similar species suggest that spawning occurs in September-October (AFMA 2024f).<br><br>*MODU and drilling noise*<br><br>Based on the expected noise emissions associated with the MODU and drilling activities any sound emissions that are typically attributed to behavioral changes are expected to be limited to within a few hundred metres of the MODU, based on recorded drilling sound levels by McCauley (1998), Nedwell & Edwards (2004) and Greene (1986). Underwater noise modelling undertaken for the nearby Ichthys Project (INPEX 2010) to consider noise emissions reported that low-frequency noise generated (such as from tanker offloading) would abate to 120 dB re 1 µPa within 8 km of the source location and the area receiving 130–140 dB re 1 µPa was very small, i.e. less than 1 km in radius. Therefore, drilling noise combined with associated vessel and MODU engines and thrusters may result in sound that is detectable above ambient noise levels over several kilometres from the MODU, although behavioural avoidance responses are more likely to occur within 1-2 km. | |

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|---|---|
| There are no known marine fauna BIAs or aggregation areas that would result in sedentary behaviour in WA-50-L (as described in Section 4.7.4) that are expected to be affected by increased noise levels, and EPBC-listed species with the potential to be exposed are considered to be transient in nature with the ability to avoid the source in the open ocean of the licence area. The green turtle internesting buffer at Browse Island does not overlap WA-50-L, located approximately 26 km from Browse Island at its closest point. In the unlikely event that behavioural changes did occur such as reorientation of an animal to the source of the sound, or avoidance responses (Southall et al. 2007), they are expected to be localised and temporary (Insignificant F). Gradual exposure to continuous noise sources, such as the MODU, are generally regarded as being less harmful and less likely to startle or stress marine fauna than rapid-onset impulsive noise sources (Hamernik et al. 1993; Hamernik et al. 2003; Southall et al. 2007).<br><br>Pelagic fish species such as tuna, and demersal fish species such as snapper and emperor may be present in the licence area, but these species are highly mobile and belong to groups of fish with limited sensitivity to sound (Popper et al. 2014; Hawkins & Popper 2016). These fish species are expected to swim away or avoid waters immediately surrounding drilling activities with no impacts to these stocks expected. Therefore, disturbance to commercially important fish species may occur; however, any impacts would be localised to individuals and would not result in any detrimental impacts in stock levels, and as such any impacts are considered to be Insignificant (F).<br><br>Although not planned, concurrent drilling operations may occur within WA-50-L. However, the distance between any concurrently operating MODUs would be at least 3 km as two MODUs would never operate at the same drill centre and the distances between drill centres ranges from 3.6 – 18 km. As stated, MODU engines and thrusters may produce sound above ambient levels over several km from the MODU, with behavioural avoidance responses possible within 1-2 km. Based on the distance between operating MODUs, any MODU and drilling noise is not expected to be detectable by receptors.<br><br>*Vessel noise*<br><br>Based on the expected noise emissions associated with the operation of vessels during the activity in WA-50-L, any noise emissions (ranging from 108 to 182 dB re 1 µPa at 1 m) are not expected to result in PTS or TTS impacts to marine fauna. Although not directly relevant to vessel engine noise, modelling for the Ichthys Project (INPEX 2010) indicated that low frequency noise generated from tanker offloading operations would abate to 120 dB re 1 µPa within 8 km of the source location with the area receiving 130–140 dB re 1 µPa predicted to be less than 1 km in radius. The sound levels produced by smaller support vessels and LWI vessels is expected to be less than the levels modelled for offloading tankers, but the sound may be audible to marine fauna over several km, with the likelihood of behavioural impacts increasing in close proximity to the vessel. Gradual exposure to continuous noise sources, such as vessel engines, are generally regarded as being less harmful and less likely to startle or stress marine fauna than rapid-onset impulsive noise sources (Hamernik et al. 1993; Hamernik et al. 2003; Southall et al. 2007). As such, exposure that would result in significant alteration of behaviour is not expected particularly in the absence of any known BIAs or important habitats in the licence area, and as such any impacts are considered to be Insignificant (F). | |

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| Pelagic fish species such as tuna, and demersal fish species such as snapper and emperor may be present in the licence area, but these species are highly mobile and belong to groups of fish with limited sensitivity to sound (Popper et al. 2014; Hawkins & Popper 2016). These fish species are expected to swim away or avoid waters immediately surrounding vessel activities with no impacts to these stocks expected. Therefore, disturbance to commercially important fish species may occur; however, any impacts would be localised to individuals and would not result in any detrimental impacts in stock levels, and as such any impacts are considered to be Insignificant (F). | |

Identify existing design and safeguards/controls measures

- Implementation of EPBC Regulations 2000 – Part 8 Division 8.1 (Regulation 8.05: *Interacting with cetaceans*)
- Relevant personnel will receive an induction/training to inform them of the requirements of EPBC Regulations 2000 – Part 8, Division 8.1 (Regulation 8.05) in accordance with Table 9-3 (INPEX Australia Support Vessels Marine Fauna Awareness Training).

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Eliminate the use of MODU and vessels | No | The use of MODU/vessels to undertake the activity cannot be eliminated. |
| Substitution | Alter the timing of the proposed drilling activities to avoid the spawning period for southern bluefin tuna (September to April) | No | It is not practicable to restrict the timing of the proposed drilling activities to only 4 months of the year (May to August) as this would result in significant delays to complete the drilling campaign. Given that WA-50-L occupies a small portion of the available spawning grounds, any underwater noise impacts from planned activities are likely to be localised to individuals and would not result in any detrimental impacts in SBT stock levels. Particularly as tuna are highly mobile and belong to a group of fish with limited sensitivity to sound. Therefore, altering the timing of the proposed activities to avoid the SBT spawning period is considered to be grossly disproportionate to the cost of implementing this control. |
| Engineering | None identified | N/A | N/A |

| | | | |
|---|---|---|---|
| Procedures & administration | Implement EPBC Regulations 2000 - Part 8 Division 8.1 (Regulation 8.07 - aircraft) specifically maintaining separation distances for helicopters. | No | As described in Section 4.7.4, no BIAs for marine fauna overlap the licence area. Given the distances to the nearest cetacean critical habitats and that helicopter approaches to the MODU will not result in injury or hearing impairment implementing this control does not provide any significant environmental benefit. |

| Identify the likelihood |
|---|
| With the above described controls in place and in the absence of any BIAs or critical habitats overlapping WA-50-L, the likelihood of impacts to marine fauna and fish species from noise emissions generated from the MODU, vessels and drilling operations are considered Unlikely (4). |

| Residual risk summary |
|---|
| Based on a consequence of Insignificant (F) and a worst-case likelihood of Unlikely (4) the residual risk is Low (9). |

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Unlikely (4) | Low (9) |

| Assess residual risk acceptability |
|---|
| Legislative requirements<br>As required by law the EPBC Regulations 2000 – Part 8, Division 8.1 will be implemented during the activity.<br>Relevant person consultation<br>No concerns have been raised regarding potential impacts and risks from underwater noise.<br>Conservation management plans / threat abatement plans<br>Several conservation management plans have been consulted in the development of this EP (Appendix B). Anthropogenic noise has been identified as a threat to pygmy blue whales in the Conservation Management Plan for the Blue Whale (DoE 2015). Noise interference has also been identified as a threat to marine turtles (DEE 2017a). The above listed controls to be adopted during the activity are in alignment with the actions identified in the various conservation management documents.<br>ALARP summary |

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| Undertake drilling activities in a manner that prevents injury to marine fauna resulting from sound emissions. | Vessel contractors comply with relevant requirements of the EPBC Regulations 2000 – Part 8 Division 8.1 (Regulation 8.05 *Interacting with cetaceans*) within the 500m exclusion zone including:<br>• Support vessels will not travel faster than 6 knots within 300 m of a cetacean or turtle (caution zone) and minimise noise.<br>• Support vessels will not approach closer than 50 m to a dolphin or turtle and/or 100 m for a whale (with the exception of bow riding).<br>• If a cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots. | Records of breaches of vessel - cetacean interaction requirements outlined in the EBPC Regulations 2000 reported. |

## 7.4 Biodiversity and conservation protection

### 7.4.1 Introduction of invasive marine species (IMS)

**Table 7-12: Impact and evaluation – Introduction of invasive marine species**

| Identify hazards and threats | |
|---|---|
| IMS are non-indigenous marine plants or animals that have been introduced into a region beyond their natural range and have the ability to survive, reproduce and establish founder populations. IMS are widely recognised as one of the most significant threats to marine ecosystems worldwide. Shallow coastal marine environments in particular, are thought to be amongst the most heavily invaded ecosystems, which largely reflects the accidental transport of IMS by international shipping to marinas and ports where the preferred artificial hard structures are commonly found.<br><br>The introduction and establishment of IMS into the marine environment may result in impacts to benthic communities and associated receptors dependent on these including fishing, due to changes to the structure of benthic habitats and native marine organisms through predation and/or competition for resources, leading to a change in ecological function. Once IMS establish, spread and become abundant in coastal waters some species can have major ecological, economic, human health and social/cultural consequences (Carlton 1996, 2001; Pimental et al. 2000; Hewitt et al. 2011).<br><br>There are several pathways for the introduction and spread of IMS of concern associated with the petroleum activity in WA-50-L including the mobilisation of vessels and MODUs from international and domestic waters, domestic conveyances associated with support vessels during planned operations and domestic conveyances during unplanned events, such as vessels seeking shelter in the lee of offshore islands during adverse sea conditions or cyclone events. If unmanaged, these may act as a pathway through the discharge of high-risk ballast water containing IMS and/or IMS present on submerged vessel hulls in the vicinity of sensitive, unaffected environments (with no previously reported presence of IMS). | |
| Potential consequence | Severity |
| The particular values and sensitivities identified as having the potential to be impacted by the introduction of an IMS are:<br>• benthic communities associated with KEFs, benthic primary producer habitat (BPPH) and shallow water coastal environments and marine parks, the closest of which is Browse Island (located approximately 26 km south-east of WA-50-L at the closest point) other offshore islands and shoals with sensitive benthic habitats, where vessels may seek shelter during adverse sea conditions or cyclone events have the potential to be affected.<br>• fisheries (commercial/aquaculture/traditional/recreational fishing).<br><br>The introduction and subsequent establishment of IMS could result in changes to the structure of benthic communities leading to a change in ecological function due to predation of native marine organisms and/or competition for resources. Once IMS establish, spread and become abundant in coastal waters some species can have major ecological, economic, human health and social/cultural consequences (Carlton 1996, 2001; Pimental et al. 2000; Hewitt et al. 2011). | Significant (C) |

| | |
|---|---|
| Benthic communities, shallow water coastal environments in WA marine parks and reserves (the closest of which is Browse Island) and fisheries (commercial (including aquaculture)/ traditional/recreational) all have the potential to be impacted by IMS. Shallow water, coastal marine environments are susceptible to the establishment of invasive populations, with most IMS associated with artificial substrates in disturbed shallow water environments such as ports and harbours (e.g. Glasby et al. 2007; Dafforn et al. 2009a, 2009b). Aside from ports and harbours, other shallow water, pristine environments also at risk include offshore islands and shoals (Section 4.4) which contains sensitive benthic habitats with a potential to be impacted by invasive populations.<br><br>In order for an IMS to pose a biosecurity risk once present at a recipient location, viable IMS propagules and/or individuals must be able to transfer from the colonised area (e.g. a vessel hull), survive in the surrounding environment, find a suitable habitat, and establish a self-sustaining population.<br><br>MODU and vessel operations are a mechanism for such transfer of IMS propagules either through the uptake and discharge of high-risk ballast water containing IMS and/or via the presence of IMS within biofouling communities on hulls or submerged equipment. IMS propagules may also be transferred via natural dispersion. Natural dispersal mechanisms could involve a mobile life-history stage (such as actively swimming adults or larval stages) with sufficient swimming capacity and/or larval durations to directly reach suitable habitats in coastal waters. Natural dispersal from offshore locations for IMS with shorter pelagic dispersal capabilities to coastal areas is also theoretically possible via intermediate steps (stepping-stone dispersal), where intermediate populations establish in suitable habitats closer inshore, and subsequent generations then spread towards coastal regions.<br><br>With consideration of the habitat preferences of IMS (shallow water environments), the closest shallow water habitat to the licence area is Browse Island, located approximately 26 km away. However, it is neither disturbed nor contains artificial structures that IMS are reported to prefer.<br><br>Support vessels transiting between WA-50-L and Broome or Darwin port have the potential to act as vectors for the transfer of IMS propagules to sensitive benthic habitats in the EMBA and this may result in medium term impacts to benthic communities with a consequence rating of Significant (C). | |

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|---|---|
| The transfer of IMS propagules via anthropogenic dispersal mechanisms and/or stepping-stone dispersal from MODUs or vessels colonised with IMS, has the potential to affect distant commercial, traditional and recreational fishing including aquaculture through impacts on economic or recreational values. There are several significant pearl farm sites located along the Kimberley coast, particularly in the Buccaneer Archipelago, Roebuck Bay and at the Montebello Islands. Although none of these areas overlap the EMBA they are potentially susceptible to IMS. The successful introduction of IMS in these areas may impact aquaculture resulting in a loss of revenue. Although there are no IPAs within the EMBA, traditional Aboriginal fishing is known to occur in State marine parks along the Kimberley coastline (Section 4.9.5). The main areas of recreational fishing effort is known to occur at population centres around Broome and Wyndham not within the EMBA (Section 4.10.1); however, extended fishing charters are known to operate during certain times of the year to fishing spots off the WA coast, including Scott Reef. The introduction and subsequent establishment of IMS may result in regional community disruption with a moderate impact on economic or recreational values associated with commercial, traditional and recreational fishing (Moderate (D)). | |
| Identify existing design and safeguards/controls measures | |
| • Vessels have an antifouling coating applied that is in accordance with the prescriptions of the International Convention on the Control of Harmful Anti-fouling systems on ships, 2001, and the *Protection of the Sea (Harmful Antifouling Systems) Act 2006* (Cwlth).<br>• MODU and vessels will have an approved ballast water management plan and valid ballast water management certificate, unless an exemption applies or is obtained.<br>• MODUs and vessels operating within Australian seas will manage ballast water discharge using one of the following approved methods of management (DAWE 2020):<br>o an approved ballast water management system<br>o ballast water exchange conducted in an acceptable area *<br>o use of low risk ballast water (e.g. fresh potable water, water taken up on the high seas, water taken up and discharged within the same place)<br>o retention of high-risk ballast water on board the vessel<br>o discharge to an approved ballast water reception facility.<br>* Acceptable area is as defined in the Biosecurity (Ballast Water and Sediment) Determination 2019. For high-risk ballast water an acceptable area for ballast water exchange is defined as (DAWE 2020):<br>- Vessels servicing an offshore facility/MODU: at least 500 m from the facility, and no closer than 12 nm from the nearest land<br>- All other vessel movements: at least 12 nm from the nearest land and in water at least 50 m deep; not within 12 nm of the Great Barrier Reef or Ningaloo Reef ballast water exchange exclusion areas. | |

- All MODUs and vessels that use ballast water will comply with the Australian Ballast Water Requirements Version 8 (DAWE 2020) enforceable under the *Biosecurity Act 2015*.
- MODU/vessels operating in Australian waters will have biofouling management plans and biofouling record book in accordance the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements (Version 2 DAFF 2023).
- Vessel masters will be advised to reduce time spent near high value sensitive areas such as offshore island and shoals and no ballast water to be exchanged in order to limit the potential spread of IMS.

| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
|---|---|---|---|
| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | Eliminate MODU and vessel use to avoid the spread of IMS. | No | A MODU is required to perform the drilling activity and can not be eliminated. Vessels are the only form of transport that can supply and support the MODU that is practicable and cost efficient. |
| Substitution | Only use a local MODU already operating in Australian waters. | No | Although using only local vessels is possible for the activity, using only a local MODU would result in delays when sourcing an appropriate available MODU. The potential cost and time needed to source a capable MODU locally is disproportionate to the minor environmental gain potentially achieved. MODU's operate globally and therefore are not always available in Australian waters.<br><br>Additional to this, there are known locations within Australia which harbour IMS (Section 4.8) and could potentially act as a source for the further spread of IMS within Australian regions. Due to the operational profile of MODU's (i.e. being static for long periods ~ 100 days when on location) they have a higher risk profile than support vessels that transit. Therefore, substituting to the use of locally available MODUs may not provide an environmental benefit. |
| | Preferentially select local support vessels already operating in Australian waters. | Yes | To reduce the potential spread of IMS, support vessels already operating in Australian waters will be selected to support the drilling campaign in preference to vessels operating internationally. |
| Engineering | MODU has an anti-fouling coating to all submerged areas. | No | Some MODUs currently on the market may have anti-fouling coatings applied to all submerged areas and others may only have it applied to intakes and seachests. |

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|---|---|---|---|
| | | | Anti-fouling coatings vary in their efficacy and utilise a range of technologies to limit the ability of biofouling to attach to the surface. Some anti-fouling coatings include biocidal layers, while others rely upon creating surfaces that reduce the likelihood of organisms to freely attach. Despite the differences in types of anti-fouling coatings and the subsequent variations in performance and efficacy, there is always an inherent risk that niche areas below the water line may harbor biofouling communities and IMS, even when antifoul coatings are present.<br><br>MODU availability must align with the schedule and other commercial considerations therefore, to limit MODU selection to only those that have anti-fouling coatings may add some value, but it will not eliminate the risk completely.<br><br>Therefore, INPEX will engage an independent third-party to undertake a biofouling risk assessment for the MODU (described in procedural controls row below) and will implement any controls required as the outcome of the biofouling risk assessment rather than rely on a MODU being available that has an anti-fouling coating that may not necessarily be an effective control. |
| Procedures & administration | Complete a biofouling risk assessment (including immersible equipment) for MODUs and vessels **mobilised directly to WA-50-L from international waters,** and implement mitigation measures commensurate to the risk, as appropriate to ensure the mobilisation of the vessel poses a low risk of introducing IMS. | Yes | The completion of a biofouling risk assessment and the implementation of associated biofouling reduction and management measures reduce the likelihood of IMS translocation and subsequent potential for transfer and establishment. This approach is in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements (Version 2).<br><br>A biofouling risk assessment is a desktop-based evaluation to determine the likelihood, and hence theoretical risk of a vessel acting as a vector for the transfer of IMS. It does not attempt to identify whether or not a vessel is actually carrying a pest species, but rather ranks vessels on a relative scale of High, Uncertain or Low/Acceptable risk, to identify which vessels may require further detailed investigation and/or management actions to reduce potential risk. |

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| | | | For any MODUs and vessels mobilising from international waters directly to WA-50-L, the assessment, undertaken by an independent third-party IMS expert on behalf of INPEX may include, but is not limited to, the following:<br>• vessel specifications: vessel name, type, size and Flag State, etc.<br>• movements: port of origin, voyage history, destination, transport method, evidence of recent dry-docking and/or inspection, etc.<br>• anti-fouling coating: type (i.e. biocidal/non-biocidal), age, service life, application area, record of Antifouling Systems Certificate, etc.<br>• inspection/cleaning: inspection and cleaning history including any relevant independent biofouling inspection reports, etc.<br>• seawater systems: marine growth prevention systems present and functioning, maintenance records, evidence of chemically or manually cleaned seawater systems including last treatment date and chemicals used etc.<br>• duration of stay: at overseas or interstate locations, and duration in WA coastal waters etc.<br>Outcomes of the biofouling risk assessment may identify the need to implement mitigation measures such as limitations of time spent in coastal waters/or alongside and managing interactions with supply vessels, through to inspection and cleaning of hulls and submerged areas. |

| | | | |
|---|---|---|---|
| | Complete a biofouling risk assessment (including immersible equipment) for MODUs and vessels mobilised **domestically from within Australian waters**, and implement mitigation measures commensurate to the risk, as appropriate to ensure the mobilisation of the vessel poses a low risk of introducing IMS. | No | As described above, MODUs or vessels mobilising from international waters directly to WA-50-L will have a biofouling risk assessment undertaken as they will not enter an Australian port and therefore not necessarily meet the DAFF pre-arrival requirements (refer to Table 2-2). However, for MODUs or vessels already operating within Australian waters a biofouling risk assessment will not be completed as this is not considered necessary for domestic MODUs or vessels as any MODU/vessel operating in Australian Waters will need to have met the requirements as detailed in the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements (Version 2) at its first point of entry to an Australian port.<br><br>An additional biofouling risk assessment is disproportionate and unnecessary if the MODUs/vessels have already demonstrated compliance with regulations upon entry to Australia as administered by DAFF. |
| Identify the likelihood | | | |
| The likelihood of an IMS becoming successfully established at a recipient location depends on a range of factors including physical characteristics of the environment falling within the tolerance ranges of the IMS (i.e. salinity, temperature, nutrient availability, etc.), and the biological characteristics of the species and the natural environment (i.e. reproductive properties, presence of appropriate prey species, predation pressure, etc.). This potential is known to be dependent on a range of factors including propagule pressure, density of the colonised population, and a range of biotic interactions and abiotic factors specific to the local marine environment. | | | |

For an IMS to establish a self-sustaining reproductive population in a recipient region, it must successfully pass through a series of stages along an invasion pathway, which include a range of selective filters. Selective filters affect the total number of organisms that can survive and successfully transition to the next stage of the invasion pathway. Offshore selective filters in the invasion pathway are likely to be more significant than for coastal environments, given there is little availability of artificial surfaces or suitable settlement habitats for propagules, and greater dilution of propagule plumes. As a result, in offshore oceanic environments propagule plumes from infrastructure colonised by IMS are likely to be highly dispersed with low densities of propagules present in the water column. In turn, if propagules are able to survive the extended periods necessary for them to be transferred to coastal waters, this is still likely to result in low densities of propagules encountering suitable habitat in shallow coastal environments. As a result, propagule pressure will be low and therefore establishment potential constrained. It is now widely accepted that 'propagule pressure' (or the number of individuals introduced), is a primary determinant of establishment success for introduced populations (Lockwood et al. 2005, Simberloff 2009). Propagule pressure is also important for the post-establishment success of IMS populations. As propagule pressure increases, it becomes more likely that the founder population will survive or has sufficient genetic variation to adapt to local conditions and establish a self-sustaining population (Lejeusne et al. 2014; Roman & Darling 2007) thereby becoming 'introduced'. Many propagules may be released but never survive to join local populations.

Marine pests known to be present in WA and NT waters (including the ports of Broome, Dampier and Darwin) and are described in Section 4.8 and Section 4.10.3.

MODUs and vessels that may be mobilised from international waters or domestically are not considered to provide a likely source for the introduction and establishment of IMS. This is due to a number of factors including the lack of man-made infrastructure e.g. jetties/wharves in the deep waters of WA-50-L where the activity will occur, and the controls and procedures in place to manage ballast water exchange and biofouling risks. As such, there is a low potential for biofouling to occur and act as a potential inoculum for the establishment and subsequent spread of IMS. Adherence to the Australian ballast water management requirements including the use of an approved ballast water management method also reduces the potential for the spread of IMS (Remote 6).

During drilling, support vessels will use Broome Port as the main supply base however they may also use Darwin or Dampier ports. The presence of jetties and wharves in ports, provides substrate for IMS, meaning that the ports could act as a source of IMS inoculum. However, resupply is typically undertaken within a relatively short timeframe (approximately 48 hours) therefore the potential for vessels to become colonised by biofouling communities is reduced. Guidance from WA DPIRD (Vessel Check Biofouling Risk Assessment Tool) acknowledges that the attachment of biofouling may occur in as short a time frame as 24 hours; however, as a 'rule of thumb', 7 days is considered to provide a pragmatic balance between logistical factors versus the risk of a vessel being contaminated with an IMS. With the described controls in place, the potential spread of IMS via support vessels during the activity is considered to be Remote (6).

Vessel masters will select appropriate transit routes between the WA/NT mainland and the licence area based on sea state conditions. During adverse sea conditions or cyclone events, due to safety reasons, vessels may seek shelter in protected areas. Typically, this would be on the leeward side of offshore islands or shoals, with vessels remaining on DP in water depths of >100 m. Many offshore islands and shoals contain sensitive, pristine benthic habitats with respect to IMS. Therefore, access to these habitats by vessels is not permitted under normal circumstances. However, sheltering during cyclone events for safety reasons, may result in these habitats being exposed to vessels that have been alongside known sources of IMS (e.g. mainland ports). Water depths where vessels would seek shelter will be approximately 100 to 150 m, as this affords the vessel the greatest protection from oncoming swells. Such deep water, sheltering locations are unlikely to provide optimal conditions for the recruitment of IMS based on a lack of hard substrate (either natural or artificial). Additionally, an advantage of sheltering on the leeward side of an island/shoal is that based on the prevailing current, the vessel will likely be downwind and therefore potential IMS propagules released from any biofouling assemblages on vessel hulls (ballast water exchange is not planned during these times) would be released downstream of the islands/shoals. Therefore, any propagules will be carried in the current away from sensitive benthic habitats.

During sheltering events, considered infrequent, the vessel controls in place for planned operations are considered to be sufficient to manage potential risks. Typically, during adverse sea conditions or cyclonic events, vessels may spend approximately 12 to 48 hours in sheltered locations and therefore it is considered to be of relatively short duration and an infrequent activity. With described controls in place, the potential for colonisation of vessels is not considered to be likely and hence the potential for spread of IMS of concern via domestic conveyances during unplanned operations is considered to be Remote (6).

Residual risk summary

Based on a consequence of Significant (C) and a worst-case likelihood of Remote (6) the residual risk is Moderate (8).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Significant (C) | Remote (6) | Moderate (8) |

Assess residual risk acceptability

Legislative requirements

MODU and vessel ballast water will be managed in accordance with the intent of the Australian Ballast Water Requirements Version 8 (DAWE 2020) and the *Biosecurity Act 2015*. Biofouling will be managed through vessel and equipment risk assessments and mitigation measures, in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements (version 2) (DAFF 2023). All vessels that use ballast water are required to meet the Regulation D2 discharge standard of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (the Convention) if they were constructed after 2017 or at their next renewal survey after September 2019. All ships must meet the D2 standard by 8th September 2024 and this will lead to an ongoing reduction in potential risk from ballast water discharges over the life of this EP. The control measures described are consistent with NOPSEMA's Information Paper: Reducing marine pest biosecurity risks through good practice and biofouling management, IP1899 (NOPSEMA 2024d).

Relevant person consultation

No relevant person concerns have been raised regarding potential impacts and risks from IMS.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (refer Appendix B). IMS have been identified as a threat in many conservation management plans, with actions focusing on the prevention of their introduction. The control measures described are consistent with the actions described in the conservation management documentation.

ALARP summary

The level of environmental risk is assessed as Moderate, therefore a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “moderate”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| No establishment of IMS of concern in the Commonwealth Marine Area or coastal waters via ballast water or biofouling attributable to the petroleum activity. | Support vessels (of appropriate class) will have an antifouling coating applied in accordance with the prescriptions of the International Convention on the Control of Harmful Anti-fouling Systems on Ships (2001) and the *Protection of the Sea (Harmful Antifouling Systems) Act 2006* (Cwlth). | Support vessels (of appropriate class) have a current International Anti-fouling Systems certificate or a Declaration on Anti-fouling Systems. |
| | All MODUs/vessels will have:<br>• approved MODUs/vessel-specific ballast water management plan maintained, or record of DAWE issued exemption (if not automatic exemption) on board. | All MODUs/vessels will have:<br>• an approved ballast water management plan, unless an exemption applies or is obtained. |

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| | • valid ballast water management certificate or record of DAWE issued exemption (if not an automatic exemption) on board. | • a valid ballast water management certificate, unless an exemption applies or is obtained. |
| | MODUs and vessels operating within Australian seas will manage ballast water discharge using one of the following approved methods of management (DAWE 2020) including:<br>• an approved ballast water management system<br>• exchange of ballast water exchange conducted in an acceptable area<br>• use of low risk ballast water (e.g. fresh potable water, water taken up on the high seas, water taken up and discharged within the same place)<br>• retention of high-risk ballast water on board the vessel<br>• discharge to an approved ballast water reception facility. | MODUs/vessels premobilisation inspection and annual verification audit reports confirm through ballast water records that an approved ballast water management option has been used. |
| | MODUs/vessels that use ballast water will comply with the Australian Ballast Water Requirements Version 8 (DAWE 2020). | Records confirm MODUs/vessels meet Australian Ballast Water Requirements Version 8. |
| | All MODUs/vessels currently operating in Australian waters will implement a:<br>• biofouling management plan.<br>• biofouling record book in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements. | MODUs/vessels premobilisation inspection confirms MODU/vessels have biofouling management plan and biofouling record book containing records of biofouling risk assessments and implementation of any associated biofouling reduction and management measures. |
| | Vessel masters notified to reduce time spent near high value areas such as offshore islands and shoals and no ballast water exchange to be undertaken to limit the potential spread of IMS. | Records of adverse weather planning communications including environmental assessment of vessel movements. |

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| | Support vessels already operating in Australian waters will be selected to support the drilling campaign in preference to internationally sourced vessels to reduce the potential for spread of IMS. | Records of support vessel selection. |
| | A biofouling risk assessment will be completed by an independent IMS expert for MODUs and vessels, including immersible equipment, prior to mobilisation to WA-50-L directly from international waters. Where required, mitigation measures commensurate to the risk will be implemented to ensure the vessel mobilisation poses a low risk of introducing IMS. | MODU specific biofouling risk assessment and any records of mitigation measures implemented confirming the MODU/vessel presents a low risk. |

### 7.4.2 Interaction with marine fauna

**Table 7-13: Impact and risk evaluation – Physical presence of vessels and interaction with marine fauna (vessel strike)**

| Identify hazards and threats | |
|---|---|
| The physical presence and use of vessels in the licence area during the drilling activity has the potential to result in collision with marine fauna (vessel strike) which may result in death or injury to individuals. Increased vessel traffic may result in increased turtle/vessel interactions and disruption to internesting or foraging behaviours. There is no towed equipment or equipment installed subsea with installation aids (i.e. rope loops or cables) associated with the activity. The flying leads associated with the temporarily deployed EDP/LRP package are not of sufficient length to present an entanglement hazard to marine fauna. Additionally, the EDP/LRP package is constantly monitored by ROV for the duration of deployment (approximately 5 days per well). | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by vessel strike or entanglement are:<br>• EPBC listed species.<br>The physical presence of vessels supporting the drilling activity in WA-50-L has a potential for interaction with transient, EPBC-listed species; specifically, marine mammals, whale sharks and turtles. A collision (vessel strike) with marine fauna may result in injury or death. Collisions between vessels and cetaceans occur more frequently where high vessel traffic and cetacean habitat overlap (Dolman & Williams Grey 2006). Vessel speed has been demonstrated as a key factor in collisions with marine fauna such as cetaceans and turtles, and it is reported that there is a higher likelihood of injury or mortality from vessel strikes on marine mammals when vessel speeds are greater than 14 knots (Laist et al. 2001; Vanderlaan & Taggart 2007).<br>The potential for vessel strike applies to all marine mammals, whale sharks and turtle species; however, humpback whales are considered to have a higher potential likelihood due to their extended surface time. The potential for collision during the drilling campaign is however reduced as the licence area is located hundreds of kilometres offshore, away from critical habitats such as humpback BIA areas (migration and calving) as shown in Figure 4-4 (located approximately 120 km south-east from WA-50-L at its closest point). The reaction of whales to approaching ships is reported to be quite variable. Dolman and Williams Grey (2006) indicate that some cetacean species, such as humpback whales, can detect and change course to avoid a vessel. | Minor (E) |

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|---|---|
| The blue whale has a foraging BIA at Scott Reef (Figure 4-4). The blue whale is subject to a Conservation Management Plan (Appendix B). The Conservation Management Plan identifies that, since 2006, there have been two records of likely ship strikes of blue whales in Australia. In 2009 and 2010, there were blue whale strandings in Victoria, near the Bonney Upwelling with suspected ship strike injuries visible. Where blue whales are feeding at or near the surface, they are more susceptible to vessel strike. However, the open ocean environment allows for whales to invoke avoidance behaviour in threatening situations. The Blue Whale Conservation Management Plan highlights that minimising vessel collision is one of the top four priorities and requires assessment of vessel strike on blue whales, assures that incidents are reported in the National Ship Strike Database, and that control measures proposed will align with these priorities.<br><br>Whale sharks do not breach the surface as cetaceans do; however, they are known to spend considerable time close to the surface increasing their vulnerability to vessel strike (DEE 2017c). Whale sharks reportedly spend 40% of their time in the upper 15 m of the water column which leaves them vulnerable to collision with smaller vessels as well as larger commercial vessels that have drafts that extend greater than 20 m below the surface (Wilson et al. 2006, Gleiss et al. 2013). The foraging area for whale sharks (BIA) is located approximately 10 km south-east from WA-50-L at its closest point (Figure 4-6). Whale sharks are also subject to a Conservation Advice (Appendix B), which notes that the threat to the recovery of the species includes strikes from vessels. While the Conservation Advice does not specify any particular measures for whale shark strike reporting, a control measure requiring compliance with the Whale Shark Wildlife Management Program no. 57 (DPaW 2013) addresses avoidance of whale sharks and, as such, is considered to align with the Conservation Advice for whale sharks.<br><br>Turtles transiting the region are also at risk from vessel strike when they periodically return to the surface to breathe and rest. Only a small portion (3–6%) of their time is spent at the surface, with routine dive times lasting anywhere between 15 and 20 minutes nearly every hour. The presence of vessels has the potential to alter the behaviour of individual turtles. Some turtles have been shown to be visually attracted to vessels, while others show strong avoidance behaviour (Milton et al. 2003). Following publication of the Recovery Plan for Marine Turtles in Australia (DEE 2017a), habitats critical for the survival of the genetically distinct, ‘Scott Reef – Browse Island’ green turtle population has been identified (Figure 4-5). The closest identified habitat to WA-50-L, relates to an internesting area consisting of a 20 km buffer around Browse Island between November and March each year. The BIA does not overlap the licence area (where support vessels may be operating) which is located approximately 26 km from Browse Island. During the internesting periods studies have shown that green turtles tend to stay relatively close to their nesting beach, approximately 7 km as reported by Pendoley (2005) and generally within 10 km (Waayers et al. 2015). Therefore, any impacts are expected to be localised and of minor consequence at the population level for these mobile and broad-ranging species. | |

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| Given the expansive open ocean environment of the licence area, the potential for the displacement of cetaceans by vessels associated with the proposed activity is considered to be low. Additionally, there are no recognised feeding or breeding grounds for cetaceans or turtles within WA-50-L. While there is potential for a small number of individual marine fauna (particularly green turtles present in the internesting buffer at Browse Island) to be impacted by vessels in WA-50-L, any potential vessel strike to marine fauna is likely to be limited to isolated incidents. As reported by the DEE (2017a), although the outcome can be fatal for individual turtles, vessel strike (as a standalone threat) has not been shown to cause stock level declines. In the event of the death of an individual whale, whaleshark or turtle, it would not be expected to have a significant effect at the population level (Minor E).<br><br>With reference to the Recovery Plan for Marine Turtles in Australia (DEE 2017a) based on the long-life span and highly dispersed life history requirements of marine turtles it is acknowledged that they may be subject to multiple threats acting simultaneously across their entire life cycle, such as increases in background light and noise levels. In considering cumulative impacts of threats on small or vulnerable stocks of marine turtles, it is likely that vessel strike may act as contributor to a stock level decline. | |

Identify existing design and safeguards/controls measures

- Implementation of EPBC Regulations 2000 – Part 8 Division 8.1 (Regulation 8.05).
- Vessel speed restrictions and separation distances maintained for whale sharks.
- Vessel crew will receive an induction/training to inform them of the requirements of EPBC Regulations 2000 – Part 8, Division 8.1 (Regulation 8.05) in accordance with Table 9-3 (INPEX Australia Support Vessels Marine Fauna Awareness Training).

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Eliminate the use of vessels | No | A vessel is the only form of transport that can provide the required level of supply and support to the MODU, that is practicable and cost efficient.. |
| | Reduce the frequency of supply vessel visits to MODUs | No | Reducing the number of vessel supply trips would decrease the potential for vessel interactions with marine fauna; however, the frequency of re-supply by support vessels is already optimised to be as low as practicable and cannot be further reduced. |

| | | | |
|---|---|---|---|
| | Prevention of vessels entering internesting area during November to March to avoid disturbance to nesting green turtles at Browse Island | No | The introduction of an exclusion zone within the Browse Island internesting BIA buffer (20 km) is not considered to be warranted given support vessels transiting between the MODU in WA-50-L and Darwin/Broome/Dampier typically remain 12 nm (approximately 22 km) from Browse Island. However, exact vessel routes will be influenced by sea state conditions and under adverse sea conditions (e.g. cyclone sheltering) vessels may enter the BIA but would remain on DP in water depths of >100 m.<br><br>Given the short duration (12-48 hours) of any sheltering events and that research has indicated that internesting green turtles generally stay within 10 km of their nesting beaches, the need for a total exclusion zone (during nesting season) from the 20 km buffer is not considered necessary. |
| Substitution | Use smaller vessels for resupply of the MODU | No | Using smaller vessels, travelling at slower speeds may decrease the potential to harm or fatally injure marine fauna in the event that a vessel strike occurred; however, smaller vessels would require more frequent journeys or may have space and weight limitations for equipment required on the MODU. |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | Vessel speed restrictions or separation distances maintained for turtles | No | It is reported that turtles generally stay close to their nesting beaches during the internesting period, so only individuals would be likely to be present in the licence area given the distance from Browse Island (26 km). Additionally, turtles reportedly spend a small portion (3–6%) of their time at the surface, this makes turtle observations by crew from the bridge of a vessel very difficult given that turtles are considerable smaller than whales or whale sharks. On this basis, reducing vessel speeds and maintaining separation distances is not considered to be an effective control and will not be implemented. |
| | Dedicated marine mammal observer (MMO) on vessels | No | The use of dedicated MMOs onboard vessels may improve the ability to identify marine fauna at risk of collision. However, this is not considered to be practicable given POB limits on vessels and through implementation of the environmental awareness program for crew (Table 9-2) is not considered to provide additional environmental benefit for the increase in cost associated with implementing this control. |

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| | | | The whale shark foraging BIA is located approximately 10 km from WA-50-L at its closest point. However, based on the levels of whale shark abundance observed in numerous studies (as described in Section 4.7.4), the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration. |

**Identify the likelihood**

Collisions with large vessels often go unnoticed and/or unreported (Cates et al. 2017). A preliminary examination of vessel collision reports between 1840 and 2015 was undertaken by Peel et al. in 2016, referenced in the National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Fauna (DEE 2017c). Peel et al. (2016) identified 109 records of ship strike in Australian waters predominantly involving humpback whales (47%). The records showed that the majority of events were in Queensland, with 10 events recorded in WA waters between 1995 and 2015. This suggests that despite the growing presence of oil & gas activities on the NWS/Timor Sea, and the steady increase (9% per year) in humpback whale numbers (Bejder et al. 2016), whale populations have not been affected by collisions with oil & gas related vessels.

An internesting BIA for green turtles at Browse Island (20 km buffer, DEE 2017a) has identified habitat critical for survival between November and March each year, however internesting turtles are likely to stay within 10 km of their nesting beach. Nevertheless, support vessel routes will not encroach on the 20 km buffer unless in adverse sea conditions, as they shall remain beyond the 12 nm territorial sea limit (12 nm equates to approximately 22 km). During weather events i.e. sheltering during cyclone events, support vessel may seek shelter in lee of Browse Island for safety reasons. The duration of such activities is expected to be limited to 12-48 hours and therefore the likelihood of interactions with marine turtles is further reduced.

The controls described above are commensurate with the level of risk and the likelihood of a vessel strike causing injury or death to EPBC-listed species is considered to be Highly Unlikely (5). There have been no incidents of vessel strike reported during the nearby INPEX Ichthys operational activities in WA-50-L to date.

If concurrent drilling operations were to occur in WA-50-L, an increase in vessel movements may increase the potential for vessel strike to occur. However, the controls described above are commensurate with the level of risk and the likelihood of a vessel strike causing injury or death to EPBC-listed species is still considered to be Highly Unlikely (5).

**Residual risk summary**

Based on a consequence of Minor (E) and a likelihood of Highly Unlikely (5) the residual risk is Low (9).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Minor (E) | Highly Unlikely (5) | Low (9) |

| Assess residual risk acceptability | | |
|---|---|---|
| Legislative requirements<br><br>EPBC Regulations 2000 – Part 8, Division 8.1 (Regulation 8.05) will be implemented with regards to vessel speeds and separation distances.<br><br>Relevant person consultation<br><br>No concerns have been raised regarding potential impacts and risks from the physical presence of the MODU and support vessels and potential for vessel strike associated with the petroleum activity.<br><br>Conservation management plans / threat abatement plans<br><br>Several conservation management plans have been consulted in the development of this EP (Appendix B). Actions identified in the Blue Whale Conservation Management Plan and conservation advice documents for whale sharks regarding vessel strike incident reporting will be implemented and controls in this EP are in alignment with the intent of the National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Fauna (DEE 2017c).<br><br>ALARP summary<br><br>Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.<br><br>Acceptability summary<br><br>Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:<br><br>• the activity demonstrates compliance with legislative requirements/industry standards<br>• the activity takes into account relevant person feedback<br>• the activity is managed in a manner that is consistent with the intent of conservation management documents<br>• the activity does not compromise the relevant principles of ESD<br>• the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |

| | | |
|---|---|---|
| No injury/ mortality of cetaceans, whale sharks or turtles resulting from interactions with vessels undertaking the petroleum activity. | Interactions between vessels and cetaceans will be consistent with EPBC Regulations 2000 – Part 8, Division 8.1 (Regulation 8.05) *Interacting with cetaceans*:<br>• Support vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) and minimise noise.<br>• Support vessels will not approach closer than 50 m to a dolphin and/or 100 m for a whale (with the exception of bow riding).<br>• If a cetacean shows signs of being disturbed, support vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots. | Records of event reports if vessel strike occurs. |
| | Interactions between support vessels and whale sharks will be consistent with the Whale Shark Wildlife Management Program no. 57 (DPaW 2013); specifically, support vessels will not travel faster than 8 knots within 250 m of a whale shark (exclusive contact zone) and not approach closer than 30 m of a whale shark. | Records of breaches of whale shark code of conduct are documented. |

## 7.5 Seabed disturbance

**Table 7-14: Impact and risk evaluation – Seabed disturbance**

| Identify hazards and threats | |
|---|---|
| As described in Section 3.3, a moored MODU may be secured to the seabed through a series of anchors and anchor chains. For a typical moored semi-submersible MODU, given the expected anchor and anchor chain dimensions (Section 3.3.1) approximately 1,000 $m^2$ (0.001 $km^2$) of benthic habitat may be disturbed per well.<br><br>During the drilling campaign, vessels may also use temporary moorings which may be installed in the vicinity of the Ichthys Field to reduce time spent on DP. Temporary moorings would likely consist of a single clump weight or drag embedment anchor, a length of chain and cable to a buoy, which would be retrieved at the end of the drilling campaign. The expected area of physical disturbance to the seabed associated with a temporary mooring is approximately 15-30 $m^2$.<br><br>The use of the rig acoustic positioning system/LBL arrays (2 – 3 $m^2$), IMR related equipment e.g. leak detection systems (4 – 5 $m^2$) and cathodic protection systems (2 -3 $m^2$), and ROV tooling baskets (2 -3 $m^2$) may be temporarily positioned on the seabed during the drilling campaign. These items will be retrieved at the end of the campaign/IMR activity.<br><br>The physical footprint of the drilling campaign will be limited to the well locations, MODU mooring system and temporary moorings. Anchoring, the use of temporary moorings and the temporary placement of LBL arrays/IMR and ROV equipment on the seabed has the potential to physically disturb the seabed in WA-50-L. A disturbance to benthic communities has the potential to result in reduced ecosystem productivity or diversity. In addition to physical disturbance, the drilling activities may also result in the localised generation of silt plumes that could affect surrounding benthic communities. | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by seabed disturbance are:<br>• benthic communities<br>• fish (demersal fish community KEF and commercial species)<br>• underwater cultural heritage.<br><br>As described in Section 4.6.3, several seabed habitat surveys have been undertaken in the Ichthys Field in WA-50-L. The results of the surveys observed that seabed topography was relatively flat and featureless (INPEX 2010) with no obstructions or features on the seafloor, such as boulders, reef pinnacles or outcropping hard layers (Fugro Survey Pty Ltd. 2005, 2015; RPS 2007). The observed habitat generally supported a diverse infauna dominated by polychaetes and crustaceans typical of the broader region and this was reflected in survey results which indicated that the epibenthic fauna was diverse but sparsely distributed (RPS 2008). | Insignificant (F) |

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|---|---|
| Benthic habitats within WA-50-L comprise of soft substrate, typical of deep continental shelf seabed habitats which are widely distributed in deeper parts of the Browse Basin (RPS 2007), and commonly found throughout the NWMR (Baker et al. 2008). Survey data also confirmed the seabed in WA-50-L has a lack of seabed features and identified heavily rippled sediments and sand waves suggestive of strong near seabed currents. The largest sand waves identified were reported to vary from 0.5 to 1.0 m in height with a maximum gradient on their northern lee side of approximately 20 degrees (Fugro Survey Pty Ltd 2015). In general, deep-sea infaunal assemblages are poorly studied on the NSW but are likely to be widely distributed in the region including WA-50-L (INPEX 2010).<br><br>The total disturbance footprint from the drilling campaign is expected to be approximately 0.013 $km^2$, which in the context of WA-50-L, covering an area of approximately 570 $km^2$, represents the disturbance of 0.0023% of the production licence area. The activity may result in the mortality of sessile fauna within this footprint and potentially the mortality of benthic infauna associated with the habitat; however, it is considered that potentially impacted benthic habitats and associated biota are well represented in the region. Therefore, any temporary disturbance and losses will represent a very small fraction of the widespread available habitat. Following removal of the MODU anchors, temporary moorings and completion of the drilling campaign, the soft sediments will be left disturbed; however, upon retrieval of the anchors/moorings, benthic habitats would remain viable and are expected to recolonise through the recruitment of new colonists from planktonic larvae and adjacent undisturbed areas.<br><br>Displacement of sediments during anchor and mooring deployment/retrieval may result in temporary, localised plumes of suspended sediment and subsequent deposition of sediment resulting in smothering of marine benthic habitat and benthic communities in the immediate vicinity. Parts of the ancient coastline KEF, particularly where it exists as a rocky escarpment, are thought to provide biologically important habitats in areas otherwise dominated by soft sediments (DSEWPaC 2012a). It is considered that the hard substrate of the escarpment is likely to support a range of sponges, corals, crinoids, molluscs, echinoderms and other benthic invertebrates (DSEWPaC 2012a). The ancient coastline KEF is located, approximately 20 km south of WA-50-L at its closest point. Therefore, benthic communities associated with the KEF are not expected to be impacted as any silt plumes generated would have dissipated over this distance in the presence of near-seabed currents and it is not expected that sedimentation/smothering impacts would occur to benthic communities. This is also expected to be the case for Echuca and Heywood Shoals located 65 km and 90 km away respectively.<br><br>The potential consequence on benthic communities is a localised impact from physical disturbance within the footprint of the anchors/chains which is expected to be limited given the predicted sparse cover of benthic communities and expected recovery through recolonization. Therefore, it is assessed to be of inconsequential ecological significance (Insignificant F).<br><br>The demersal fish community KEF overlaps the licence area and a limited number of commercially significant fish stocks, considered as key indicator species, may be present in the waters of WA-50-L (Table 4-6). Although they may be present, given the deep waters and absence of suitable habitats, WA-50-L is not considered to offer spawning or aggregation habitat for demersal species (Section 4.10.1). Similarly, as southern bluefin tuna spawning is reported to occur in surface waters, despite the licence area overlapping a small portion of the spawning grounds, disturbance to seabed habitats from the petroleum activity is not expected to affect fish spawning habitats (Insignificant F). | |

| | |
|---|---|
| As described in Section 4.9.4, within the EMBA there are a number of wrecks over 75 years old which are protected under the *Underwater Cultural Heritage Act 2018.* In relation to WA-50-L the location of planned activities, the closest known shipwrecks are associated with guano transport and are located in proximity to Browse Island where they are reported to have been wrecked between 1878 and 1887.<br><br>In many cases, the exact location of the shipwrecks is unknown. However, as WA-50-L is approximately 26 km from Browse Island at the closest, shipwrecks are not expected to be disturbed by the proposed activities. The seabed in WA-50-L has heavily rippled sediments suggestive of strong near seabed currents and a lack of seabed features. Based on the distances to Browse Island, the physical footprint of disturbance and presence of strong near seabed currents, any impacts to cultural values associated with shipwrecks due to planned activities would be considered as a minor impact on heritage (Insignificant F). | |

| Identify existing design and safeguards/controls measures | | | |
|---|---|---|---|
| None identified | | | |
| **Propose additional safeguards/control measures (ALARP Evaluation)** | | | |
| **Hierarchy of control** | **Control measure** | **Used?** | **Justification** |
| Elimination | No anchoring by MODU | No | All semi-submersible MODUs will require some form of contact to remain stable on the seabed at the well location. Given the water depth in the permit areas, the use of a jack-up rig is not possible and therefore a semi-submersible MODU or drillship will be selected for use. Due to the drilling schedule, specific MODU availability cannot be guaranteed, hence a moored semi-submersible MODU has been assessed as is considered to represent the worst-case with respect to seabed disturbance from anchoring. |
| | No anchoring by vessels | Yes | Support vessels will not anchor in the licence area but will use DP to maintain position. If available, vessels may use temporary moorings to reduce time spent on DP. LWI vessels will maintain position through the use of DP systems and will not anchor in WA-50-L unless in the case of an emergency. |
| Substitution | None identified | N/A | N/A |

| | | | |
|---|---|---|---|
| Engineering | None identified | N/A | N/A |
| Procedures & administration | Rig move and positioning plan | Yes | Anchor installation and retrieval operations will be managed by implementation of the plan, based on the approved mooring design, to ensure that the mooring lines are installed as per design and the MODU remains on station and within the boundaries of WA-50-L. |
| | Implement an UCH 'unexpected finds protocol' | No | Unexpected finds of suspected UCH can occur during near and offshore developments (DCCEEW 2024f). Such finds may impact UCH and therefore breach the Underwater Cultural Heritage Act 2018. The Ichthys LNG offshore facility in WA-50-L was constructed, installed and commissioned from 2014 through 2018 and has been operational since that time. During INPEX's long-term presence in the licence area and extensive surveying of the seabed during the design, construction and further expansion phases of the Ichthys Project no UCH has been discovered.<br><br>During preparation of this EP a search of the AUCHD and the WA Museum shipwrecks database identified no wrecks or artefacts within WA-50-L (Section 4.9.4). Therefore, the implementation of an unexpected finds protocol is not warranted for the proposed activities to be undertaken in WA-50-L. Nevertheless, in the event that any UCH discoveries are made during the activity, relevant notifications will be made as detailed in Section 9.8.3. |
| | Equipment temporarily positioned or wet-stored on the seabed to be removed at the end of the campaign/IMR activity | Yes | The placement of equipment on the seabed may result in a temporary disturbance to benthic communities in WA-50-L. To promote the recovery and recolonisation of the seabed, equipment will be retrieved at the end of the drilling campaign or IMR activity. |
| Identify the likelihood | | | |
| Given the controls in place, the likelihood of impacting benthic communities located at the anchor/chain and temporary mooring locations in WA-50-L, is considered to be Possible (3). Any temporary impacts are considered to be ecologically insignificant to the wider diversity and productivity of benthic communities in the region, including the ancient coastline KEF, based on the relatively small area potentially impacted i.e. total disturbance footprint relative to the widespread available habitat and expected recovery.<br><br>Disturbance to seabed habitats from the petroleum activity is not expected to affect fish spawning habitats and with the controls in place the likelihood of impacting fish communities (demersal fish community KEF and commercial species) is Highly Unlikely (5). | | | |

No known underwater cultural heritage has been identified or reported in WA-50-L during any of INPEX's previous studies as part of the Ichthys development. Therefore, the likelihood of impacting or disturbing underwater cultural heritage from planned activities is considered to be Remote (6).

Residual risk summary

Based on a consequence of Insignificant (F) and a likelihood of Possible (3) the residual risk is Low (8).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Possible (3) | Low (8) |

Assess residual risk acceptability

Legislative requirements

There are no specific environmental guidelines/legislation regarding the environmental management of anchoring/moorings with respect to impacts on benthic communities. The rig moves and positioning plans will be developed in accordance with industry guidelines and standards namely the Mooring Code API RP 2SK and the APPEA MODU Mooring in Australian Tropical Waters Guidelines. In accordance with s572 of the OPGGS Act (removal of property), titleholders are required to remove all structures, equipment and other property from the title area, therefore any property associated with abandoned wells in WA-50-L will be removed by INPEX.

Relevant person consultation

Through consultation with relevant persons during the development of this EP, INPEX received feedback from Vocus Communications regarding the location of proposed drilling activities with reference to the submarine cable that services the Ichthys offshore facility present within WA-50-L. INPEX confirmed on a map the exact location of the cables in relation to the proposed drilling activities/drill centres in WA-50-L and that there would be no interaction with any submarine cables from the proposed drilling activities associated with this EP. No concerns have been raised by relevant persons regarding seabed disturbance.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (Appendix B). The recovery plan for sawfish and river sharks specifies habitat degradation and modification as a principle threat and details actions to reduce impacts on critical sawfish and river shark habitats. There are no critical habitats for sawfish or river sharks within WA-50-L and therefore no specific actions relating to seabed disturbance apply.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| Seabed disturbance is limited to planned well locations. | No planned anchoring of vessels associated with the activity. | Incident report |
| | INPEX will verify that the contractor prepares and implements a Rig Move and Positioning Plan prior to the MODU arriving in WA-50-L. The plan shall include:<br>Details of the configuration of the anchors necessary to keep the MODU securely on location and provides anchor-mooring analyses and procedures for anchor mobilisation and retrieval activities. This includes:<br>• planning and verification of well and MODU anchoring locations (including for relief wells) so that well and anchors are all located within the boundaries of WA-50-L.<br>• definition of procedures for anchor deployment and recovery. | Documentation confirming implementation of the Rig Move and Positioning Plan and any issues with anchor deployment, use and recovery that could increase seabed footprint of disturbance. |

| | | |
|---|---|---|
| | • anchors will be carried to the deployment location and deployed or retrieved directly using AHSV to minimise drag. | |
| | Temporarily wet-stored equipment will be retrieved from the seabed. | ROV 'as left' survey records demonstrate all temporarily wet-stored equipment has been removed. |

## 7.6 Social and cultural heritage protection

### 7.6.1 Physical presence - disruption to other marine users

**Table 7-15: Impact and risk evaluation – Physical presence of MODU and vessels resulting in disruption to marine users**

| Identify hazards and threats | |
|---|---|
| The physical presence of the MODU with associated support vessels (including LWI vessel) in WA-50-L has the potential to cause disruption to other marine users, including shipping operators and fisheries through the reduction of space available to conduct shipping and fisheries activities in the licence area. Support vessels do not have an associated 500 m exclusion zone, however the MODU and LWI are required to maintain a PSZ under the OPGGS Act. The PSZ will remain in place for the duration of the drilling activity while the MODU (or LWI vessel) is at each well location in WA-50-L with drilling activities estimated to last for 100-125 days per well (Section 3.1). The potential, albeit temporary, interference with and/or exclusion of other users, within the PSZ may result in a loss of revenue for commercial users including fisheries. | |
| Potential consequence | Severity |
| The particular values and sensitivities with the potential to be impacted by physical presence of the MODU/vessels are:<br>• shipping<br>• commercial, traditional (Indonesian) and recreational fisheries including Aboriginal traditional use of resources.<br><br>Other marine users in the vicinity of WA-50-L may be impacted by MODU and vessel presence (including the presence of PSZ exclusion) because of the loss of navigable space available to conduct their activities. The implications of such disruptions include changes to sailing routes and journey times, or reduced ability to fish in an area. The worst-case consequence from a loss of access to an area could result in economic losses and/or potential reduction in employment levels.<br><br>A review of AMSA's vessel traffic data for the Browse Basin in January 2024 confirmed the absence of any major shipping lanes within the licence area (Figure 4-8). A large proportion of the high-density vessel traffic in and around WA-50-L is related to supply vessels supporting the offshore developments (INPEX Ichthys facility and Shell Prelude FLNG facility) that routinely transit between the offshore facilities and the ports of Darwin and Broome on the mainland. Therefore, in some areas of WA-50-L heavy vessel traffic will occur. In addition to vessel traffic, INPEX's Ichthys offshore facility (CPF and FPSO) are permanently moored within WA-50-L, with 500 m exclusion zones in place, also contributing to a loss of navigable space in the licence area.<br><br>Individual vessels may have to slightly alter their sailing routes to avoid the MODU in WA-50-L, potentially leading to longer journey times; however, given the presence of the permanently moored facilities in the licence area that other marine users are aware of, any disruption is expected to cause minor impact and not result in any economic losses. Therefore, the consequence is considered to be insignificant (F). | Insignificant (F) |

| | |
|---|---|
| Several Commonwealth and State managed fisheries overlap the licence area (Section 4.10.1). In many instances, although the management area of a fishery overlaps WA-50-L, no fishing effort actually occurs in the licence area based on the water depth, water temperature and lack of suitable habitat. Of the fisheries overlapping WA-50-L, the Commonwealth-managed North West Slope Trawl Fishery is the only active fishery, however it reportedly fishes at low levels, with only negligible trawl fishing occurring in the Ichthys Field (AFMA 2024b). Based on the low level of identified commercial fishing activity and the relatively small spatial area occupied by the PSZ in comparison to the entire extent of the fishing grounds available to commercial operators, the potential loss of navigable space in which a fishing operator could conduct their activities is considered to be insignificant (F).<br><br>Although not expected, if concurrent drilling operations were to be undertaken in WA-50-L during the drilling campaign, the presence of additional support vessels and a MODU (with associated PSZ) is not expected to significantly affect the availability of navigable waters in relation to the area covered by the fishing grounds. Therefore, no cumulative impacts are expected.<br><br>WA-50-P is situated within the MoU box for Indonesian traditional fishing (DSEWPaC 2012) as shown on Figure 4-9. Therefore, Indonesian fishing vessels may be present in the area when transiting between fishing grounds at Scott Reef and Browse Island; however, transit routes are not expected to overlap WA-50-L as Scott Reef and Browse Island are located south of the licence area. Therefore, interference and disruption are not expected, and any impact is expected to be insignificant (F).<br><br>Recreational fishing and Aboriginal traditional use of resources may also occur off the WA coast during certain times of the year where resource availability may be influenced by the season (Section 4.9.5). There is no evidence that recreational fishing or Aboriginal traditional activities occur within WA-50-L most likely due to the distance from land, lack of features of interest and deep waters. Therefore, the potential for loss of access to the recreational fishing industry or traditional owners as a result of MODU/vessel physical presence in the licence area is considered to be of Insignificant consequence (F). | |

Identify existing design and safeguards/controls measures

- Ongoing relevant person notifications/consultation with relevant persons as per Section 9.8.3 and Table 9-7.
- MODU and vessels fitted with lights, signals, AIS transponders and navigation equipment as required by the *Navigation Act 2012* and associated Marine Orders (consistent with COLREGS requirements).

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Eliminate the use of MODU/vessels | No | The use of MODU/vessels to undertake the activity cannot be eliminated. |

| | | | |
|---|---|---|---|
| Substitution | Reduce the size of the PSZ | No | The implementation of the PSZ promotes the safety of other sea users and the integrity of MODUs. In accordance with the OPGGS Act, PSZs are required and cannot be reduced in size. |
| | Alter timing to avoid peak fishing periods | No | The area that others are excluded from is of limited size (500 m radius PSZ) when compared to the area available to other marine users. In conjunction with low fishing activity in the area, as confirmed through consultation, altering the timing of the activity is not deemed necessary or considered an effective control. It would also result in significant delays to complete the drilling campaign. |
| Engineering | None identified | N/A | N/A |
| Procedures & administration | Implement a compensation process for commercial fisheries for damage to fishing equipment or loss of access (displacement) | No | Implementation of a claims process to compensate commercial fisheries that are excluded from the 500 m PSZ around the MODU, within their fishing grounds is considered to be grossly disproportionate. Based on the relatively small size of the PSZ in the context of the available fishing grounds the physical presence of the MODU and vessels associated with the drilling activities in WA-50-L will have an insignificant impact on commercial fisheries. The potential for economic losses or reduction in employment levels is considered to be Highly Unlikely given that access to the remainder of the fishing grounds will be available. |
| Identify the likelihood | | | |
| The MODU and vessels associated with the drilling activities in WA-50-L will have an insignificant impact by reducing the navigable space available to shipping and fishing operators. The likelihood of loss of access/space in the open ocean resulting in an economic loss or reduction in employment levels is considered to be Highly Unlikely (5). During relevant person engagement for the EP, shipping operators were not considered as relevant persons to be consulted, as the petroleum activity is outside of any shipping routes/channels. Relevant persons, including fisheries, were consulted throughout the development of this EP. Commercial fisheries will continue to be informed and updated on operational activities being undertaken by INPEX. On this basis, with the controls in place, impacts to economic values from loss of revenue for fisheries due to lack of access to fishing grounds with potential reduction in employment levels is considered Highly Unlikely (5). | | | |
| Residual risk summary | | | |
| Based on a consequence of Insignificant (F) and a likelihood of Highly Unlikely (5) the residual risk is Low (10). | | | |

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Highly Unlikely (5) | Low (10) |
| Assess residual risk acceptability | | |

Legislative requirements

While on location, a PSZ with a 500 m radius will be maintained around the MODU to control activities and reduce the risk of marine collisions, as required under the OPGGS Act Section 617. The OPGGS Act requires that activities do not cause interference to other users more than is reasonably necessary for carrying out rights conferred by the Act. Marine Safety Information notifications will be issued for the drilling period via AMSA, while the Australian Hydrographic Office (AHO) will issue a Notice to Mariners. The MODU and vessels will be equipped with navigation equipment as required by the *Navigation Act 2012*. All vessels are required to comply with the *Navigation Act 2012*, and associated Marine Orders, which are consistent with the COLREGS requirements.

Relevant person consultation

During consultation for the development of this EP in 2024, Tuna Australia (identified as a relevant person) confirmed to INPEX that feedback from previous INPEX EP consultation (undertaken in 2023 for adjacent permits W-285-P and WA-343-P) would apply to this EP and that Tuna Australia had no new issues to raise. Therefore, this EP has been updated to reflect Tuna Australia's 2023 feedback specifically Section 4.10.1, consequence assessments presented in this EP and the consideration of a new control (claims process for compensation). Although this control has not been adopted, the notification control presented in Table 9-6 has been adopted and aligns with previous feedback from Tuna Australia to INPEX.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (Appendix B). None of the recovery plans or conservation advice documents are relevant to the physical presence of vessels disrupting shipping or fishing operators.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents

| | | |
|---|---|---|
| • the activity does not compromise the relevant principles of ESD<br>• the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP. | | |
| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
| Interference with other marine users is limited to the extent necessary for the reasonable exercise of the right conferred by the petroleum title. | Vessels will be fitted with lights, signals, AIS transponders and navigation and communications equipment, as required by the *Navigation Act 2012*. | Records confirm that required navigation equipment is fitted to vessels to ensure compliance with the *Navigation Act 2012*. |

## 7.7 Loss of containment

The activity will require the handling, use and storage of chemicals and hydrocarbon materials which may include, but are not limited to:

- MGO/diesel
- hydraulic oil
- grease
- drilling fluids
- BOP/subsea/hydraulic control fluids.

Undertaking the activity introduces the potential for loss of containment events. These events may be classified as Level 1, Level 2 or Level 3 incidents, in accordance with the INPEX *Browse Regional OPEP* described in Table 8-9 of this EP.

INPEX defines an emergency condition as:

"an unplanned or uncontrolled situation that harms or has the potential to harm people, the environment, assets, Company reputation or Company sustainability and which cannot, through the implementation of Company standard operating procedures, be contained or controlled."

An evaluation of the environmental impacts and risks associated with emergency conditions is included in Section 8 of this EP.

A summary of the potential sources/threats for loss of containment events (and emergency conditions) associated with this EP is presented in Table 7-16. Incident levels are indicative only and classifications have been assigned for the purposes of enabling the risk evaluation to be undertaken. In the event of a spill, the incident level will be classified as described in the INPEX *Browse Regional OPEP* (Table 8-9).

**Table 7-16: Representative loss of containment events and emergency conditions identified for the activity**

| Scenario | | Basis of volume calculation | Type | Indicative incident level | Section addressed |
|---|---|---|---|---|---|
| Source | Threat | | | | |
| Management of hydrocarbon products on board | Inappropriate use /handling/ minor spills on board<br>Failure of hydraulic hoses on equipment<br>Drop out of hydrocarbons while flaring due to non-combustion | Failure of tote tank estimated to be in the order of 1 $m^3$<br>Failure of hydraulic hoses estimated to be in the order of < 1 $m^3$<br>Drop out volumes estimated to be in the order of < 1 $m^3$ | Various | 1 | Accidental release overboard – Table 7-17 |

| Scenario | | Basis of volume calculation | Type | Indicative incident level | Section addressed |
|---|---|---|---|---|---|
| **Source** | **Threat** | | | | |
| Cargo transfers | Dropped objects | 5.5 $m^3$ – based on the volume of a tote tank which, if lost during cargo transfer, has the potential to result in a full loss of contents | Various | 1 | Accidental release overboard – Table 7-17 |
| SBM transfers | Spill during transfer | 10 $m^3$ – based on hose failure during transfer<br>70 $m^3$ - loss of riser contents | Various | 1 | Accidental release overboard – Table 7-17 |
| Hydrocarbon transfers | Spill during bunkering | 10 $m^3$ – based on hose failure during transfer | Group II – diesel | 1 | Accidental release overboard – Table 7-17 |
| Helicopter refuelling | Spill during refuelling on board the MODU | 4.4 $m^3$ – based on volume stored on board the MODU | Group I (i.e. aviation fuel) | 1 | Accidental release overboard – Table 7-17 |
| Emergency conditions (refer to Section 8) | | | | | |
| Loss of well containment | Integrity failure | Brewster reservoir:<br>Subsea release of 241,088 $m^3$ Brewster condensate – based on 3,013.6 $m^3$ per day for an 80-day blowout. | Group I – condensate | 3 | Loss of well containment – Section 8.2 |
| Vessels | Collision | 250 $m^3$ – based on capacity of largest single fuel tank (AMSA 2015) | Group II – diesel | 2 | Vessel collision – Section 8.3 |

### 7.7.1 Accidental release

**Table 7-17: Impact and evaluation – loss of containment: accidental release overboard**

| Identify hazards and threats | |
|---|---|
| Loss of containment events were identified (Table 7-16), including minor spills on board (<1 $m^3$); failure of hydraulic hoses (<1 $m^3$); drop out of hydrocarbons during flaring (< 1 $m^3$); loss of tote tank during cargo transfer (5.5 $m^3$); loss of SBM during transfer or from riser (10 – 70 $m^3$) and loss of hydrocarbon fuels during bunkering of vessels and helicopters (4.4 - 10 $m^3$).<br><br>Specific predictive modelling was not undertaken for the potential loss of containment events. This was based on the expected low volumes and that any predicted impacts are likely to be localised to the point of release. Given the properties of the chemicals involved (predominantly Group I and Group II hydrocarbons), which tend to be more volatile and less persistent in the environment any spills will rapidly disperse at the sea surface.<br><br>An accidental release overboard resulting in a spill that reaches the marine environment has the potential to result in localised changes to water quality, resulting in impacts to marine fauna and planktonic communities at the sea surface, but no impact on deeper water communities or benthic habitats would be expected. | |
| **Potential consequence** | **Severity** |
| The particular values and sensitivities identified as having the potential to be impacted by an accidental release are:<br>• EPBC listed species<br>• Planktonic communities.<br><br>Potential accidental releases overboard from loss of containment events may result in the exposure of marine fauna and plankton near the sea surface, to a range of chemicals and Group I and Group II hydrocarbons. Foreseeable loss of chemicals to the marine environment would be of small (<1 - 5 $m^3$), and impacts would generally be of low consequence (Insignificant F). Therefore, the focus of this assessment is based on the larger spill volumes associated with loss of SBM and diesel during transfers/bunkering.<br><br>Given the anticipated volumes (worst case 10 $m^3$ of diesel or 70 $m^3$ SBM), potential exposure is expected to be localised to the point of discharge in WA-50-L and in some instances a portion of the spilled volume is expected to be at least partially captured within the MODU drainage system, therefore further reducing the potential spill volume. Upon release to the marine environment hydrocarbons will disperse through natural physical oceanic processes, such as currents, tides and waves, and photochemical and biological degradation. Therefore, any surface expression is expected to weather and dissipate in a relatively short time with limited potential for exposure to surfacing marine fauna or plankton at the sea surface. | Insignificant (F) |

| | |
|---|---|
| As air-breathers, marine mammals, if they surface, are vulnerable to exposure to hydrocarbon spill impacts through the inhalation of evaporated volatiles. Effects include toxic effects, such as damage to lungs and airways, and eye and skin lesions from exposure to oil (WA DoT 2018). Vapours, if inhaled, have the potential to damage the mucous membranes of the airways and the eyes. Inhaled volatile hydrocarbons are transferred rapidly to the bloodstream and may accumulate in tissues, such as in the brain and liver, resulting in neurological disorders and liver damage (Gubbay & Earll 2000). Blue whales and humpback whales (baleen whales), that may filter feed near the surface, would be more likely to ingest oil than gulp-feeders, or toothed-whales and dolphins. Spilled hydrocarbons may also foul the baleen fibres of baleen whales, thereby impairing food-gathering efficiency, or resulting in the ingestion of hydrocarbons, or prey that has been contaminated with hydrocarbons (Geraci & St. Aubin 1988).<br><br>Turtles can be exposed to hydrocarbons if they surface within the spill, resulting in direct contact with the skin, eyes, and other membranes, as well as the inhalation of vapours or ingestion (Milton et al. 2003). Floating oil is considered to have more of an effect on reptiles than entrained/dissolved oil because reptiles hold their breath underwater and are unlikely to directly ingest dissolved oil (WA DoT 2018).<br><br>Potential effects to whale sharks include damage to the liver and lining of the stomach and intestines, as well as toxic effects on embryos (Lee 2011). Whale sharks are filter-feeders and are expected to be highly vulnerable to entrained hydrocarbons (Campagna et al. 2011) rather than hydrocarbons floating at the sea surface.<br><br>In the absence of any known BIAs for marine fauna in the licence area, any individuals present are likely to be transiting the area for a short duration. The closest BIA to WA-50-L relates to the 20 km green turtle internesting buffer at Browse Island (26 km away). Additionally, a whale shark foraging BIA is located approximately 10 km south-east from the licence area at its closest point (Figure 4-6). However, based on the levels of whale shark abundance observed in numerous studies (as described in Section 4.7.4), the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration. Given the low volumes, limited duration of exposure due to expected weathering and dispersion in an open ocean environment, the level of consequence is expected to present a local scale event of inconsequential ecological significance (Insignificant F).<br><br>As a consequence of their presence close to the water surface, plankton may be exposed to any chemicals or hydrocarbons spilled at the sea surface particularly in high energy seas where the vertical mixing of oil through the water column would be enhanced. The effects of oil on plankton have been well studied in controlled laboratory and field situations. The different life stages of a species often show widely different tolerances and reactions to oil pollution. Usually, eggs, larval and juvenile stages will be more susceptible than adults (Harrison 1999). Post-spill studies on plankton populations are few, but those that have been conducted, typically show either no effects or temporary minor effects (Kunhold 1978). Given the high temporal and spatial variability in plankton communities and the expected small size of the sea surface impacted by an accidental release, the potential consequence in regard to planktonic communities is considered to be Insignificant (F). | |
| Identify existing design and safeguards/controls measures | |
| • All vessels >400 GT will have a SOPEP (or SMPEP) in accordance with Marine Order 91 | |

| | | | |
|---|---|---|---|
| • Spill kits will be available on-board MODUs and vessels<br>• Personnel will receive an induction/training to inform them of deck spill response requirements in accordance with Table 9-3<br>• INPEX chemical, assessment and approval procedure for selection of chemicals in accordance with Section 9.6.1 and Table 9-5<br>• INPEX lifting standard and cargo transfer procedures. | | | |
| Propose additional safeguards/control measures (ALARP Evaluation) | | | |
| Hierarchy of control | Control measure | Used? | Justification |
| Elimination | Eliminate the use of chemicals and hydrocarbons on board. | No | Chemicals and hydrocarbons are required for safe and efficient operations and cannot be eliminated. In the case of diesel, it is required as fuel and cannot be eliminated. |
| | No bunkering or SBM transfers. | No | Bunkering of fuel and SBM from supply vessels to MODUs is required during the activity as space limitations/tank capacities mean that supplies need to be replenished. |
| | No cargo transfers. | No | Cargo transfers cannot be eliminated, as this is the only practicable option for supplying MODUs in offshore locations. |
| Substitution | None identified | N/A | N/A |
| Engineering | Prevent onboard spills through appropriate storage of hydrocarbons and chemicals including their associated waste constituents. | Yes | Through bunding of storage areas and good storage and management of hydrocarbon and chemical products and associated wastes can reduce the potential risk of a loss of containment event occurring. |

| | | | |
|---|---|---|---|
| Procedures & administration | Implement hydrocarbon/SBM transfer procedures that specify keeping of hose registers, and operational requirements (e.g. minimum lighting conditions, communications, visual monitoring, dry break/break away couplings installed and used, use and maintenance of certified hoses and a permit-to-work system). | Yes | The transfer of fuel and SBM will occur in accordance with strict conditions for preventing spills to the marine environment. Offshore transfers of fuel and SBM will be conducted in accordance with the MODU contractor's transfer procedures. |
| | Hydraulic equipment on board MODU and vessels will be subject to routine servicing and inspection to ensure it is fit for purpose. | Yes | Routine servicing and inspection of hydraulic equipment will ensure it is fit for purpose and minimise the potential for leaks and spills to deck as a result of corrosion, and wear and tear of hydraulic hoses. |
| | Well flow back procedure (well test package) implemented for flaring operations. | Yes | This procedure includes a continuous 24/7 flare watch to observe and monitor flaring operations and reduce potential for hydrocarbon drop out during flaring. Function testing of continuous ignition system and pilot system is also covered by the procedure. |

| Identify the likelihood |
|---|
| Routine vessel controls, such as bunding, and the ready availability of spill recovery equipment reduce the likelihood of any spills reaching the environment. Routine servicing of hydraulic equipment onboard also reduces the likelihood of spills during the activity. In the event of an overboard spill from a MODU/vessel or an accidental release, based on the low volumes and expected weathering of spilled chemicals, in conjunction with the controls in place, the likelihood of a loss of containment event causing harm to the identified receptors is considered to be Unlikely (4). |
| Residual risk summary |
| Based on a consequence of Insignificant (F) and a likelihood of Unlikely (4) the residual risk is Low (9). |

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Insignificant (F) | Unlikely (4) | Low (9) |

| Assess residual risk acceptability |
|---|

Legislative requirements

The activities and proposed management measures are compliant with industry standards and relevant Australian legislation, specifically concerning prevention pollution, including Marine Order 91: Marine Pollution Prevention - Oil.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from accidental release/loss of containment. Spill response activities and notifications to relevant persons have been identified and included in INPEX spill response processes.

Conservation management plans / threat abatement plans

Several conservation management plans (Appendix B) identify oil or chemical spills as key threatening processes, through both direct/acute impacts, as well as indirect impacts through habitat degradation. The prevention of loss of containment events and reducing impacts to the marine environment through the preventative controls in place and spill response preparedness, demonstrates alignment with the various conservation management plans.

ALARP summary

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as “low”, the consequence does not exceed “C – significant” and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| No loss of containment of hydrocarbons or chemicals to the marine environment. | Premobilisation HSE inspections confirm that MODU and vessels >400 GT have SOPEP (or SMPEP) compliant with Marine Order 91. | Premobilisation HSE inspection documentation. |

| | | |
|---|---|---|
| | Spill kits will be available on board the MODUs and vessels. | Inspection records confirm spill kits are available and stocked. |
| | INPEX lifting standard and cargo transfer processes are implemented. | Training records of personnel involved in lifting and cargo transfer activities. |
| | Bunding around stored bulk wet chemicals or hazardous liquid waste storage areas in accordance with Australian standards. | Bunding and drainage verified by containment specialist. |
| | INPEX will verify the contractor implements MODU and vessel bunkering procedures for hydrocarbon and SBM transfers that will include as a minimum:<br>• completion of permit to work (PTWs) for all diesel and SBM transfers.<br>• dry break couplings/weak link breakaway couplings and flotation collars are installed on hydrocarbon bulk transfer hoses to prevent entanglement and enable early leak detection.<br>• hydrocarbon bulk transfer hoses are certified and rated for hydrocarbons and pressure tested and maintained in a hose register.<br>• bunkering is undertaken during daylight hours, if permit to work in place and weather is good (e.g. suitable sea conditions). Night-time bunkering will not be undertaken on a routine basis. This will only be undertaken in fully lit conditions and in favourable sea states.<br>• preventive maintenance of hydraulic equipment to ensure its integrity. | Documentation that hydrocarbon and SBM bunkering procedures approved and are implemented, e.g. undertaken during daylight hours and in appropriate sea state, etc.<br>Hose register.<br>Completed and approved PTW records for all diesel and SBM transfers.<br>Documentation of maintenance recorded in the preventive maintenance system. |
| | Well flow back procedure (well test package) implemented including: | Pre-flow checklist. |

| | | |
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| | • continuous (24/7) flare watch during flaring operations<br>• function testing of continuous ignition system and pilot system. | |

# 8 EMERGENCY CONDITIONS

An evaluation of potential spill sources and worst-case spill scenarios (WCSS) identified several potential emergency conditions related to the activity (Table 7-16). The emergency conditions are summarised in Table 8-1.

**Table 8-1: Potential emergency conditions**

| Scenario | | Hydrocarbon type | Release location |
|---|---|---|---|
| Source | Threat | | |
| Loss of well containment | Integrity failure | Group I – condensate | Subsea |
| Vessels | Collision | Group II – diesel | Surface |

## 8.1 EMBA based on oil spill modelling

As described in Section 4, the spatial extent of the EMBA and EPEI, used as the basis for the EPBC Act Protected Matters database search (Appendix B), has been determined using stochastic oil spill modelling of the worst-case credible scenario (Table 7-16).

The hydrocarbon exposure thresholds adopted to conservatively identify the EMBA and EPEI are described in Table 8-2, which includes surface, entrained, dissolved and shoreline accumulation thresholds. For completeness Table 8-2 also includes thresholds applied by INPEX for oil spill planning and scientific monitoring purposes (NOPSEMA 2019) noting that these low thresholds may not be ecologically significant.

**Table 8-2: Hydrocarbon exposure thresholds**

| Purpose | Thresholds | Justification | References |
|---|---|---|---|
| EMBA –used to establish the area for relevant person consultation and to assess impacts to socio-economic and cultural receptors. | Surface – 1 g/m$^2$ | Visible sheen may be present on the sea surface with potential for some socio-economic impact (visual) but below concentrations where ecological impacts may occur.<br>As in-water hydrocarbons are not visible, thresholds used relate only to ecological impacts on socio-economic and cultural receptors (if any).<br>Predicts potential for some socio-economic impact from low concentrations of oil accumulating on shorelines. | French-McCay 2002, 2003, 2009, 2016, 2018<br>ANZG 2018<br>AMSA 2015 |
| | Entrained – 100 ppb | | |
| | Dissolved – 50 ppb | | |
| | Shoreline – 10 g/m$^2$ | | |
| EPEI –used to assess impacts to ecological receptors. | Surface – 10 g/m$^2$ | These concentrations represent potential ecological impacts to ecological receptors at the sea surface, in the water column and or on shorelines. | French-McCay 2002, 2003, 2009, 2016, 2018 |
| | Entrained – 100 ppb | | |
| | Dissolved – 50 ppb | | |

| Purpose | Thresholds | Justification | References |
|---|---|---|---|
| | Shoreline – 100 g/m$^2$ | | ANZG 2018<br>AMSA 2015 |
| Oil spill scientific monitoring – used to the determine the planning area for scientific monitoring in the event of a spill, see INPEX *Browse Regional OPEP* for further details. | Surface – 1 g/m$^2$ | These low exposure concentrations are used to determine the area for scientific monitoring (such as water quality) and are considered too low for ecological impact assessment. | NOPSEMA 2019 |
| | Entrained – 10 ppb | | |
| | Dissolved – 10 ppb | | |
| | Shoreline – 10 g/m$^2$ | | |

Based on the defined hydrocarbon exposure thresholds (Table 8-2), the resulting EMBA and EPEI are the sum of 300 overlaid modelling runs from the release location within WA-50-L (100 runs per season) during three seasonal periods (summer, winter and transitional months) under different hydrodynamic conditions (e.g. currents, winds, tides, etc.).

This technique has been used to provide a highly conservative representation of the EMBA and EPEI to ensure that the EPBC Act Protected Matters database search includes all potential receptors.

Oil spill modelling algorithms use many conservative assumptions including dispersion rates, entrainment rates and biological degradation rates, which collectively result in an over-prediction of entrained oil concentrations over large distances. The consequence of these conservative assumptions result in the over-estimation of the volumes of oil being calculated by the model, to be arriving at shorelines.

In addition, the modelling algorithms include multiple conservative assumptions related to the processes of oil stranding on a shoreline, including over calculation of oil-patches arriving on a shoreline, simplification of shoreline contours, absence of wetting/drying effects and realistic intertidal zone widths, which may be large in areas with higher tidal ranges and/or gradual slopes. The outcome of this combination of factors is likely to be resulting in the model over-reporting locations of shoreline contact. Further details on the limitations of oil spill modelling are provided in Appendix D.

In summary, the actual area that may be affected from any single spill event would be considerably smaller than the area represented by the EMBA and EPEI (Figure 8-1). As presented in Table 8-4 and Figure 8-1, the EMBA based on the WCSS may extend up to approximately 226 km (1 g/m$^2$ - visible surface sheen) or up to 118 km (above ecological impact threshold – 10 g/m$^2$) from the release location (RPS 2024a). Entrained oil concentrations at or greater than the impact threshold concentration (100 ppb) may travel up to approximately 450 km from the release location. Dissolved oil concentrations at or greater than the impact threshold concentration (50 ppb) may travel up to approximately 250 km from the release location in WA-50-L. Shoreline contact was predicted at multiple locations across all modelled seasons. The maximum accumulated concentrations on shorelines were predicted at Ashmore Reef (1,980 g/m$^2$) and Browse Island (1,493 g/m$^2$) with corresponding maximum accumulated volumes on shoreline of 174 m$^3$ and 67 m$^3$ respectively (refer to Table 8-4 for further details).

The impacts and risks associated with the loss of well containment scenario are presented in Table 8-5.

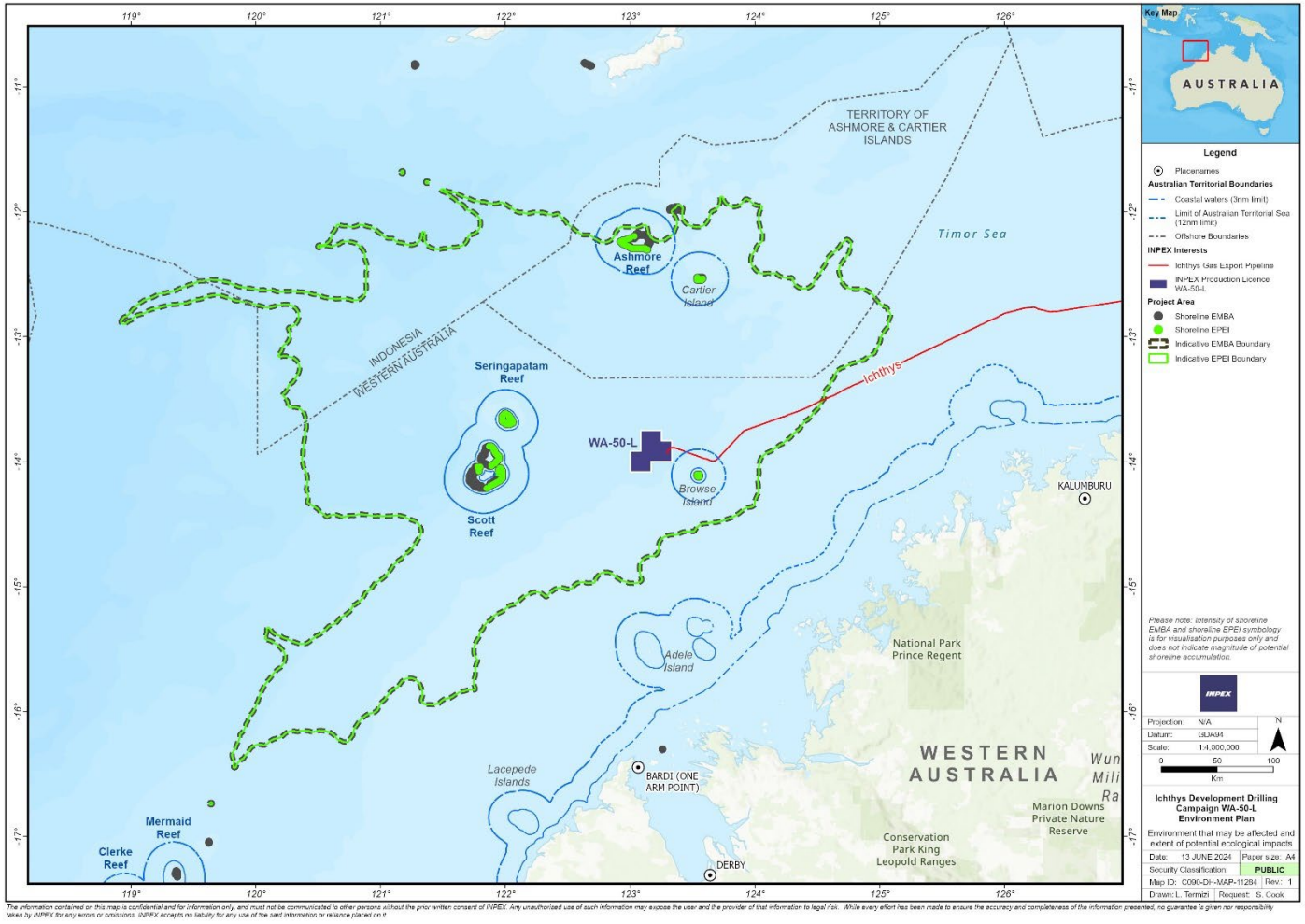


**Figure 8-1: EMBA and EPEI from the WCSS**

## 8.2 Loss of well containment

A worst-case loss of well containment leading to a Group I hydrocarbon loss (gas and condensate) could occur due to integrity failure resulting from any of the following:

- MODU loss of stability
- failure of primary and secondary well controls
- loss of well integrity.

The worst-case loss of containment scenarios in this EP conservatively assumes the wellbore is free from all restrictions, there are no restrictions at the wellhead and the hole section is fully drilled. APPEA guidance regarding worst-case discharge rates (used as an input for oil spill modelling) is based on there being no obstructions in the hole, so that the worst-case represents an unrestricted flow from an open hole – i.e. no pipe in hole and no BOP rams partially closed. However, this is unreasonable as in a scenario where there is no pipe in the hole, blind shear rams are highly effective and cannot be inhibited in closure or sealing by non-centred pipe. A feasible scenario is with pipe in the hole and a failure of the BOP rams (pipe and shear) to close and/or seal – in this case there will be a drilling assembly and pipe to the BOP creating an additional frictional loss.

Although not used for any predictive oil spill modelling, calculations of a more feasible scenario, where there is a restricted discharge flow rate (i.e. with a 5-7/8" drill pipe in the hole) and the flow path is assumed to be via annulus only, indicate a 43% reduction in flow rates confirming that the worst-case discharge used in this EP is highly conservative.

To establish the worst credible discharge rates from a well blowout, a transient simulation model (OLGA model) for each reservoir was used to determine the gas discharge rates before calculating the condensate discharge rates using condensate:gas ratios. The highest gas and condensate discharge rates and seabed gas temperatures were used in the model simulations in order to obtain credible worst-case results. A range of possible permeability sensitivities were also considered in order to derive a range of credible worst-case results. Reservoir inflow was subsequently calculated based upon pressure, temperature, thickness, porosity, permeability and productivity data.

The modelled oil spill scenario (RPS 2024a) represents loss of containment from the wellhead when the drill string is intersecting both the Brewster and Plover formations during drilling operations. The maximum release rate was calculated at 3,013.6 $m^3$ per day of condensate, with gas, from the Brewster formation.

### 8.2.1 Location

Spill modelling (RPS 2024a) was undertaken for a subsea release of Brewster condensate in the licence area, WA-50-L, at a location adjacent to Brewster drill centre 4 (BDC-4) (Figure 3-1).

### 8.2.2 Volume and duration

The volume of Brewster condensate used in the modelling was 241,088 $m^3$ (3,013.6 $m^3$ per day) based on an uncontrolled blowout with no restrictions within the well bore. The duration of the hydrocarbon release was 80 days (based on the time to complete a relief well / well-kill operation). The overall duration of the modelled simulations was 94 days, to account for further transport, dispersal and weathering (RPS 2024a).

### 8.2.3 Hydrocarbon properties

Hydrocarbon properties associated with the Group I Brewster condensate used for the modelling study (RPS 2024a) is presented in Table 8-3.

**Table 8-3: Group I condensate properties**

| Hydrocarbon type | Density at 25 ˚C (g/cm³) | Viscosity – centipoise (cP) – at 25 ˚C | Characteristic | Volatile (%) | Semi-volatile (%) | Low volatility (%) | Residual (%) |
|---|---|---|---|---|---|---|---|
| | | | Boiling point (˚C) | <180 | 180–265 | 265–380 | >380 |
| Brewster condensate | 0.763 | 1.2 | % of total | 62.0 | 23.0 | 12.0 | 3 |
| | | | % aromatics | 10.8 | 0.2 | 0.01 | - |

### 8.2.4 Modelling results

Stochastic modelling results are summarised in Table 8-4 and include results taken for three modelled seasons throughout the year; October to March (summer), May to August, (winter) and combined April and September (transitional months). For each season, 100 modelled replicates were run and therefore the results summarised represent 300 possible spill scenarios.

The modelling predicted that the subsea release would generate a cone of rising gas bubbles that will entrain the oil droplets with sea water to the sea surface. The plume was initially forecast to rise towards the sea surface with a vertical velocity of around 11.6 m/s, gradually slowing and increasing plume diameter as colder seawater near the seabed was raised into the warmer, less dense, ambient seawater towards the surface.

The plume diameter at the point of surfacing is predicted to be approximately 25 - 30 m. The relatively high gas to oil ratio, combined with the rate of release though the wellhead was calculated to generate relatively small condensate droplets within the rising plume of entrained seawater. These droplets will be subject to mixing into the upper 2-3 m of the water column due to turbulence generated by the lateral displacement of the rising plume. The relatively small size of the droplets indicates that droplets would tend to remain entrained within the plume but a portion would be expected to form sheens and slick patches at the sea surface under calm sea conditions. More energetic sea conditions would result in a high proportion remaining entrained in the wave mixed zone.

Under light wind conditions (constant 5 knots) sea conditions would be calm and the Brewster condensate would tend to spread to a thin film due to the relatively low viscosity of the mixture. The mixture contains a high proportion (62%) of highly volatile components and will initially evaporate at a high rate until this component has evaporated. Evaporation will then slow as the remnant mixture becomes enriched with longer-chain, less volatile hydrocarbons. Up to 85% of the mixture floating at the water surface would be expected to evaporate within 24 hours, and up to 87% would have evaporated after 7 days. Low rates of entrainment (0.7%) and dissolution (0.7%) were calculated for these conditions. Under these light wind conditions, approximately 11% of the oil would persist on the sea surface after 7 days.

Under moderate wind conditions (> 10 knots) up to 21% of the released mixture would be entrained, with evaporation calculated at 78% within 24 hours; however, with increased levels of entrainment a smaller proportion is predicted to evaporate after 7 days. Only a small proportion (<1%) of the release was calculated to be on the sea surface after 1 week under these conditions.

**Table 8-4: Loss of well containment stochastic modelling results summary**

| Hydrocarbon exposure | Subsea release of 241,088 $m^3$ of Brewster Condensate over 80 days (RPS 2024a) |
|---|---|
| Surface | The maximum distance of floating hydrocarbons on the sea surface, at concentrations greater than 1 $g/m^2$ (visible sheen), travelled by a single spill trajectory (out of 300 simulations) was 226 km.<br><br>At a concentration of >10 $g/m^2$ (ecological impact threshold), the maximum distance travelled by a single spill trajectory (out of 300 simulations) was 118 km. |
| Entrained | The maximum distance of entrained hydrocarbon, at concentrations greater than 100 ppb, travelled by a single spill trajectory (out of 300 simulations) was approximately 450 km.<br><br>The worst-case instantaneous entrained oil concentration at any receptor is predicted at the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery as 13,509 ppb in winter.<br><br>Across all replicates the worst-case entrained oil concentrations for waters surrounding emergent sensitive receptors in proximity to the release location were calculated as 915 ppb at Browse Island (summer); 609 ppb at Seringapatam Reef (summer); 581 ppb at Scott Reef South (summer); 344 ppb at Heywood Shoal (summer); 291 ppb at Ashmore Reef (summer); 257 ppb Woodbine Bank (summer); 239 ppb at Johnson Bank (summer); 230 ppb Sandy Islet (summer); 201 ppb at Cartier Island (summer); 130 ppb at Hibernia Reef (summer); and 115 ppb at Echuca Shoal (summer).<br><br>Worst-case entrained oil concentrations for waters in the Kimberley MP and Argo-Rowley MP were predicted as 478 ppb (summer) and 103 ppb (winter) respectively. No entrained hydrocarbons exceeding the 100 ppb threshold were predicted in the waters of any WA State MPs or surrounding Indonesian coastlines. |
| Dissolved | The maximum distance of dissolved aromatic hydrocarbons, at concentrations greater than 50 ppb, travelled by a single spill trajectory (out of 300 simulations) was approximately 250 km.<br><br>The worst-case concentration of dissolved aromatic hydrocarbons at any receptor is predicted at the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery as 1,314 ppb (transitional).<br><br>Across all replicates the worst-case dissolved aromatic hydrocarbon concentrations for waters surrounding emergent sensitive receptors in proximity to the release location were calculated as 135 ppb at Browse Island (winter); 105 ppb at Johnson Bank (summer); 83 ppb at Echuca shoal (winter); 81 ppb at Seringapatam Reef (summer); and 63 ppb Scott Reef South (transitional). Noting the following locations were predicted to receive concentrations below the 50 ppb threshold - 46 ppb at Cartier Island (winter); 40 ppb at Ashmore Reef (summer); and 21 ppb at Heywood Shoal (transitional). |

| Hydrocarbon exposure | Subsea release of 241,088 $m^3$ of Brewster Condensate over 80 days (RPS 2024a) |
|---|---|
| | Worst-case dissolved hydrocarbons concentration for waters in the Kimberley MP was predicted as 123 ppb (winter). No dissolved hydrocarbons exceeding the 50 ppb threshold were predicted in the waters of any WA State MPs or surrounding Indonesian coastlines |
| Shoreline | Shoreline contact was predicted at several locations including Browse Island, Cartier Island, Ashmore Reef, Sandy Islet, Clerke Reef and Imperieuse Reef (Rowley Shoals MP) as well as some shorelines on the islands within the Mayala MP and Indonesian waters (East and West Nusa Tenggara provinces).<br><br>Maximum (worst case replicate) local shoreline accumulated concentrations were predicted as listed below noting the 10 $g/m^2$ (EMBA) and 100 $g/m^2$ (EPEI) thresholds:<br>• 1,980 $g/m^2$ at Ashmore Reef (winter)<br>• 1,493 $g/m^2$ at Browse Island (winter)<br>• 439 $g/m^2$ at Sandy Islet (summer)<br>• 373 $g/m^2$ at Cartier Island (summer)<br>• 47 $g/m^2$ at Clerke Reef (transitional)<br>• 36 $g/m^2$ at Imperieuse Reef (transitional)<br>• 28 $g/m^2$ at Nusa Tenggarra Timur (east) (summer)<br>• 15 $g/m^2$ at Nusa Tenggarra Barat (west) (winter)<br>• 14 $g/m^2$ at Mayala MP (winter).<br><br>The worst-case volumes of oil predicted to accumulate on shorelines for all seasons were:<br>• Ashmore Reef (174 $m^3$ winter)<br>• Browse Island (67 $m^3$ transitional)<br>• Cartier Island (16 $m^3$ summer)<br>• Sandy Islet (13 $m^3$ transitional)<br>• Imperieuse Reef (2 $m^3$ all seasons)<br>• Nusa Tenggarra Timur (east) (2 $m^3$ summer & transitional)<br>• Clerke Reef (2 $m^3$ transitional)<br>• Nusa Tenggarra Barat (west) (<1 $m^3$ winter)<br>• Mayala MP (<1 $m^3$ winter).<br><br>Minimum time for shoreline contact (>10 $g/m^2$) ranged from 90 hours at Browse Island to 1938 hours (>80 days) at Imperieuse Reef (Rowley Shoals MP). |

### 8.2.5 Impact and risk evaluation

**Table 8-5: Impact and evaluation – Loss of well containment**

| Identify hazards and threats | |
|---|---|
| A subsea release of Group I hydrocarbons from a production well, has the potential to result in changes to water quality through surface, entrained/dissolved, and shoreline hydrocarbon exposure. The thresholds for impacts associated with surface, entrained/dissolved, and shoreline hydrocarbon exposures are described in Table 8-2. The results of the predictive oil spill modelling for the loss of well containment scenario is presented in Table 8-4. | |
| Potential consequence – surface hydrocarbons | Severity |
| The particular values and sensitivities with the potential to be exposed to surface hydrocarbon may include:<br>• commercial, traditional and recreational fisheries including aquaculture and Aboriginal traditional use of resources (within approximately 226 km from the release location based on the visible sheen threshold)<br>• Aboriginal heritage (within approximately 226 km from the release location based on the visible sheen threshold)<br>• EPBC-listed species (within approximately 118 km from the release location based on 10 g/m$^2$ impact threshold).<br>• planktonic communities (within approximately 118 km from the release location based on 10 g/m$^2$ impact threshold).<br>Based on the properties of condensate (Group I) any slick forming at the sea surface following a subsea release will undergo rapid evaporation of volatile components during light wind conditions and rapid entrainment during increased wind conditions (RPS 2024a). This will reduce the duration of any surface expression and potential for impacts to marine fauna at the sea surface.<br>The values and sensitivities associated with aquaculture, commercial, traditional and recreational fisheries (seafood quality and employment) could be impacted by a visible sheen on the sea surface. Any loss of access to undertake traditional activities such as ceremonies and the collection of food during certain seasons or at specific times of the year (refer to Aboriginal seasonal calendars section) is not expected given the offshore waters of the EMBA are located over 100 km from the Kimberley coastline and they do not support any traditional activities influenced by Aboriginal seasonal calendars. Although the visible sheen is predicted to possibly extend up to 226 km from the release location it would not be a continuous surface expression. Exclusion zones may impede access to fishing and other culturally important areas for a short-to-medium term, and nets and lines could become oiled (ITOPF 2011). There is no evidence of any recreational fishing or Aboriginal traditional activities that occur within WA-50-L likely because of the distance from land, lack of features of interest and deep waters. Recreational day-fishing is concentrated around the population centres of Broome, Derby and Wyndham, as well as other readily accessible coastal population settlements which are outside of the EMBA, and therefore will not be impacted by this type of spill. | Moderate (D) |

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| Commercial fisheries that transect the EMBA predominantly operate in the shallower waters of the EMBA, with generally low levels of fishing activity reported (refer to Section 4.10.1). Traditional fishing, particularly at Browse Island and Scott Reef could also be affected by impacts to fish and benthic habitats from entrained oil, discussed below. Based on the expected rapid weathering of condensate at the sea surface by evaporation, photo-oxidation and biodegradation and high potential for entrainment due to wave and wind action, any surface exposure is expected to be limited to a relatively short duration. Therefore, impacts on commercial, recreational and traditional fishing (including Aboriginal traditional use of resources) and aquaculture are expected to be short to medium term, and the consequence is considered to be Minor (E).<br><br>There are no known BIAs or aggregation areas within WA-50-L. However, there are several marine fauna BIAs located in areas predicted to be exposed to surface expressions above the 10 $g/m^2$ exposure threshold (within 118 km of the modelled release location in WA-50-L). The closest of these include a 20 km internesting buffer at Browse Island for green turtles, a whale shark foraging BIA located approximately 10 km south-east of WA-50-L and blue whale foraging/migration located at Scott Reef approximately 100 km west of WA-50-L. A range of other marine fauna may also be present within this area albeit on a transient basis.<br><br>As air-breathers, marine mammals, if they surface, are vulnerable to exposure to hydrocarbon spill impacts through the inhalation of evaporated volatiles. Effects include toxic effects, such as damage to lungs and airways, and eye and skin lesions from exposure to oil (WA DoT 2018). Vapours from the spill are considered the most significant risk to cetacean health, as their exposure can be significant. Vapours, if inhaled, have the potential to damage the mucous membranes of the airways and the eyes. Inhaled volatile hydrocarbons are transferred rapidly to the bloodstream and may accumulate in tissues, such as in the brain and liver, resulting in neurological disorders and liver damage (Gubbay & Earll 2000). Blue whales and humpback whales (baleen whales), that may filter feed near the surface, would be more likely to ingest oil than gulp-feeders, or toothed-whales and dolphins. Spilled hydrocarbons may also foul the baleen fibres of baleen whales, thereby impairing food-gathering efficiency, or resulting in the ingestion of hydrocarbons, or prey that has been contaminated with hydrocarbons (Geraci & St. Aubin 1988).<br><br>Browse Island (listed as a C-class reserve) is the closest turtle nesting area (located approximately 26 km south-east of WA-50-L) and is surrounded by a 20 km internesting buffer for green turtles between November and March (DEE 2017a) as described in Section 4.7.4. Turtles can be exposed to hydrocarbons if they surface within the spill, resulting in direct contact with the skin, eyes, and other membranes, as well as the inhalation of vapours or ingestion (Milton et al. 2003). Floating oil is considered to have more of an effect on reptiles than entrained/dissolved oil because reptiles hold their breath underwater and are unlikely to directly ingest dissolved oil (WA DoT 2018). Other aspects of turtle behaviour, including a lack of avoidance behaviour, indiscriminate feeding in convergence zones, and large, pre-dive inhalations, make them vulnerable (Milton et al. 2003; WA DoT 2018). In addition, hatchlings spend more time on the surface than older turtles, thus increasing the potential for contact with oil slicks (Milton et al. 2003).<br><br>A whale shark foraging BIA is located approximately 10 km from WA-50-L at its closest point (Figure 4-6). Based on the levels of whale shark abundance observed in numerous studies (as described in Section 4.7.4), the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration. | |

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| As described in Section 4.7.4, WA-50-L is located within the East Asian–Australasian Flyway. The migration of marine avifauna through the EAA Flyway generally occurs at two times of year, northward between March and May and southward between August and November (Bamford et al. 2008; DEE 2017b). There are no BIAs for marine avifauna that overlap WA-50-L. However, several breeding and resting BIAs for many marine avifauna species are present within the region (Figure 4-7). Marine avifauna have the potential to directly interact with hydrocarbons on the sea surface, in the course of normal foraging activities. Direct contact with surface hydrocarbons may result in dehydration, drowning and starvation and is likely to foul feathers, which may result in hypothermia (Matcott et al. 2019). Birds resting at the sea surface and surface-plunging birds are considered particularly vulnerable to surface hydrocarbons. Impacts may include damage to external tissues, including skin and eyes, and internal tissue irritation in lungs and stomachs (WA DoT 2018). Toxic effects may also result where hydrocarbons are ingested, as birds attempt to preen their feathers (Jenssen 1994; Matcott et al. 2019).<br><br>Based on the predicted limited extent of the surface hydrocarbons (approximately 118 km where concentrations are > 10 g/m$^2$), the rapid evaporation of volatile components and expected weathering resulting in reduced levels of toxicity, any impacts to transient EPBC-listed species are expected to be on a local to medium scale, with short to medium term impacts with no threat to the overall population of a protected species (Moderate D).<br><br>As a consequence of their presence close to the water surface, plankton may potentially be exposed to hydrocarbons on the sea surface. Based on the properties of condensate any visible hydrocarbon forming at the sea surface would undergo rapid evaporation of volatile components; therefore, reducing the duration of any potential exposure to fish eggs and larvae at the sea surface. However, the majority of impacts may be toxicity related, associated with entrained/dissolved hydrocarbons exposure. This is particularly the case in high energy seas where the vertical mixing of oil through the water column would be enhanced. Therefore, the impact evaluation for planktonic communities is provided in the entrained/dissolved hydrocarbons subsection below. | |
| Potential consequence – entrained/dissolved hydrocarbons | Severity |
| A subsea release of condensate due to a production well blowout in WA-50-L could result in entrained hydrocarbons (>100 ppb) potentially extending up to 450 km from the release location. Concentrations of dissolved aromatic hydrocarbons >50 ppb may also extend over a wide area, approximately 250 km.<br><br>The values and sensitivities with the potential to be affected by entrained and dissolved aromatic hydrocarbon exposure include:<br>• commercial, traditional and recreational fisheries including aquaculture and Aboriginal traditional use of resources<br>• Fish communities, BIA - whale shark foraging)<br>• benthic primary producer habitats / benthic habitats (corals and seagrasses)<br>• planktonic communities<br>• EPBC-listed species (BIAs - marine mammals, turtles and avifauna)<br>• underwater cultural heritage. | Significant (C) |

| | |
|---|---|
| The values and sensitivities associated with commercial, traditional and recreational fisheries including aquaculture and Aboriginal traditional use of resources (seafood quality and employment) could be impacted due to exposure to entrained/dissolved oil. The impact to fish communities from exposure to entrained and dissolved hydrocarbons above threshold values, is primarily associated with toxicity resulting in impacts to seafood quality. Chronic impacts to juvenile fish and larvae may occur if exposed to entrained/dissolved hydrocarbon plumes potentially resulting in lethal or sub-lethal effects or impairment of cellular functions (WA DoT 2018). Juvenile fish and larvae may experience increased toxicity upon such exposure to plumes, because of the sensitivity of these life stages, with the worst impacts predicted to occur in smaller species (WA DoT 2018). Adult fish exposed to entrained hydrocarbons are likely to metabolise the hydrocarbons and excrete the derivatives, with studies showing that fish have the ability to metabolise petroleum hydrocarbons. These accumulated hydrocarbons are then released from tissues when fish are returned to hydrocarbon free seawater (Reiersen & Fugelli 1987).<br><br>Following a subsea release from a well blowout, the plume of gas/condensate will rise through the water column and become entrained in the upper layers of the water column (typically the top 30 m). Soluble aromatics components will dissolve as the plume rises through the water column, with concentrations >50 ppb typically predicted in the top 130 m. Therefore, pelagic fish, and site attached fish on coral reefs, such as Heywood Shoal, Echuca Shoal, Scott Reef, Seringapatam Reef, Johnson Bank, Hibernia Reef, Ashmore Reef, Cartier Island and Browse Island, have the potential to be exposed to entrained and/or dissolved hydrocarbons above the impact thresholds (100 ppb and 50 ppb respectively).<br><br>A whale shark foraging BIA is located approximately 10 km from WA-50-L at its closest point. Whale sharks reportedly spend 40% of their time in the upper 15 m of the water column and are therefore likely to be exposed to entrained and dissolved hydrocarbons. Potential effects to whale sharks include damage to the liver and lining of the stomach and intestines, as well as toxic effects on embryos (Lee 2011). As whale sharks are filter feeders they are expected to be highly vulnerable to entrained/dissolved hydrocarbons (Campagna et al. 2011).<br><br>The consequence of entrained/dissolved hydrocarbons on fisheries (commercial, recreational and traditional including aquaculture, and Aboriginal traditional use of resources), fish communities and shark populations is considered to be Significant (C).<br><br>Benthic communities in the EMBA, including benthic primary producers, such as coral reefs, seagrass, and deeper water filter-feeding communities could be exposed to entrained oil and dissolved aromatic hydrocarbons above impact thresholds which could result in lethal or sub-lethal effects on these values and sensitivities. No entrained oil or dissolved hydrocarbons (exceeding the respective 100 ppb and 50 ppb thresholds) were predicted in waters of any WA state MPs or surrounding Indonesian coastlines. | |

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| Shallow water communities are generally at greater risk of exposure than deep water communities (NRC 1985; WA DoT 2018). Exposure of shallow subtidal corals to entrained and dissolved hydrocarbons has the potential to result in lethal or sublethal toxic effects, resulting in acute impacts or death at moderate to high exposure thresholds (Loya & Rinkevich 1980; Shigenaka 2001; WA DoT 2018), including increased mucus production, decreased growth rates, changes in feeding behaviours and expulsion of zooxanthellae (Peters et al. 1981; Knap et al. 1985). Adult coral colonies, injured by oil, may also be more susceptible to colonisation and overgrowth by algae or to epidemic diseases (Jackson et al. 1989). A study by Nordborg et al. (2018) reported that the presence of ultraviolet radiation increases the hazard posed by dissolved hydrocarbons to tropical, shallow-water coral reefs due to phototoxicity. PAH phototoxicity occurs through the formation of radical oxygen species and/or transformation of PAHs into more toxic products. Therefore, co-exposure to ultraviolet radiation may considerably enhance negative impacts and the risks to coral larvae may be substantially underestimated in shallow-water tropical reef systems (Nordborg et al, 2018). Lethal and sublethal effects of entrained and dissolved oils have been reported for coral gametes at much lesser concentrations than predicted for adult colonies (Heyward et al. 1994; Harrison 1999; Epstein et al. 2000). Goodbody-Gringley et al. (2013) found that exposure of coral larvae to oil and dispersants negatively impacted coral settlement and survival, thereby affecting reef resilience.<br><br>Browse Island (closest shallow water/emergent sensitive receptor) is predicted to receive a concentration of entrained hydrocarbons of 915 ppb and dissolved aromatic hydrocarbons at 135 ppb; concentrations were predicted to be higher at the immediate release location within WA-50-L (Table 8-4). Due to the proximity of some deep-water filter feeding communities, such as the 125 m ancient coastline KEF, Echuca Shoal and Heywood Shoal, and the prolonged exposure above impact thresholds that may be received at these locations, the potential consequence for coral reefs is considered to be Significant (C).<br><br>Entrained and dissolved hydrocarbons have the potential to affect seagrasses and macroalgae through toxicity impacts. The hydrophobic nature of hydrocarbon molecules allows them to concentrate in membranes of aquatic plants. Hence the thylakoid membrane (an integral component of the photosynthetic apparatus) is susceptible to oil accumulation, potentially resulting in reduced photosynthetic activity (Runcie & Riddle 2006). However, a layer of mucilage present on most species of seagrass prevents the penetration of toxic aromatic fractions (Burns et al. 1993). Although seagrass and macroalgae may be subject to lethal or sublethal toxic effects, including mortality, reduced growth rates, and impacts to seagrass flowering, several studies have indicated rapid recovery rates may occur even in cases of heavy oil contamination (Connell et al, 1981; Burns et al. 1993; Dean et al. 1998; Runcie & Riddle 2006). For algae, this could be attributed to new growth being produced from near the base of the plant while the distal parts (which would be exposed to the oil contamination) are lost. For seagrasses this may be because 50–80% of their biomass is in their rhizomes, which are buried in sediments, thus less likely to be adversely impacted by hydrocarbons (Zieman et al. 1984). It has been reported by Taylor & Rasheed (2011) that seagrass meadows were not significantly affected by an oil spill when compared to a non-impacted reference seagrass meadow. The closest important seagrass habitat to WA-50-L is associated with the dugong foraging at Ashmore Reef. Other seagrass habitats are also found at Browse Island, Scott Reef and Cartier Island, where exposure to entrained and dissolved hydrocarbons may be above thresholds that could cause impact. The consequence is considered to be Minor (E) based on the expected rapid recovery. | |

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| Planktonic communities may be exposed to entrained/dissolved hydrocarbon plumes, especially in high energy seas where the vertical mixing of oil through the water column would be enhanced. The effects of oil on plankton have been well studied in controlled laboratory and field situations. The different life stages of a species often show widely different tolerances and reactions to oil pollution. Usually, eggs, larval and juvenile stages will be more susceptible than adults (Harrison 1999). Post spill studies on plankton populations are few, but those that have been conducted typically show either no effects, or temporary minor effects (Kunhold 1978). The lack of observed effects may be accounted for by the fact that many marine species produce very large numbers of eggs, and therefore larvae, to overcome natural losses (such as through predation by other animals; adverse hydrographical and climatic conditions; or failure to find a suitable habitat and adequate food). A possible exception to this would be if a shallow entrained/dissolved hydrocarbon plume were to intercept a mass, synchronous spawning event. Recently spawned gametes and larvae would be particularly vulnerable to oil spill effects, since they are generally positively buoyant and would also be exposed to surface spills. Hook & Osborn (2012) reported that typically, phytoplankton are not sensitive to the impacts of oil. Although phytoplankton are not sensitive to oil, they do accumulate it rapidly because of their small size and high surface area to volume ratio and can pass oil onto the animals that consume them (Wolfe et al. 1998a, 1998b). This is also applicable to zooplankton, that are reported to accumulate oil via the ingestion of phytoplankton. However, consumption of zooplankton by fish does not appear to be an efficient means of trophic transfer, perhaps due to the metabolism of oil constituents (Wolfe et al. 2001).<br><br>Fish eggs and larvae, for example southern bluefin tuna or other species that spawn in surface waters of the EMBA, may potentially be exposed to hydrocarbons on the sea surface and entrained or dissolved within the upper water column. Eggs, larval and juvenile stages are more susceptible than adults. These fish species such as southern bluefin tuna, produce very large numbers of eggs, and therefore larvae, to overcome natural losses (such as through predation by other animals or adverse hydrographical and climatic conditions). Therefore, impacts to fish spawning are not expected to have detrimental impacts to commercial fish species stock levels. Under most circumstances, impacts to plankton at the sea surface is expected to be localised, with short term impacts; however, if a shallow entrained/dissolved plume reached a coral spawning location, such as Browse Island or Scott Reef, during a spawning event, localised short to medium term impacts could occur. Therefore, the consequence is considered to be Moderate (D).<br><br>Marine mammals, marine reptiles and marine avifauna could also be impacted through entrained and dissolved hydrocarbon exposure, primarily through ingestion during foraging activities (WA DoT 2018). The EMBA overlaps a Ramsar site and nationally important wetland at Ashmore Reef (Section 4.5). Several other marine fauna BIAs are predicted to be exposed to entrained and dissolved hydrocarbons above exposure thresholds. These include the 20 km internesting buffer at Browse Island for green turtles and blue whale foraging/migration at Scott Reef. A range of other marine fauna may also be present within this area albeit on a transient basis. Small proportions of populations of protected species could be impacted by exposure to entrained and dissolved hydrocarbons, therefore the consequence is considered to be Moderate (D).<br><br>Underwater cultural heritage within the EMBA, namely shipwrecks in proximity to Browse Island (Section 4.9.4), may be exposed to entrained and dissolved hydrocarbons from a subsea release of condensate. The deterioration of historic shipwrecks due to enhanced corrosion from oil-induced microbially induced corrosion (Mugge et al 2019), may not only lead to the loss of underwater cultural heritage but there may also be ecological repercussions from impacts to marine flora and fauna that have settled upon them (Salerno et al 2018). Following the Deepwater Horizon spill in the Gulf of Mexico in 2010, a study by Salerno et al (2018) indicated that exposure to oil and dispersant could disrupt the composition and metabolic function of biofilms colonising metal hulls, as well as corrosion processes, potentially compromising shipwrecks as ecological and historical resources. | |

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| The closest known shipwrecks to WA-50-L are associated with guano transport on Browse Island (wrecks dating from 1878-1887) where the water depth is approximately 290 m. As predicted in the oil spill modelling, entrained and dissolved hydrocarbon plumes will rise up through the water column therefore direct contact and potential for impacts to marine flora and flora associated with any known shipwrecks on the seabed is not expected. Any impacts to underwater cultural heritage are considered to be minor and Insignificant (F). | |
| Potential consequence – shoreline hydrocarbons | Severity |
| As summarised in Table 8-4, shoreline contact and accumulation of oil on shorelines was predicted at four locations within the EMBA at concentrations in excess of the 100 g/m$^2$ impact threshold. Indicative quantities of oil that could potentially accumulate on shorelines within the EMBA, where the 100 g/m$^2$ impact threshold was exceeded were predicted as follows:<br>• Ashmore Reef (174 m$^3$ winter)<br>• Browse Island (67 m$^3$ winter)<br>• Cartier Island (16 m$^3$ summer)<br>• Sandy Islet (13 m$^3$ transitional).<br>As described in Section 8.1, oil spill model algorithms use many conservative assumptions including dispersion rates, entrainment rates and biological degradation rates, which collectively result in an over-prediction of entrained oil concentrations over large distances. The consequence of these conservative assumptions result in the over-estimation of the volumes of oil being calculated by the model, to be arriving at a shoreline. The modelling also includes multiple conservative assumptions related to the processes of oil stranding on a shoreline, including over calculation of oil-patches arriving on a shoreline, simplification of shoreline contours, absence of wetting/drying effects and realistic intertidal zone widths. The outcome of this combination of factors is likely to be resulting in the model over-reporting locations of shoreline contact (Appendix D).<br>The minimum predicted time for shoreline contact above the impact threshold was 90 hours (3.75 days) at Browse Island. In general, time to contact for other shorelines was in the order of 15 to 83 days. Given this time to reach shorelines, any surface release is expected to have weathered due to several physical and biological processes, such as evaporation of volatile/toxic components, photo-oxidation and biodegradation (Stout et al. 2016). Impacts to ecological receptors from exposure to weathered oil (waxy flakes and residues) are far less than those associated with exposure to fresh oils, which have higher levels of toxicity (Milton et al. 2003; Hoff & Michel 2014; Woodside 2014; Stout et al. 2016). Therefore, impacts from weathered oil are generally limited to smothering and coating associated with the waxy flakes and residues which generally have low levels of adhesion. Intertidal habitats and marine fauna known to use shorelines are most at risk from shoreline accumulations, due to smothering of intertidal habitats (such as emergent coral reefs) and coating of marine fauna (WA DoT 2018). Consequently, the particular values and sensitivities with the potential to be exposed to shoreline accumulated hydrocarbons are:<br>• benthic primary producer habitats/shoreline habitats (intertidal only)<br>• EPBC-listed species (BIAs - turtles and avifauna) | Moderate (D) |

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| • Aboriginal heritage<br>• underwater cultural heritage exposed at low tide.<br><br>Benthic primary producer habitats exposed at spring low tides are the most vulnerable to smothering. However, as spills disperse, intertidal communities are expected to recover (Dean et al. 1998). Direct contact of hydrocarbons to emergent corals can cause smothering, resulting in a decline in metabolic rate and may cause varying degrees of tissue decomposition and death. A range of impacts may also result from toxicity, including partial mortality of colonies, reduced growth rates, bleaching, and reduced photosynthesis (Negri & Heyward 2000; Shigenaka 2001). The rate of recovery of coral reefs depends on the level or intensity of the disturbance, with recovery rates ranging from 1 or 2 years to decades (Fucik et al. 1984, French McCay 2009).<br><br>A Ramsar site and nationally important wetland is present at Ashmore Reef that overlaps the EMBA (Section 4.5). This location provides important resting and breeding habitats for migratory and shoreline bird species. Given the predicted times to contact and significant expected weathering of any hydrocarbons accumulating on shorelines, any impacts to benthic primary producer or intertidal habitats are expected to be localised and of short to medium term with a consequence of Moderate (D).<br><br>Marine turtles that utilise shoreline habitats can be exposed to hydrocarbons externally, through direct contact; or internally, by ingesting oil, consuming prey containing oil, or inhaling volatile compounds (Milton et al. 2003). Shoreline hydrocarbons can impact turtles at nesting beaches when they come ashore, with exposure to skin and cavities, such as eyes, nostrils, and mouths. Eggs may also be exposed during incubation, potentially resulting in increased egg mortality and detrimental effects on hatchlings. Hatchlings may be particularly vulnerable to toxicity and smothering, as they emerge from the nests and make their way over the intertidal area to the water (Milton et al. 2003). There are a number of foraging, nesting and internesting BIAs for turtles within the EMBA that have the potential to be exposed to shoreline accumulations above the impact threshold concentration (100 $g/m^2$). Potential impacts may occur on nesting populations, which may affect species recruitment at a local population level particularly in relation to green turtles at Browse Island with a small, localised range of habitat (DEE 2017a). At locations with longer times for shoreline contact, there is a high potential for hydrocarbons to become more weathered. Weathered oil has been shown to have little impact on turtle egg survival, while fresh oil may have a significant impact (Milton et al. 2003). Given the modelling results (time to contact and predicted volumes on shorelines), there is the potential for local to medium scale impacts with medium term effects on nesting populations of turtles at individual nesting beaches/locations (Moderate D).<br><br>Birds coated in hydrocarbons may suffer toxic effects where oil is ingested, either through birds' attempts to preen their feathers (Jenssen 1994; Matcott et al. 2019) or ingested as weathered waxy flakes/residues present on shorelines. However, waxy residues are generally considered to be of lower toxicity (Stout et al. 2016; Woodside 2014). Shorebirds foraging and feeding in intertidal zones are at potential risk of exposure to shoreline hydrocarbons, potentially causing acute effects to numerous marine avifauna BIAs, and species present at the Ashmore Reef Ramsar/wetland site. It is also possible that birds exposed to surface hydrocarbons may be displaced (i.e. fly away) and use nearby shorelines to recover, thereby, potentially increasing their exposure to shoreline hydrocarbons. In the event of shoreline contact following a loss of containment event from a production well in WA-50-L, there is the potential for short–to-medium term impacts on the environment while local populations recover. It is not expected that the overall population viability for any protected species would be threatened. Therefore, the potential consequence associated with shoreline hydrocarbon exposure for EPBC-listed species is considered to be Moderate (D). | |

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| In summary, the potential extent of shoreline accumulation (> 100 g/m$^2$) may result in exposure to the identified values and sensitivities. There would likely also be cumulative impacts as a result of interactions between surface, entrained/dissolved and shoreline hydrocarbon impacts on the food web and through bioaccumulation up the food chain potentially impacting a small portion of a population of protected species. On this basis, the potential consequence associated with shoreline accumulation from a loss of well containment is considered to be Moderate (D).<br><br>As described in Section 4.9.5, important Aboriginal heritage sites for ritual and stories, fishing and hunting are typically confined to nearshore and adjacent areas. There are no registered Aboriginal Cultural Heritage sites located within WA-50-L or the EMBA. However, oil spill modelling results, presented in Table 8-4 predict shorelines in the Mayala MP may be contacted albeit by low volumes (<1 m$^3$) and at low concentrations (14 g/m$^2$) and only during the winter season (equating to 1 out of 300 modelled runs). As described previously, the modelling results are based on multiple stochastic modelling runs (300) and are highly conservative. The oil spill model algorithms use conservative assumptions including dispersion rates, entrainment rates and biological degradation rates, which collectively result in an over-estimation of the volumes of oil being calculated by the model, to be arriving at shorelines. Therefore, impacts associated with disruption and loss of access to culturally significant sites following a spill are expected to be minor (Insignificant F).<br><br>Underwater cultural heritage, described in Section 4.9.4, confirms a wreck believed to be the *Ann Millicent* (sailing vessel) was wrecked in 1888 on a reef to the south of Cartier Island. At low tide remains of the wreck are visible (WAM 2008) and therefore could be impacted by predicted shoreline contact resulting in potential deterioration and enhanced corrosion from oil-induced microbially induced corrosion (Mugge et al. 2019). As the wreck is only exposed during low tide, any accumulations of oil are expected to be removed and dispersed by natural washing/tidal movements. Therefore, impacts to underwater cultural heritage are considered to have limited adverse impact on heritage, aesthetic or recreational values (Minor E). | |

Identify existing design and safeguards/controls measures

- Conduct drilling in accordance with the OPGGS (Resource Management and Administration) Regulations 2011 and OPGGS (Safety) Regulations 2009 including a NOPSEMA accepted WOMP and MODU safety case.

Propose additional safeguards/control measures (ALARP Evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | None identified | N/A | N/A |
| Substitution | None identified | N/A | N/A |

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| Engineering | Maintain well integrity throughout the well's lifecycle to avoid the requirement to implement source control. | Yes | Controls to maintain well integrity throughout the well's lifecycle will be in place as documented in the NOPSEMA accepted WOMP. These will include but are not limited to:<br>• adherence to the drilling management system including in particular the well integrity standard, well design standard and well operations standard<br>• well design inputs such as hazardous gases, temperature and pore pressure and how these are used in well design<br>• barrier design, installation and verification<br>• drilling Technical Authorities<br>• well integrity assurance activities<br>• well design assurance activities<br>• drilling fluid type and density selection and calculation of kick tolerance<br>• cementing design, placement and verification<br>• well abandonment design, execution and verification<br>• risk management process including identification, analysis, evaluation, control, monitoring and review<br>• management of change<br>• use of performance standards in well construction including but not limited to well acceptance criteria<br>• process safety management<br>• the competency assurance process.<br>Through implementation of such preventative controls, the potential for a release of hydrocarbon to the marine environment and the likelihood of shoreline contact and/or associated environmental impacts both nationally and internationally is reduced. |

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| Procedures & administration | Well Control Bridging Document, well integrity standard and well operations standard. | Yes | The drilling contractor's Well Control Bridging Document, INPEX Well Integrity Standard and INPEX Well Operations Standard covers all aspects of primary and secondary well control for drilling operations implemented to minimise the potential for a loss of well containment and reduce any impacts to the environment and the likelihood of shoreline contact both nationally and internationally by preventing a spill. |
| | Trained and competent personnel. | Yes | Adherence to the INPEX Competency Assurance and Management Standard (0000-AN-STD-60011) to ensure all personnel on the MODU and vessels will be competent to undertake their assigned positions, including, all critical drilling personnel comply with minimum well control training and oil spill response competency requirements. |
| | Implement INPEX *Browse Regional OPEP* | Yes | The INPEX *Browse Regional OPEP* defines the processes that will be used to maintain oil spill preparedness and implement effective response measures, in the event of a spill.<br><br>For this EP, an assessment of the well blowout WCSS against the Browse Regional OPEP Basis of Design has been conducted, as is required under BROPEP BOD/FCA, Figure 8-1 – management of change process.<br><br>The well blowout WCSS from this EP has been compared against the Browse Regional OPEP BOD response planning thresholds, (BROPEP BOD/FCA Table 4-4) and is lower than the response planning thresholds, as presented in the BROPEP BOD/FCA Table 4-4.<br><br>Therefore, the well blowout WCSS assessed under this EP is equivalent, or less than the WCSS defined in the Browse Regional OPEP BOD. As such, no revision to the spill preparedness/response arrangements defined in the Browse Regional OPEP are required. |
| | Implement INPEX Source Control Capability & Arrangements | Yes | The INPEX Source Control Capability & Arrangements report provides a detailed source control capability analysis for the worst credible blowout scenario. It also provides an implementation strategy for source control arrangements and risk assessment, including management of change processes and compliance reporting requirements. |

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| | Implement a compensation process for commercial fisheries in the unplanned event of a loss of well containment resulting in economic losses. | No | INPEX maintains financial assurance to ensure the costs of implementing an oil spill response and undertaking pre and post spill monitoring termed as 'operational and scientific monitoring' are met. The monitoring put in place during and after the response to an oil spill will determine impacts to the environment (including economic losses to commercial fisheries). The outcomes of the monitoring would be shared with the commercial fishing industry and Government departments if appropriate. If any claims were to be made post-event, this would be assessed on a case-by-case basis based upon actual impacts that had been realised.<br><br>Therefore, the establishment of an additional compensation protocol for an unknown event (i.e. an oil spill where the duration and area of impact is impossible to predict ahead of time) is a duplication of the process that INPEX is already required to have in place. |

Identify the likelihood

Given the design and mitigation controls that have been identified to minimise the potential for a loss of well containment the likelihood of the consequence occurring is considered Highly Unlikely (5).

INPEX has conducted a drilling campaign risk assessment and maintains a risk register for current drilling operations, which determines the likelihood rating, and subsequently the residual risk, of a loss of well containment event against associated consequential factors including finance reputation, health and safety and environment. This process is verified by a quarterly risk review, which continues to assess any change to activities which may affect residual risk levels. Together these processes verify the likelihood level as 'High Unlikely' (5).

A suite of control measures that typically exceed industry well control and barrier standards have been implemented by INPEX for the drilling activities covered in this EP and include:

- the development and implementation of a Well Control Bridging Document for alignment and agreement on the systems and approach to be used for well control in operations
- INPEX well control audits of drilling contractor equipment, systems and personnel via SMEs
- major and minor (major accident event) barrier health checks which are in-depth reviews of well control related barriers including related performance standards
- independent third-party inspection of well control equipment, systems, maintenance and testing
- detailed INPEX quality audits of drilling contractor maintenance system including well control equipment
- enhanced conventional pit monitoring with multiple sensors per pit / solids control tanks

- continuous fluid density in/out, gas in/out and temperature in/out monitoring available via mudlogging
- connection flowback fingerprinting utilized as a standard practice
- real time data from mudlogging available to Driller as well as Operator and Drilling Contractor site-based supervisor offices
- application of the INPEX Drilling Behaviours throughout the campaign which create an open culture of speaking up and reporting bad news, avoiding rushing of tasks, not getting comfortable and being visible and actively present. Previous application of these behaviors has created a strong culture of effective well monitoring and control
- rigorous management of change process that includes a technical authority that is independent of direct well operations.

The INPEX risk matrix describes associated likelihood timeframes, frequencies and probabilities (in line with historical industry and regional events); however, the introduction of these additional control measures, considered by INPEX to further reduce the likelihood, has resulted in a likelihood rating of Highly Unlikely (5).

If concurrent drilling operations were to occur during the activity, up to two MODUs could be potentially operating in WA-50-L. In this case the likelihood of two well blowouts is deemed to be non-credible and with the above controls in place the likelihood of the consequence occurring is Remote (6).

Residual risk summary

Based on the worst-case consequence for all hydrocarbon exposure mechanisms (surface/entrained/dissolved/shoreline) Significant (C) and a likelihood of Highly Unlikely (5) the residual risk is ranked as Moderate (7).

| Consequence | Likelihood | Residual risk |
|---|---|---|
| Significant (C) | Highly Unlikely (5) | Moderate (7) |

Assess residual risk acceptability

Legislative requirements

All reasonable means to minimise the likelihood of a loss of well containment occurring have been taken during the design and planning process for the production wells. Relevant Australian standards, codes of practice and industry best practice has been adopted to ensure well integrity is maintained. All activities will be undertaken in accordance with the OPGGS (Resource Management and Administration) Regulations 2011 and OPGGS (Safety) Regulations 2009. The controls are typical for the proposed activities and are appropriate for the NWS region.

Relevant person consultation

Relevant persons have been engaged throughout the development of the EP, and where applicable the consequence assessment in this table of the EP has been revised and updated to reflect relevant person feedback. Where relevant, the controls in place and described above have been developed in consultation with relevant persons (e.g. WA DoT, WA DBCA, AMSA and AMOSC) on an ongoing basis through consultation on INPEX's Browse regional OPEP.

Feedback from the DNP has been incorporated into Table 2-4 of the INPEX Browse Regional OPEP with regard to required notifications in the event of an oil spill that may impact on an AMP.

Feedback received from Tuna Australia during previous EP consultation in 2023 has been incorporated into the consequence assessment presented in this table of the EP. Consideration of feedback from the Australian Southern Bluefin Tuna Industry Association (ASBTIA) with regards to a compensation process for commercial fisheries in the event of an environmental disaster (oil spill) has been presented in this table of the EP.

Conservation management plans / threat abatement plans

Several conservation management plans (refer Appendix B) identify oil spills as a key threatening process, through both direct/acute impacts of oil, as well as indirect impacts through habitat degradation (which is a potential consequence of an oil spill). The prevention of loss of well containment and reducing impacts to the marine environment through oil spill response preparedness and response (refer INPEX Browse Regional OPEP) demonstrates alignment with the various conservation management plans.

ALARP summary

Given the level of environmental risk is assessed as Moderate, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as "low", the consequence does not exceed "C – significant" and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
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| No incidents of loss of hydrocarbons to the marine environment as a result of a loss of well containment. | INPEX and MODU contractor will conduct drilling activities in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011 and OPGGS (Safety) Regulations 2009 requirements, including:<br>• a NOPSEMA accepted WOMP<br>• a NOPSEMA accepted MODU safety case. | • WOMP acceptance letter received from NOPSEMA.<br>• NOPSEMA acceptance of MODU safety case. |
| | INPEX will verify that the MODU contractor complies with the requirements of the approved Well Control Bridging Document which aligns requirements (and clarifies if conflicts exist, which standard takes precedence) between the INPEX Well Operations Standard (0000-AD-STD-60004) and Well Operations Manual (0000-AD-MAN-60002) which covers all aspects of primary and secondary well control for floating drilling operations, including:<br>*Well design/planning*<br>• Assessment of formation pressure and fracture gradient along the length of the well.<br>• Shallow gas analysis and assessment has shown no potential for any shallow hazards.<br>• Planned hydrostatic overbalance to stop ingress potential (i.e. inflow of formation fluids) into the well.<br>• Kick tolerance – adequate design window to tolerate a kick of a certain volume and safe circulation out of the well.<br>• Assessment of well control equipment requirements to ensure they are suitable and specific for well design, including subsea BOP stacks, well choke and kill systems.<br>• Well-bore monitoring equipment – two independent systems for monitoring flow and volume from the well-bore shall be provided (by the drilling contractor and the mud logging contractor).<br>*BOP system*<br>• BOP installed in sections where there is potential for flow from the well. | *Well design/planning*<br>• Proposed well design, and comparison with drilling contractor's equipment to ensure minimum requirements are met and align with the INPEX Well Operations Manual (0000-AD-MAN-60002).<br>*BOP system*<br>• BOP pressure and function testing prior to installation and at regular intervals for the duration of drilling campaign while installed. The INPEX drilling supervisor or drilling engineer must approve BOP pressure tests and report appropriately.<br>• Inspection and maintenance records show BOP meets INPEX requirements (e.g. shear ram capability, industry standard etc.) and maintained in accordance with MODU preventive maintenance system.<br>*Mud logging*<br>• Documentation that mud logging unit provides kick detection. |

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| | • BOP function and pressure tested prior to use and meets the requirements of the industry standard American Petroleum Institute (API) STD 53 Blowout Prevention Equipment Systems for Drilling Wells (4th edition, November 2012). The INPEX drilling supervisor or drilling engineer must approve BOP pressure tests in accordance with predetermined acceptance criteria.<br>• The drilling contractor shall have a maintenance/inspection program for BOP control equipment which will align with the drilling contractor's well control standard. The BOP will undergo weekly/fortnightly function and pressure testing.<br>• BOP shall have a shear ram capable of shearing the drill pipe in use and sealing the well-bore.<br>• Compliance with INPEX Well Integrity Standard (0000-AD-STD-60003) which requires two tested barriers to allow removal of the BOP.<br>*Mud logging*<br>The mud logging unit shall provide kick detection through the following:<br>• continually manned (24 hrs) during all live, open hole well operation, with appropriate checks and calibration checks on key components<br>• continuous recording of drilling operations, including mud flow out and pressure evaluation, with alarms in place to detect any significant changes.<br>*Well abandonment*<br>• INPEX will verify compliance with the WOMP which outlines the means by which the wells will be plugged and abandoned using a combination of verified barriers. | • Documentation demonstrates all issues identified, addressed or closed out. Summary of compliance with INPEX Well Integrity Standard (0000-AD-STD-60003) summarised in pre-start environmental audit and annual environmental audit report.<br>*Well abandonment*<br>• Compliance with INPEX Well Integrity Standard (0000-AD-STD-60003) and WOMP reported. |
| | MODU and vessel personnel will demonstrate competence in accordance with the INPEX Competency Assurance and Management Standard (0000-AN-STD-60011). | Training records. |

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| Refer to the INPEX *Browse Regional OPEP* for environmental performance outcomes, standards and measurement criteria related to mitigative controls. |
| Refer to the INPEX *Source Control Capability & Arrangements report for* environmental performance outcomes, standards and measurement criteria related to source control. |

## 8.3 Vessel collision

### 8.3.1 Location

Only vessels using marine diesel will be used during the petroleum activity. Spill modelling was undertaken for a surface release of marine gas oil (MGO) at a location adjacent to the CPF Ichthys Explorer in WA-50-L (RPS 2024b). The release point provides indicative information only as an exact location for a vessel collision cannot be predicted.

### 8.3.2 Volume and duration

AMSA guidance (AMSA 2015) recommends that the maximum credible volume spill for a vessel collision scenario be based on the volume of the largest single fuel tank. A review of the expected tank sizes associated with the activity indicated the MODU support vessels to be approximately 225 $m^3$. Conservatively, the modelling of a 250 $m^3$ spill volume has been used (RPS 2024b) with the spill modelled as a release over 6 hours, with spill trajectory and fate tracked for 28 days.

### 8.3.3 Hydrocarbon properties

Hydrocarbon properties associated with the Group II MGO used for the modelling study are presented in Table 8-6.

**Table 8-6: Group II MGO properties**

| Hydrocarbon type | Density at 25 ˚C (g/cm$^3$) | Viscosity – centipoise (cP) – at 25 ˚C | Characteristic | Volatile (%) | Semi-volatile (%) | Low volatility (%) | Residual (%) |
|---|---|---|---|---|---|---|---|
| | | | Boiling point (˚C) | <180 | 180–265 | 265–380 | >380 |
| Marine Gas Oil | 0.829 | 4.0 | % of total | 6 | 34.6 | 54.4 | 5 |
| | | | % aromatics | 1.8 | 1.0 | 0.2 | - |

### 8.3.4 Modelling results

Modelling results are summarised in Table 8-7 and include results taken for three modelled seasons throughout the year: October to March (summer); May to August (winter); and April and September (transitional months). For each season, 100 modelled replicates were run and therefore the results summarised represent 300 possible spill scenarios.

MGO fuels, in general, have relatively low viscosity and density and will consequently spread rapidly as a floating film on calm seas. This spreading will enhance the rate of evaporation of the more volatile components, but evaporation will then slow as the mixture evolves towards higher proportions of the low volatile and non-volatile components (RPS 2024b).

Under low wind conditions, the MGO is predicted to rapidly evaporate over the first 12 hours with progressively slower evaporation over the following days. Approximately 38% of the mass is predicted to evaporate within the first 12 hours and another 2% over the following 12 hours. Around 5% of the remaining mass would evaporate over the next 6 days. During the first week following a release, the mass would be subject to microbial and photo-degradation (RPS 2024b).

Under strong wind conditions, that would generate breaking surface waves, approximately 74% of the oil is predicted to entrain into the water column within 24 hours and 26% is predicted to have evaporated leaving only a small proportion of the MGO floating at the sea surface (<1%) (RPS 2024b).

**Table 8-7: Vessel collision spill modelling results**

| Hydrocarbon exposure | Surface release of 250 $m^3$ MGO (RPS 2024b) |
|---|---|
| Surface | The maximum distance of floating hydrocarbon, at concentrations greater than 1 $g/m^2$ (visible sheen), travelled by a single spill trajectory (out of 300 simulations) was approximately 96 km from the release location.<br><br>The maximum distance travelled by a single spill trajectory (out of 300 simulations) for floating hydrocarbons at concentrations >10 $g/m^2$ (environmental impact threshold) were predicted to be approximately 17 km. |
| Entrained | The maximum distance of entrained hydrocarbon, at concentrations greater than 100 ppb, travelled by a single spill trajectory (out of 300 simulations) was approximately 80 km.<br><br>The worst-case instantaneous entrained oil concentration at any receptor is predicted at the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery as 12,676 ppb in winter.<br><br>Across all replicates the maximum entrained oil concentrations for waters surrounding emergent sensitive receptors in proximity to the release location were below the 100-ppb impact threshold. |
| Dissolved | The maximum distance of dissolved aromatic hydrocarbons, at concentrations greater than 50 ppb, travelled by a single spill trajectory (out of 300 simulations) was approximately 70 km.<br><br>The worst-case concentration of dissolved aromatic hydrocarbons is predicted at the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery as 266 ppb in winter. A concentration of 126 ppb was predicted for the continental slope demersal fish communities KEF in summer.<br><br>Across all replicates the maximum dissolved aromatic hydrocarbon concentrations for waters surrounding emergent sensitive receptors in proximity to the release location were below the 50-ppb impact threshold. |
| Shoreline | No concentrations of oil on shoreline were predicted above the ecological impact threshold of 100 $g/m^2$ across all seasons.<br><br>Maximum concentrations were predicted at Cartier Island (52 $g/m^2$; summer) and Browse Island (22 $g/m^2$; transitional). |

| | |
|---|---|
| | Minimum times for shorelines to be contacted was 63 hours at Browse Island (at >10 g/m$^2$ during summer) and 226 hours at Cartier Island (at >10 g/m$^2$ during summer). No contact was predicted at Cartier Island or Browse Island at >100 g/m$^2$ during all modelled seasons.<br><br>Worst-case accumulated volumes of oil along shorelines at Cartier Island was predicted to be 2 m$^3$ (summer) and <1 m$^3$ at Browse Island (transitional). |

### 8.3.5 Impact and risk evaluation

**Table 8-8: Impact and risk evaluation – Vessel collision resulting in a Group II (MGO) spill**

| Identify hazards and threats | |
|---|---|
| A surface release of Group II hydrocarbons from a vessel collision has the potential to result in changes to water quality through surface, entrained/dissolved, and shoreline hydrocarbon exposure. The thresholds for impacts associated with surface, entrained/dissolved, and shoreline, hydrocarbon exposures are described in Table 8-2. The results of the predictive modelling for the vessel collision scenario are presented in Table 8-7. | |
| Potential consequence – surface hydrocarbons | Severity |
| The values and sensitivities with the potential to be affected by surface hydrocarbon exposure from a release due to a vessel collision include:<br>• commercial, recreational and traditional fisheries and Aboriginal traditional use of resources (within 96 km from the release location based on 1 g/m$^2$ visible sheen threshold in worst-case)<br>• Aboriginal heritage (within approximately 96 km from the release location based on the visible sheen threshold)<br>• EPBC-listed species (within 17 km from the release location based on 10 g/m$^2$ impact threshold)<br>• planktonic communities (within 17 km from the release location based on 10 g/m$^2$ impact threshold).<br>As described in Table 8-5, commercial, recreational and traditional fisheries including aquaculture may be impacted by the presence of exclusion zones, loss of access to culturally important areas to undertake traditional activities and the oiling of nets and lines. The potential extent of the visible sheen associated with the vessel collision scenario is significantly less than for a loss of well containment scenario. There are low levels of commercial and traditional fishing within WA-50-L and there is no evidence of any recreational fishing or Aboriginal traditional activities occurring, likely because of the distance from land, lack of features of interest and deep waters (refer to Sections 1044.10.1, 4.10.2 and 4.9.5). There are no registered Aboriginal Cultural Heritage sites located within WA-50-L or the EMBA. Any impacts to commercial and traditional fishing are expected to be localised to within 96 km of the release location and temporary in nature given the expected evaporation, weathering and rapid dispersion of Group II hydrocarbons at the sea surface. Therefore, the consequence rating for is considered to be Insignificant (F). | Minor (E) |

| | |
|---|---|
| There is only one marine fauna BIA predicted to be exposed to surface expressions above the 10 g/m$^2$ exposure threshold (within 17 km of the release location). This relates to the whale shark foraging BIA located approximately 10 km from WA-50-L at its closest point (Figure 4-6). Based on the levels of whale shark abundance observed in numerous studies (as described in Section 4.7.4), the likelihood of whale shark presence within this BIA is considered very low, with no specific seasonal pattern of migration. A range of other marine fauna may also be present within this area albeit on a transient basis. Impacts to EPBC-listed species are described in Table 8-5. Based on the predicted limited extent of the surface hydrocarbons (within 17 km where concentrations are >10 g/m$^2$, noting that the spill would not represent a continuous surface expression) and the rapid evaporation of volatile components and expected weathering resulting in reduced levels of toxicity, any impacts to EPBC-listed species are expected to be on a local scale, with short-term impacts on a small portion of the population of a protected species (Minor E).<br><br>Plankton may potentially be exposed to hydrocarbons on the sea surface. However, the majority of impacts would be toxicity related, associated with entrained/dissolved hydrocarbons exposure. Therefore, the impact evaluation for plankton is provided in the subsection below. | |
| Potential consequence – entrained/dissolved hydrocarbons | Severity |
| The values and sensitivities with the potential to be affected by dissolved/entrained hydrocarbon exposures from a surface release of MGO due to a vessel collision are:<br>• commercial, traditional and recreational fisheries and Aboriginal traditional use of resources (within 80 km from the release location)<br>• KEFs, fish communities and whale shark BIA (within 80 km from the release location)<br>• planktonic communities (within 80 km from the release location)<br>• EPBC-listed species including marine mammals, turtles, marine avifauna (within 80 km from the release location).<br><br>Fishing grounds that overlap the area may potentially be exposed to entrained/dissolved hydrocarbons above impact thresholds (Table 8-7). The impact to fish communities from exposure to entrained and dissolved hydrocarbons above threshold values, is primarily associated with toxicity resulting in impacts to seafood quality as described in Table 8-5.<br><br>There are low levels of commercial and traditional fishing within WA-50-L. A surface release of diesel is expected to entrain predominantly within the upper water column; therefore, exposure is considered to be relatively limited within the water column. Worst-case predicted concentrations of entrained oil and dissolved aromatic hydrocarbons are predicted for receptors that overlap WA-50-L including the continental slope demersal fish communities KEF, the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery. However, across all replicates the maximum entrained oil and dissolved aromatic hydrocarbons concentrations for waters surrounding emergent sensitive receptors in proximity to the release location were below the 100-ppb and 50-ppb impact thresholds respectively. Therefore, pelagic fish, and site attached fish on coral reefs, such as Browse Island (approximately 26 km away) and Echuca Shoal (approximately 65 km away) were not predicted to be exposed to entrained or dissolved hydrocarbons above the impact thresholds. | Minor (E) |

| | |
|---|---|
| Impacts to fish from entrained/dissolved hydrocarbon exposure are described in Table 8-5. Given the highly mobile nature of pelagic fish, they are not expected to remain within entrained/dissolved hydrocarbon plumes for extended periods, and limited acute impacts or risks associated with the exposure are expected. The whale shark foraging BIA is located approximately 10 km from WA-50-L at the closest point. Whale sharks reportedly spend 40% of their time in the upper 15 m of the water column and are therefore likely to be exposed to entrained and dissolved hydrocarbons. Potential effects to whale sharks include damage to the liver and lining of the stomach and intestines, as well as toxic effects on embryos (Lee 2011). As whale sharks are filter feeders they are expected to be highly vulnerable to entrained/dissolved hydrocarbons (Campagna et al. 2011). In the event that a spill from a vessel collision occurred during whale shark foraging activities, there is the potential for a small proportion of the population to be affected; however, as there are no whale shark aggregations (such as the Ningaloo Reef aggregation) and reported low abundance, the overall population viability is not expected to be threatened. As such, the consequence of entrained/dissolved hydrocarbons on fisheries (commercial, recreational and traditional), KEFs, fish and shark populations is considered to be Minor (E).<br><br>The potential range of impacts of entrained/dissolved hydrocarbon exposure on planktonic communities is described in Table 8-5. Fish eggs and larvae, for example southern bluefin tuna or other species that spawn in surface waters of the EMBA, may potentially be exposed to hydrocarbons on the sea surface and entrained or dissolved within the upper water column. Eggs, larval and juvenile stages more susceptible than adults. These fish species such as southern bluefin tuna and other species, produce very large numbers of eggs, and therefore larvae, to overcome natural losses (such as through predation by other animals or adverse hydrographical and climatic conditions). Therefore, impacts to fish spawning are not expected to have detrimental impacts to commercial fish species stock levels. In the event of a vessel collision resulting in a MGO spill, impacts on plankton are expected to be highly localised, with short-term impacts, due to the limited exposure (upper water column). However, if a shallow entrained/dissolved plume reached a coral-spawning location, such as Browse Island, during a spawning event, localised short-to-medium term impacts could occur. Therefore, the consequence is considered to be Minor (E).<br><br>EPBC-listed species including marine mammals, marine reptiles and marine avifauna within 80 km of the release location could be impacted through entrained and dissolved hydrocarbon exposure, primarily through ingestion during foraging activities as described in Table 8-5. Any entrained/dissolved plume would be spatially and temporally limited in extent and as such, impacts to EPBC-listed species are expected to be on a local scale, with short-term impacts on a small portion of the population of a protected species, with the consequence considered to be Minor (E). | |
| Potential consequence – shoreline hydrocarbons | Severity |
| As summarised in Table 8-7, no concentrations of oil on shoreline were predicted above the ecological impact threshold of 100 g/m$^2$ across all seasons. Only Browse Island and Cartier Island were predicted to be contacted at concentrations of 22 g/m$^2$ and 52 g/m$^2$ respectively. Times to contact ranged from 63 hours (Browse Island) to 226 hours (Cartier Island) and worst-case volumes on shorelines predicted to be <1 m$^3$ (Browse Island) and 2 m$^3$ (Cartier Island).<br><br>The particular values and sensitivities with the potential to be exposed to shoreline hydrocarbons are:<br><br>• benthic primary producer habitats/shoreline habitats (intertidal only) | Insignificant (F) |

- EPBC-listed species (BIAs - turtles and avifauna)
- Aboriginal heritage.

Given the limited range of locations, low volumes and expected weathering of any hydrocarbons accumulating on shorelines, any impacts to benthic and shoreline habitats (refer to Table 8-5), from a vessel collision event are expected to be localised and short term with an Insignificant consequence (F).

Impacts to transient EPBC listed species, specifically marine turtles and avifauna (refer to Table 8-5) may include exposure to weathered MGO; however, at concentrations below impact thresholds (100 $g/m^2$). This may result in a local scale, temporary impact on the environment with inconsequential ecological significance (Insignificant F).

No direct impact to culturally significant sites or Aboriginal heritage values are anticipated from a vessel collision scenario. Although Worst-case predictive modelling estimated oil on shorelines (<1 $m^3$ at Browse Island and 2 $m^3$ Cartier Island) these locations are located a considerable distance from mainland Australia, approximately 170 km and 290 km respectively at their closest points. There are no formally recognised Aboriginal heritage sites or places on Browse Island or Cartier Island (Appendix B.4). Therefore, any impacts on Aboriginal heritage values or disruption through loss of access to culturally important sites following a spill would be minor (Insignificant F).

Identify existing design safeguards/controls

- Vessels fitted with lights, signals, AIS transponders and navigation equipment as required by the *Navigation Act 2012*.
- PSZ maintained around the MODU in accordance with the OPGGS Act
- Ongoing relevant person consultation and notifications made to relevant persons as per Section 9.8.3 and Table 9-7.

Propose additional safeguards/control measures (ALARP evaluation)

| Hierarchy of control | Control measure | Used? | Justification |
|---|---|---|---|
| Elimination | Eliminate vessels. | No | Vessels are the only form of transport that can maintain ongoing logistical support to the MODU in a fashion that is practical and cost efficient. |
| Substitution | Use only Group II (MGO) fuel oils, as opposed to Group IV (IFO 180 / HFO 380) fuel oils. | Yes | Limiting vessel selection to only vessels which use Group II fuel oils may require more detailed planning to avoid delays in sourcing appropriate available vessels. However, in the event of a vessel collision, MGO is less persistent than alternative heavier fuels such as heavy fuel oil (HFO) and intermediate fuel oil (IFO). Therefore, this control has been adopted. |

| | | | |
|---|---|---|---|
| Engineering | Drilling support vessels used will have dynamic positioning equipment. | Yes | The use of DP vessels to support the MODU and drilling activities will reduce the potential for vessel collisions. Supply vessels will also be equipped with a backup DP system as a failsafe (DP2 or greater). |
| Procedures and administration | Vessels will not carry over 250 $m^3$ of MGO fuel in any single tank. | Yes | Vessels will be selected to ensure that no single fuel tank carries over 250 $m^3$ and maintain a spill risk less than assessed in this EP. |
| | Implement INPEX *Browse Regional OPEP*. | Yes | The INPEX *Browse Regional OPEP* defines the processes that will be used to maintain oil spill preparedness and implement effective response measures, in the event of a spill.<br><br>For this EP, an assessment of the vessel collision WCSS against the Browse Regional OPEP Basis of Design has been conducted, as is required under BROPEP BOD/FCA, Figure 8-1 – management of change process.<br><br>The vessel collision WCSS from this EP has been compared against the Browse Regional OPEP BOD response planning thresholds, (BROPEP BOD/FCA Table 4-5). The vessel collision data presented in Table 8-7 of this EP, are lower than the response planning thresholds, as presented in the BROPEP BOD/FCA Table 4-5.<br><br>Therefore, the vessel collision WCSS assessed under this EP is less than the vessel collision WCSS defined in the Browse Regional OPEP BOD. As such, no revision to the spill preparedness/response arrangements defined in the Browse Regional OPEP are required. |
| Identify the likelihood | | | |
| Likelihood | Reported industry statistics indicate vessel failures are considered rare with 37 collisions reported out of a total of 1,200 marine incidents in Australian waters between 2005 and 2012 (most recent data) (ATSB 2013).<br><br>A ship collision risk assessment was undertaken to support the INPEX Ichthys Project. The study determined collision frequencies and impact energies for passing (third-party) vessels, infield vessels and offloading tankers. The annual frequency of a collision with a passing vessel – i.e. one not within the control of INPEX – imparting at least 150 megajoules (sufficient impact energy) is 3.5 × 10-7, or once every 2.9 million years.<br><br>On this basis and given the controls that have been identified to minimise the potential for vessel collision and subsequent loss of containment, the likelihood of the consequence occurring is considered Highly Unlikely (5). | | |

| | |
|---|---|
| | If concurrent drilling operations were to occur during the activity, including the ongoing Ichthys drilling campaign in nearby WA-50-L, an increase in vessel traffic could be expected. However, given the distance (tens of km) between any concurrently operating MODUs and the controls in place the likelihood of the consequence occurring is considered to be Highly Unlikely (5). |
| Residual risk | Based on the worst-case consequence for all applicable hydrocarbon exposure mechanisms (surface, entrained and dissolved) Minor (E) and a likelihood of Highly Unlikely (5) the residual risk is ranked as Low (9). |

| Residual risk summary | | |
|---|---|---|
| Consequence | Likelihood | Residual risk |
| Minor (E) | Highly Unlikely (5) | Low (9) |

| Assess residual risk acceptability |
|---|
| Legislative requirements<br><br>The activities and proposed management measures are compliant with industry standards and with relevant Australian legislation, specifically concerning navigational safety requirements, including AMSA Marine Orders – Part 30: Prevention of Collisions, Issue 8 (Order No. 5 of 2009). All vessels are required to comply with the *Navigation Act 2012*, and associated Marine Orders, which are consistent with the COLREGS requirements.<br><br>Relevant person consultation<br><br>Relevant persons have been engaged throughout the development of the EP, and where applicable the consequence assessment in this table of the EP has been revised and updated to reflect relevant person feedback. Where relevant, the controls in place and described above have been developed in consultation with relevant persons (e.g. WA DoT, WA DBCA, AMSA and AMOSC) on an ongoing basis through consultation on INPEX's Browse regional OPEP. The controls in place are considered to manage risks associated with a vessel collision to ALARP.<br><br>Conservation management plans / threat abatement plans<br><br>Several conservation management plans (refer Appendix B) identify oil spills as a key threatening process, through both direct/acute impacts of oil, as well as indirect impacts through habitat degradation (which is a potential consequence of an oil spill). The prevention of vessel collisions and reducing impacts to the marine environment through oil spill response preparedness and response (refer INPEX Browse Regional OPEP), demonstrates alignment with the various conservation management plans.<br><br>ALARP summary |

Although the level of environmental risk is assessed as Low, a detailed ALARP evaluation was undertaken to determine what additional control measures could be implemented to reduce the level of impacts and risks. No additional controls, beyond those identified during the detailed ALARP assessment can reasonably be implemented to further reduce the risk of impact.

Acceptability summary

Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:

- the activity demonstrates compliance with legislative requirements/industry standards
- the activity takes into account relevant person feedback
- the activity is managed in a manner that is consistent with the intent of conservation management documents
- the activity does not compromise the relevant principles of ESD
- the predicted level of impact does not exceed the defined acceptable level in that the environmental risk has been assessed as "low", the consequence does not exceed "C – Significant" and the risk has been reduced to ALARP.

| Environmental performance outcomes | Environmental performance standards | Measurement criteria |
|---|---|---|
| No incidents of loss of hydrocarbons to the marine environment as a result of a vessel collision. | MODU/vessels will be fitted with lights, signals, AIS transponders and navigation and communications equipment, as required by the *Navigation Act 2012*. | Records confirm that required navigation equipment is fitted to MODU/vessels to ensure compliance with the *Navigation Act 2012*. |
| | A 500 m PSZ, issued by NOPSEMA, will be maintained around the MODU. | Gazette notice of PSZ.<br>Records of reporting of unauthorised entry into the PSZ. |
| | Only vessels using Group II/MGO/marine diesel will undertake activities described in this EP. | Vessel selection records. |
| | Drilling support vessels used will have dynamic positioning equipment and have a backup DP system as a failsafe. | Records confirm that vessel have DP equipment and fail-safe system in place. |
| | Vessels will not carry more than 250 $m^3$ of MGO fuel in any single tanks. | Vessel general arrangement/tank diagrams.<br>Oil record books. |
| Refer to the INPEX *Browse Regional OPEP* for environmental performance outcomes, standards and measurement criteria related to mitigative controls. | | |

## 8.4 Oil spill response and capability

INPEX has developed a regional OPEP for the Browse region which applies to the activity described in this EP. The INPEX *Browse Regional OPEP* (BROPEP) consists of a suite of documents as shown in Figure 8-2 and described in Table 8-9. The BROPEP covers all INPEX Australia's exploration and production activities in the Browse, Bonaparte and Canning Basins.

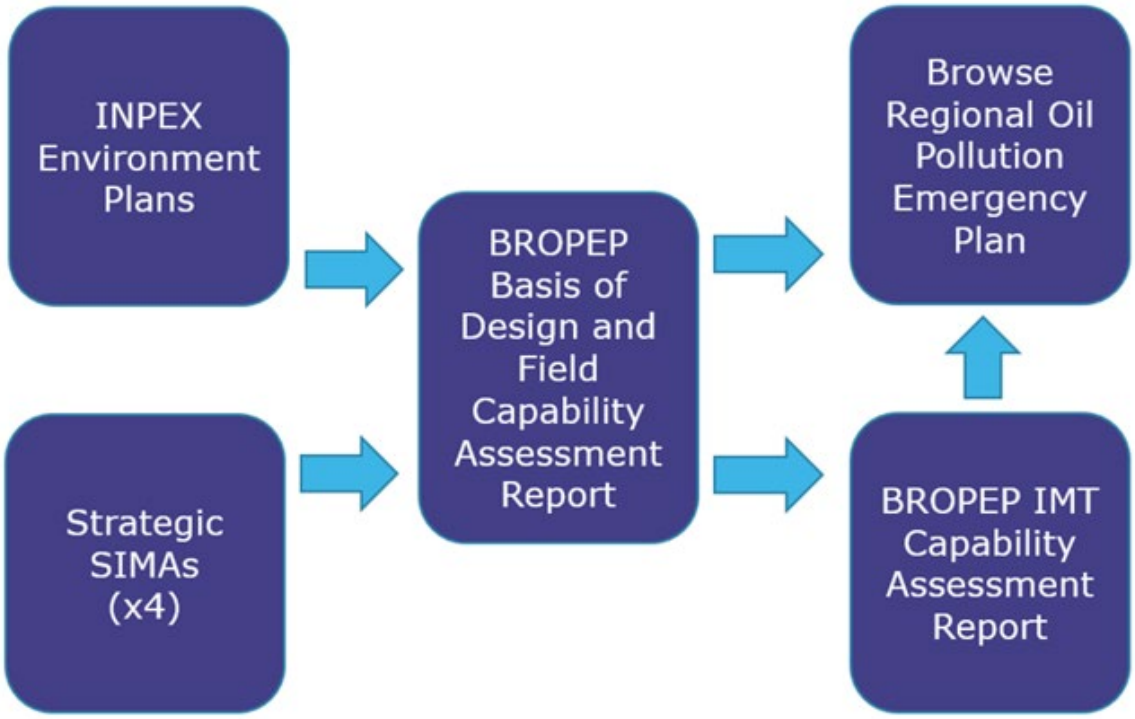



**Figure 8-2: Browse Regional OPEP document structure**

**Table 8-9: Browse Regional OPEP documentation overview**

| Document title | Document number | Purpose |
|---|---|---|
| INPEX Environment Plans | N/A | All INPEX EPs contain a detailed activity description and activity-specific oil spill scenarios. Specifically, INPEX EPs include the following:<br>• a description of the activity-specific spill scenarios (including the potential release rates, volumes, locations, hydrocarbon types, etc.)<br>• activity-specific oil spill modelling (used to inform environmental risk assessments)<br>• an assessment of oil spills risks/impacts on environmental values and sensitivities<br>• evaluations of controls to prevent oil pollution from the specific activity. |

| Document title | Document number | Purpose |
|---|---|---|
| | | • The WCSS from all INPEX EPs are included in the INPEX Australia - Browse Regional Oil Pollution Emergency Plan - Basis of Design and Field Capability Assessment. |
| Strategic Spill Impact Mitigation Assessments (SIMAs):<br>• Condensate spill – instantaneous surface release<br>• Marine gas oil/diesel spill – instantaneous surface release<br>• Intermediate fuel oil/heavy fuel oil (HFO) spill – instantaneous surface release<br>• Condensate/gas well or pipeline blowout – long duration subsea release. | X060-AH-LIS-60031<br>X060-AH-LIS-60032<br>X060-AH-LIS-60033<br>X060-AH-LIS-60034 | The four INPEX Strategic SIMA documents are pre-spill planning tools. These are used to facilitate response option selection by identifying and comparing the potential effectiveness and impacts of the various oil spill response strategies on a range of environmental values and sensitivities.<br>The Strategic SIMAs utilise a semi-quantitative process to evaluate the impact mitigation potential of each response strategy. This method provides a transparent decision-making process for determining which response strategies are most likely to be effective at minimising oil spill impacts. The SIMA process includes environmental considerations as well as a range of shared values such as ecological, socio-economic and cultural aspects. |
| INPEX Australia - Browse Regional Oil Pollution Emergency Plan - Basis of Design and Field Capability Assessment (BROPEP BOD/FCA) | X060-AH-REP-70016 | The BROPEP BOD/FCA presents an overview of all of INPEX Australia's offshore activities and associated oil spill risks. It includes an evaluation of modelling outcomes from a series of selected WCSSs and presents an oil spill response field capability analysis.<br>The BROPEP BOD/FCA includes the EPOs and EPSs relevant to the preparedness and environmental risk assessment of field response capability and arrangements and the broader BROPEP implementation strategy (i.e., reviews, management of change process, etc.). |
| INPEX Australia - Browse Regional Oil Pollution Emergency Plan – Incident Management Team Capability Assessment (BROPEP IMTCA) | X060-AH-REP-70015 | The BROPEP IMTCA utilises the field capability assessments as inputs to evaluate the size and structure of the INPEX incident management team (IMT) necessary to mobilise and maintain the field capability. The BROPEP IMTCA outlines the EPOs and EPSs relevant to INPEX IMT capability and arrangements. |

| Document title | Document number | Purpose |
|---|---|---|
| INPEX Australia - Browse Regional Oil Pollution Emergency Plan (BROPEP) | X060-AH-PLN-70009 | The BROPEP is the tool which will be utilised by INPEX IMT during any impending/actual oil spill event. This document assists/guides the IMT through the process of notifications, gaining/maintaining situational awareness, response strategy evaluation and incident action plan development, and mobilisation of field response capabilities.<br>The BROPEP outlines the EPOs and EPSs related to the implementation of response strategies and OSM. |
| INPEX Australia Operational and Scientific Monitoring Bridging Implementation Plan (OSM BIP) | 0075-AH-REP-70004 | Under the Joint Industry Operational and Scientific Monitoring (OSM) Framework, INPEX has developed the required Bridging Implementation Plan (BIP).<br>The OSM BIP describes the interface between INPEX's existing environmental management framework (e.g. Environment Plans (EPs) and BROPEP) and the Joint Industry OSM Framework. It identifies and describes the most likely spill scenarios with respect to INPEX's activities, the environments most likely to be affected (including the sensitive receptors), the relevant baseline data sets, as well as INPEX's management systems, under which the monitoring shall proceed. |

An assessment of the WCSS defined in this EP has been conducted against the INPEX *Browse Regional OPEP BOD*, within the ALARP evaluations of the WCSS (refer to Table 8-5).

The outcome of this assessment was that no change is required to the spill preparedness/response arrangements defined in the INPEX *Browse Regional OPEP* for the proposed activities covered under this EP.

## 8.5 Source control capability and arrangements

Source control capability and arrangements required to conduct a successful well-kill for exploration and production wells in the Browse Basin is detailed in INPEX's Source Control Capability and Arrangements Report (D021-AH-REP-70000). This document also provides the environmental ALARP and acceptability statements and implementation strategy, to ensure the ongoing demonstration of source control capability and arrangements.

An overview of source control documentation is provided in Table 8-10 and the purpose of the Source Control Capability and Arrangements Report is to:

- Present a summary of INPEX Australia's exploration and production drilling, and operations activities in the Browse Basin.
- Present a summary of the worst credible well blowout scenarios (WCWBS) which could occur from exploration/production drilling activities and from the operation of production wells.
- Provide a detailed source control capability analysis, for the selected WCWBS.
- Define EPOs and EPSs for the source control capabilities and arrangements (preparedness), and the risk assessment of the implementation of the source control capability.

- Provide an implementation strategy for this source control arrangements and risk assessment report, including management of change processes and compliance reporting requirements.
- Ensure INPEX's description of source control capability and arrangements as related to EPs is appropriately described, in accordance with the requirements of Section 3.1 of the NOPSEMA *Source control planning and procedures* Information Paper (NOPSEMA 2024c).

**Table 8-10: Source control documentation overview**

| Document title | Document number | Purpose |
|---|---|---|
| INPEX Environment Plans | N/A | All INPEX EPs contain a detailed activity description and activity-specific oil spill scenarios. Specifically, INPEX EPs include the following:<br>• a description of the activity-specific spill scenarios (including the potential well blowout release rates, volumes, locations, hydrocarbon types, etc.)<br>• activity-specific oil spill modelling (used to inform environmental risk assessments)<br>• an assessment of oil spills risks/impacts on environmental values and sensitivities<br>• evaluations of controls to prevent well blowouts. |
| Well Operations Management Plan | N/A | The WOMP describes the well activities and associated management systems for the exploration wells within the permit areas. |
| Source Control Emergency Response Plan (SCERP) | D020-AD-PLN-10040 | The purpose of the SCERP is to provide a plan for regaining control of a blowout, not blowout prevention. The SCERP specifies how INPEX will respond to a well control event where primary well control has been lost with potential, or real, complications with secondary well control, extending to the worst-case scenario of an uncontrolled blowout with significant hydrocarbon release to the environment and loss of assets. |
| Wild Well Control International (WWCI) Source Control Emergency Response Plan (ERP) | D020-AD-PRC-10036 | The WWCI ERP is a vendor document designed as a subset of the SCERP, to support response preparations to well control emergencies and establish a process for responding to safely managing them using a standard uniform approach. It includes the equipment and procedures to address a range of well control scenarios necessitating immediate mobilisation of intervention equipment and personnel. |
| INPEX Australia - Browse Regional Oil Pollution Emergency Plan (BROPEP) suite of documents, including: | X060-AH-REP-70016<br>X060-AH-REP-70015 | The BROPEP BOD & FCA report evaluates the oil spill field response capability required for all INPEX Australia's offshore petroleum exploration and production activities and associated oil spill risks. |

| Document title | Document number | Purpose |
|---|---|---|
| BROPEP BOD & FCA<br>BROPEP IMTCA<br>BROPEP | X060-AH-PLN-70009 | The BROPEP IMTCA report defines the required IMT capability needed to implement the field oil spill response.<br>The BROPEP is the response document, used by the IMT, to activate and implement oil spill response capabilities during a spill scenario. |

# 9 ENVIRONMENTAL MANAGEMENT IMPLEMENTATION STRATEGY

This section provides a description of the INPEX Australia BMS which captures the HSE requirements to manage HSE risks and meet legislative and corporate obligations, as applicable to the implementation of this EP and its associated performance outcomes and standards.

## 9.1 Overview

The BMS is a comprehensive, integrated system that includes standards and procedures necessary for the management of HSE risks. Activities to manage HSE risks are planned, implemented, verified and reviewed under an iterative “plan, do, check, act” (PDCA) cycle. The PDCA cycle enables INPEX to ensure that processes are adequately resourced and managed and that opportunities for improvement are determined and acted on.

INPEX HSE requirements are designed to meet the in-principal expectation of several standards, international management frameworks, guidelines and legislation. Of particular relevance to this EP are the following:

- Commonwealth of Australia, OPGGS (E) Regulations 2023
- NOPSEMA Environment plan content requirements
- International Association of Oil and Gas Producers (IOGP) 510 Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry
- IOGP 511 Operating Management System in practice
- International Standards Organisation (ISO) 9001 Quality Management Systems
- ISO 14001 Environmental Management Systems.

The components of the BMS relevant to HSE are grouped into 13 external elements (Figure 9-1). These elements have to be managed and implemented properly in order to achieve the desired HSE performance and reflect a PDCA cycle, which is applied to every aspect of the 13 elements.

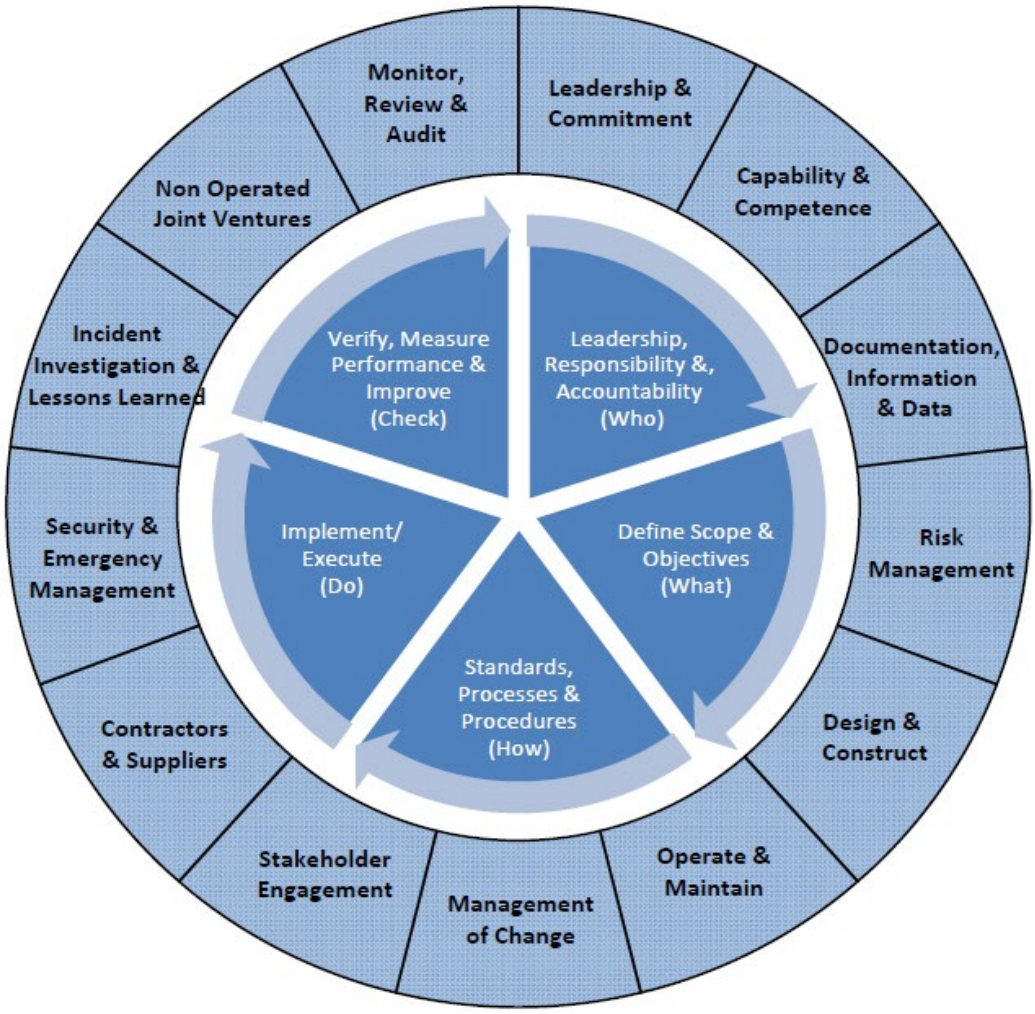


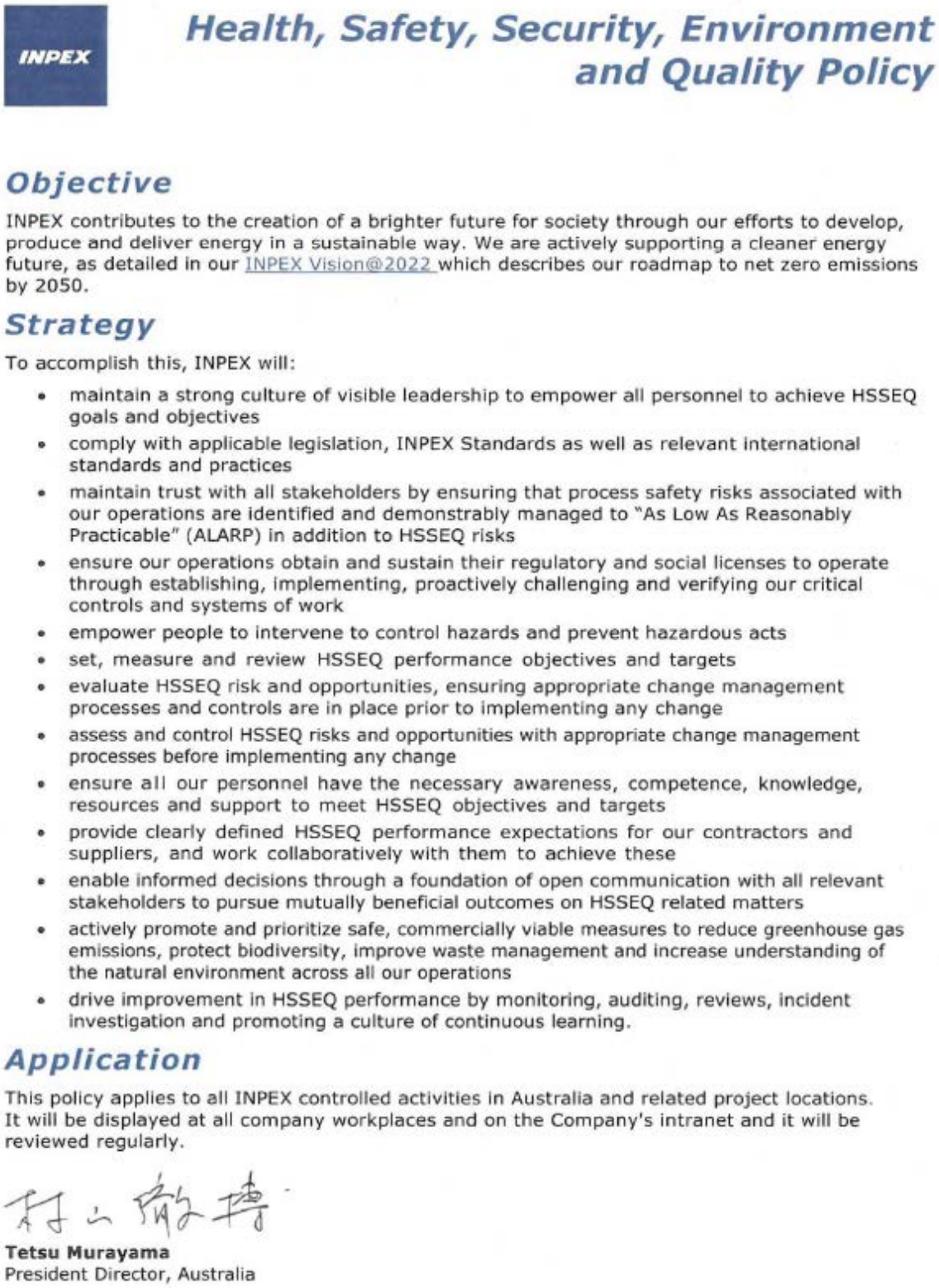

**Figure 9-1: INPEX BMS: HSE requirements**

## 9.2 Leadership and commitment

INPEX environmental performance is achieved through strong visible leadership, commitment and accountability at all levels of the organisation. Leadership includes defining performance targets and providing structures and resources to meet them. Achieving high levels of HSE performance is defined within the highest levels of management system documents (policies) and is cascaded through subsidiary documents.

The INPEX health, safety, security, environment and quality policy (as amended from time to time (Figure 9-2) solidifies this commitment and states the minimum expectations for environmental performance. The policy applies to all INPEX controlled activities in Australia including WA-50-L. All personnel, including contractors, are required to comply with the policy.

The policy (as amended) is available on the INPEX intranet and displayed at all INPEX workplaces, including all contractor vessels in the licence area. It will be communicated to personnel involved in the activities, including contractors, through inductions.



INPEX

# Health, Safety, Security, Environment and Quality Policy

## Objective

INPEX contributes to the creation of a brighter future for society through our efforts to develop, produce and deliver energy in a sustainable way. We are actively supporting a cleaner energy future, as detailed in our INPEX Vision@2022 which describes our roadmap to net zero emissions by 2050.

## Strategy

To accomplish this, INPEX will:

- maintain a strong culture of visible leadership to empower all personnel to achieve HSSEQ goals and objectives
- comply with applicable legislation, INPEX Standards as well as relevant international standards and practices
- maintain trust with all stakeholders by ensuring that process safety risks associated with our operations are identified and demonstrably managed to "As Low As Reasonably Practicable" (ALARP) in addition to HSSEQ risks
- ensure our operations obtain and sustain their regulatory and social licenses to operate through establishing, implementing, proactively challenging and verifying our critical controls and systems of work
- empower people to intervene to control hazards and prevent hazardous acts
- set, measure and review HSSEQ performance objectives and targets
- evaluate HSSEQ risk and opportunities, ensuring appropriate change management processes and controls are in place prior to implementing any change
- assess and control HSSEQ risks and opportunities with appropriate change management processes before implementing any change
- ensure all our personnel have the necessary awareness, competence, knowledge, resources and support to meet HSSEQ objectives and targets
- provide clearly defined HSSEQ performance expectations for our contractors and suppliers, and work collaboratively with them to achieve these
- enable informed decisions through a foundation of open communication with all relevant stakeholders to pursue mutually beneficial outcomes on HSSEQ related matters
- actively promote and prioritize safe, commercially viable measures to reduce greenhouse gas emissions, protect biodiversity, improve waste management and increase understanding of the natural environment across all our operations
- drive improvement in HSSEQ performance by monitoring, auditing, reviews, incident investigation and promoting a culture of continuous learning.

## Application

This policy applies to all INPEX controlled activities in Australia and related project locations. It will be displayed at all company workplaces and on the Company's intranet and it will be reviewed regularly.

**Tetsu Murayama**
President Director, Australia

**Figure 9-2: INPEX health, safety, security, environment and quality policy**

## 9.3 Capability and competence

INPEX appoints and maintains competent personnel to manage environmental risks and provide assurance that the INPEX health, safety, security, environment and quality policy, objectives and performance expectations will be achieved. This applies to individual competencies established in position descriptions and competency plans that set expectations, track progress and monitor results. It also applies to the overall capability of the organisation through well-defined organisational structures and provision of resources.

### 9.3.1 Roles and responsibilities

INPEX has established and implements standards, procedures and systems to build and maintain a trained and competent workforce capable of fulfilling its assigned roles and responsibilities, as well as meeting its legislative and regulatory requirements. The selection process for the key INPEX personnel identified in Table 9-1 includes consideration of their previous work experience and recognised qualifications when compared with the INPEX minimum competency standards. Key personnel are provided with a position description to formalise their role and define their responsibilities.

The key roles are responsible for collecting and maintaining the required evidence and monitoring data as specified in the environmental performance standards detailed in sections 7, 8 and 9 of this EP. Additional supporting roles and responsibilities related to the implementation of HSE requirements are also listed in Table 9-1.

Prior to mobilisation of personnel, those in key roles (Table 9-1) will be informed of their respective responsibilities in relation to this EP. This information will be disseminated by INPEX (e.g. through workshops, one-on-one sessions or by email) to ensure EP/INPEX *Browse Regional OPEP* awareness and that appropriate competencies and training requirements are met.

INPEX conducts training-needs analysis for each of the key roles listed in Table 9-1 to define minimum training requirements. The analysis is used to develop training plans which document, schedule and record completion of specific HSE training for individuals.

**Table 9-1: Key personnel and support roles and responsibilities**

| Key role | Responsibilities |
|---|---|
| INPEX General Manager Drilling (Onshore) | Ensures overall compliance with the INPEX BMS HSE requirements including environmental performance outcomes and standards. |
| INPEX Drilling Manager (Ichthys) | Ensures relevant INPEX BMS HSE requirements, including environmental performance outcomes and standards are communicated to drilling contractors.<br>Ensures the INPEX Drilling Superintendent is provided with the resources required to ensure environmental performance outcomes and standards are met and maintained. |
| INPEX Drilling Superintendent (Onshore) | Ensures activities are undertaken in accordance with this EP.<br>Ensures any changes to the activity that may affect the performance outcomes and environmental management procedures detailed in this EP are communicated to the INPEX HSE team.<br>Ensures vessel masters are provided with the resources required to ensure that the commitments in this EP are undertaken. |

| | |
|---|---|
| | Ensures the INPEX drilling supervisor is provided with the resources required to ensure that the commitments in this EP are undertaken.<br><br>Ensures reporting of environmental incidents meets external reporting requirements and INPEX incident reporting requirements.<br><br>Ensures corrective actions raised from environmental audits are tracked and closed out. |
| INPEX Drilling Supervisor<br><br>(Offshore) | Ensures contractors perform operations in a manner consistent with the performance outcomes and environmental management procedures detailed in this EP.<br><br>Ensures the implementation of the INPEX Health, Safety, Security, Environment and Quality Policy, through application of this EP.<br><br>Ensures the offshore installation manager (OIM), vessels masters and all crews adhere to the requirements of this EP.<br><br>Ensures that the INPEX drilling superintendent is alerted to any changes in activities that could have a negative impact on environmental performance.<br><br>Reports incidents to the INPEX Drilling Superintendent. |
| INPEX HSE Adviser/ Environmental Adviser<br><br>(Onshore) | Ensures that environmental audits are undertaken.<br><br>Ensures that waste management and containment equipment audits are undertaken.<br><br>Ensures that the OIM and vessels masters have been provided copies of personnel responsibilities as set out in this EP.<br><br>Ensures that any changes to the petroleum activity that may affect EP mitigation and management measures are captured via the management of change process. |
| Offshore Installation Manager<br><br>(Offshore) | Ensures the MODU management system and procedures are implemented.<br><br>Ensures personnel starting work on the MODU receive an HSE induction that meets the requirements specified in this EP.<br><br>Ensures personnel are competent to undertake the work they have been assigned.<br><br>Ensures emergency drills are conducted as per the MODU's schedule.<br><br>Ensures the MODU's emergency response team has been given sufficient training to implement the MODU's SOPEP/SMPEP.<br><br>Ensures any environmental incidents or breaches of performance outcomes, standards or criteria, are reported immediately to the INPEX Drilling Supervisor. |
| Vessel masters<br><br>(Offshore) | Conduct vessel operations in accordance with this EP.<br><br>Implement the vessel's SOPEP/SMPEP in an emergency.<br><br>Implements relevant performance standards stated within this EP.<br><br>Ensure that environmental incidents or breaches of performance outcomes, standards or criteria on vessels, are reported. |
| **Support role** | **Responsibilities** |

| | |
|---|---|
| All crew<br>(Offshore) | Work in accordance with accepted MODU and vessel HSE systems and procedures.<br>Comply with EP requirements as applicable to assigned role.<br>Report any hazardous condition, near miss, unsafe act, accident or environmental incident immediately to supervisors.<br>Attend HSE meetings and training when required. |

### 9.3.2 Organisation

Figure 9-3 illustrates the organisational structure for onshore and offshore during the proposed activity in WA-50-L.

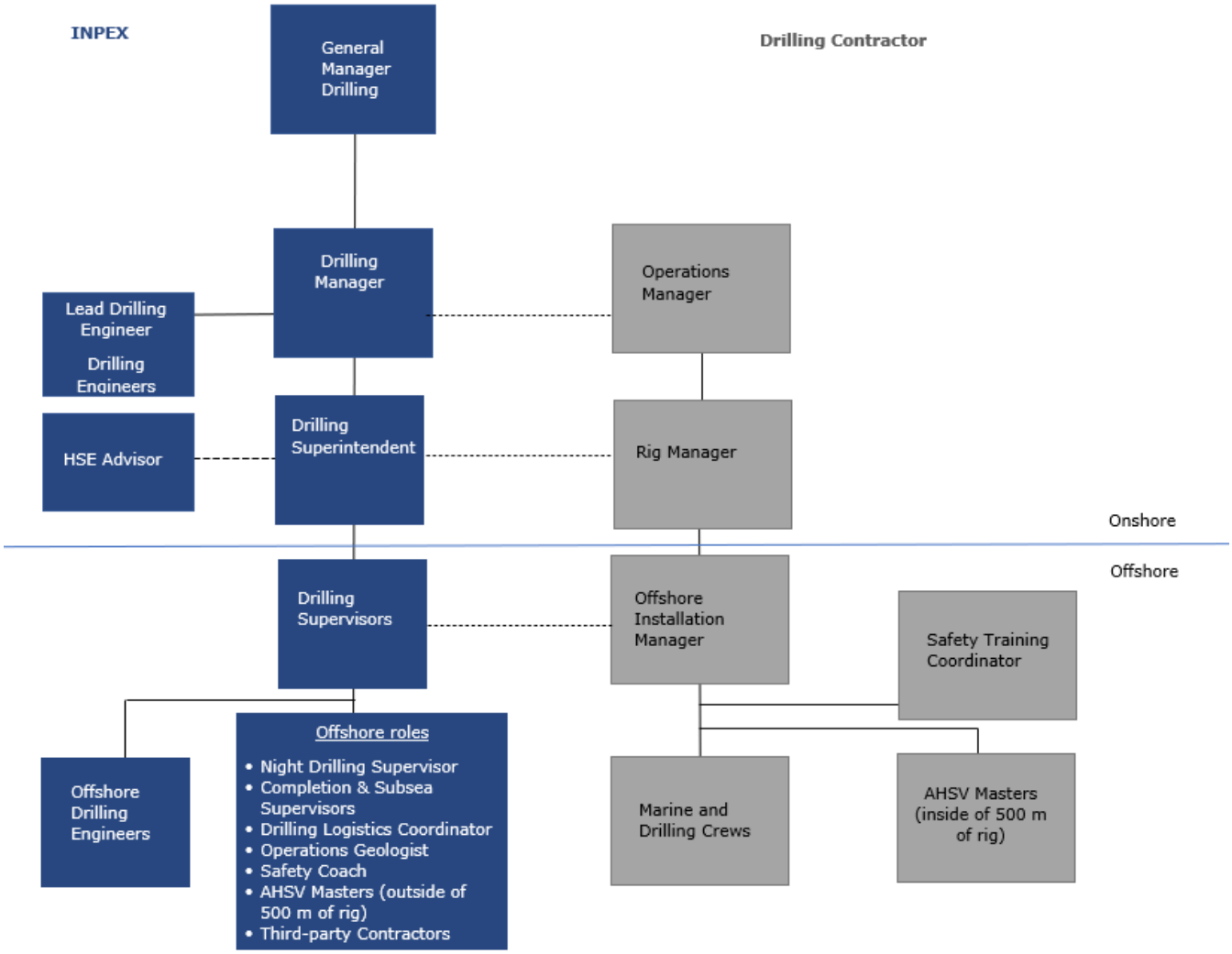



**Figure 9-3: Organisational structure**

### 9.3.3 Inductions and training

Inductions are conducted for all personnel (including INPEX representatives, contractors, subcontractors and visitors) before they start work on any of the vessels described in this EP. Inductions cover the HSE requirements under the INPEX BMS, including information about the commitments contained in this EP. A summary of the inductions and training programs in place to ensure relevant personnel are aware of their responsibilities is presented in Table 9-2.

In addition, environmental awareness is communicated to all personnel through a number of different mechanisms including environmental alerts, environmental bulletin posts on INPEX intranet site and posters displayed at work locations.

**Table 9-2: Inductions and training course summary**

| Induction / training course | Target audience | EP relevant content |
|---|---|---|
| INPEX Australia HSE Induction | All INPEX Australian entities | Overview of INPEX Health, Safety, Security, Environment and Quality Policy, OPGGS (E) Regulations 2023 and requirement to adhere to EP commitments. |
| Drilling campaign induction (online or face to face) | All campaign personnel | Overview of the drilling campaign and EP revision including:<br>• environmental values and sensitivities<br>• environmental aspects/risk from offshore activities<br>• controls to manage emissions, discharges and wastes<br>• reporting requirements. |
| INPEX Australia Offshore Environment Plan Support Vessel Induction | All personnel working onboard MODUs and support vessels. | Overview of the management controls for emissions, discharges and wastes from vessels (which are consistent throughout INPEX EPs) including:<br>• environmental values and sensitivities<br>• environmental aspects/risk from offshore activities<br>• controls to manage emissions, discharges and wastes<br>• reporting requirements. |
| INPEX Australia Browse Regional Oil Pollution Emergency Plan Induction | Vessel masters and any other relevant crew. | Overview of the Browse Regional OPEP requirements related to vessels (which are consistent throughout INPEX EPs). |
| INPEX Australia Support Vessels Marine Fauna Awareness Training | All vessel bridge personnel. | Overview of the marine fauna management requirements (which are consistent with this EP). |

**Table 9-3: Environmental performance outcome, standard and measurement criteria for inductions and training**

| Environmental performance outcome | Environmental performance standard | Measurement criteria |
|---|---|---|
| INPEX personnel including staff, contractors and visitors are aware of their responsibilities under this EP. | The training and awareness material described in Table 9-2 is delivered. | Records that inductions, training and awareness material have been provided. |

## 9.4 Documentation, information and data

INPEX implements and maintains document and records management procedures and systems. These are in place to ensure that the information required to support safe and reliable survey operations, is current, reliable and available to those who need it. It also ensures that organisational knowledge and learning is captured and preserved to enable the effective operations of processes to maintain compliant management of HSE information.

Documents and records are stored electronically in INPEX document management systems and databases. This EP and associated documentation are maintained within a database, with current versions also available via the controlled document repository.

Records to demonstrate implementation of the INPEX BMS HSE requirements and compliance with legislative requirements and other obligations are identified and maintained for at least five years. These records include:

- written reports – including risk assessment reports, hazard and risk registers, monitoring reports, ALARP demonstrations and audit and review reports– about environmental performance or implementation strategies
- records relating to environmental performance or the implementation strategies
- records of environmental emissions and discharges
- management of change records
- incident and/or near miss investigation reports
- lessons learned records
- improvement plans (corrective actions, key performance indicators)
- records relating to training and competency in accordance with this EP.

## 9.5 Risk Management

A robust, structured process is applied by INPEX to identify hazards and ensure that HSE risks arising from assets and operations are systematically identified, assessed, evaluated and controlled to levels as low as reasonably practicable.

The risks and impacts associated with the petroleum activity are detailed in Section 7 and Section 8. Additional risk assessments will be undertaken on an ongoing basis when triggered by any of the following circumstances:

- when there is a proposed change to the activity, as identified by an INPEX MoC request
- when identified as necessary following the investigation of an event
- when additional or new information about environmental impacts or risks becomes available (e.g., through better knowledge of the receptors present within the EMBA,

new scientific information/papers, results of monitoring, other industry events or studies or a relevant matter or objection/claim with merit is raised via ongoing relevant person consultation)

- if there is a change in regulations, as necessary
- during scheduled reviews of the documentation associated with this EP.

The risk assessments will be carried out in line with the assessment process described in Section 6 and are aligned to the HSE requirements of the INPEX BMS. This ensures that risks related to the activity are systematically identified, assessed, evaluated and controlled.

An environmental risk register for the activity is reviewed on a quarterly basis. The review includes assessment of any new information and other changes that have been recorded throughout the previous quarter. Where this review results in a change, the changes are documented and communicated.

## 9.6 Operate and maintain

### 9.6.1 Chemical assessment and approval

Chemicals discharged during the drilling campaign will be selected to meet both technical and environmental criteria. The environmental criteria are specified in the INPEX Chemical Assessment and Approval Guideline as summarised below:

- The chemical product is listed in the OSPAR list of substances/preparations used and discharged offshore which are considered to PLONOR. This list is based on assessment of the intrinsic properties of a chemical product and for a product to be included on the list the OSPAR Commission must consider that it poses little or no risk to the environment.
- The chemical product is GOLD or SILVER-rated under the OCNS CHARM model. The CHARM model calculates the ratio of predicted environmental concentration against no effect concentration. This is expressed as a HQ, which is then used to rank the product.
- The chemical product (if not CHARM-rated, e.g. inorganics, hydraulic fluids or pipeline chemicals) has an OCNS group rating of D or E. Non-CHARM products with a D or E grouping are either readily or inherently biodegradable.
- The chemical product (if not OCNS registered) is assessed as ‘green’ via the INPEX pseudo ranking system in line with the OCNS CHARM/ non-CHARM criteria (refer Table 9-4).

The INPEX pseudo ranking system, designed for those chemicals that are not OCNS registered (i.e. fall outside of the gold, silver, D or E criteria), is a chemical assessment tool used to determine a chemical’s inherent environmental hazard potential. This is determined by considering toxicity in conjunction with bioaccumulation and biodegradation potentials in line with the OCNS CHARM/non-CHARM criteria. Chemicals falling within the ‘green’ range are considered to present a low inherent hazard potential as shown in Table 9-4.

**Table 9-4: INPEX chemical assessment tool**

| | | **Bioaccumulation** | | | | | |
|---|---|---|---|---|---|---|---|
| | | $LogP_{ow}$[1] <3 or BCF[2] ≤100 and with a molecular weight ≥700 | | | $LogP_{ow}$[1] ≥3 or BCF[2] >100 and with a molecular weight <700 | | |
| **Toxicity (ppm)** | | **Biodegradation (in 28 days)** | | | | | |
| Aquatic | Sediment | ≥60% | ≥20% to <60% | <20% | ≥60% | ≥20% to <60% | <20% |
| <1 | <10 | | | | | | |
| 1≤ to <10 | 10≤ to <100 | | | | | | |
| 10≤ to <100 | 100≤ to <1000 | | | | | | |
| 100≤ to <1000 | 1000≤ to <10000 | | | | | | |
| ≥1000 | ≥10000 | | | | | | |

Cells highlighted in green represent chemical characteristics associated with low environmental hazard levels.

1 Octanol–water partition coefficient.

2 Bioconcentration factor.

In addition, the assessment process allows for the consideration of chemical products that do not meet at least one of the environmental criteria listed above. These are considered Category 2 chemicals in the Chemical Assessment and Approval Guideline. Triggering this would require a further risk assessment of the product in accordance with the INPEX risk management process, which includes consideration of the *INPEX Risk Management Standard* (0000-A0-STD-60020).

Those chemical products considered as having a moderate or above residual risk will be assessed as unsuitable for use and will not be processed for approval and use during the drilling activity. Successful chemical requests will proceed to the approval stage, conducted within the chemical product database where all relevant records are maintained.

An EPO and EPS related to the implementation of the chemical assessment procedure is presented in Table 9-5.

**Table 9-5: Environmental performance outcome, standards and measurement criteria for implementation of chemical assessment and approval procedure**

| Environmental performance outcome | Environmental performance standard | Measurement criteria |
|---|---|---|
| No discharge of unapproved chemicals. | All chemicals assessed in accordance with the procedure. | Chemical assessments recorded and retained in a database. |

## 9.7 Management of change

Changes to this EP will be managed in accordance with the INPEX Australia MoC standard, and related procedures and guidelines. Where a change to management of an activity is proposed, it will be logged. Internal notification will be communicated via a MoC request. The request will identify the proposed change(s) along with the underlying reasons and highlight potential areas of risk or impact. In accordance with the INPEX business rules, it is mandatory to undertake an environmental risk assessment in every case for changes that could affect the environment. The MoC request will be managed by an environmental adviser who will then determine the necessary approval/endorsement pathway, in consultation with the environmental approvals coordinator. Minor changes (such as updating a document or process) that do not invoke a revision trigger are endorsed by the General Manager Drilling (or delegate) and the change is implemented.

In accordance with Regulations 38 and 39 of the OPGGS (E) Regulations, a revision of this EP will be submitted to NOPSEMA where:

- a change is considered to represent a new activity
- a change is considered to represent a significant modification to, or a new stage of, an existing activity
- a change will create a significant new environmental impact or risk that is not provided for in the current EP; or
- a change will result in a series of new (or increased) environmental impacts or risks that, together, will result in a significant new environmental impact or risk, or a significant increase in an existing environmental impact or risk.

The MoC request process will be periodically checked against NOPSEMA guidance to ensure ongoing compliance and will be undertaken as part of the management review process described in Section 9.13.

## 9.8 Stakeholder engagement

Communications with stakeholders and relevant persons are designed to be inclusive and effective, to facilitate the controlled transfer of relevant and appropriate HSE information. Stakeholders include INPEX Corporation, INPEX entities, contractors, regulators, external industry bodies, shareholders, joint venture participants, suppliers, customers, non-government organisations, indigenous groups, financiers and members of the community.

### 9.8.1 Legislative and other requirements

INPEX maintains an approvals and compliance tracking system which identifies future approval requirements and when they must be in place, as well as compliance with existing approvals. Through this system, responsible persons are provided with alerts for required actions and time frames to avoid non-compliance and ensure there are no gaps in approvals.

In addition, INPEX personnel participate in industry and regulator forums, as well as maintain up-to-date knowledge of industry practices and proposed regulatory changes. Changes to legislative and other requirements are reviewed for potential impacts to business operations and communicated, as required, to personnel managing potentially affected activities.

Updates to matters relating to the EPBC Act, including policy statements and conservation management documentation will be achieved through subscription to automated email notifications provided by the DCCEEW. In addition, updates following the Government's independent AMP review, such as AMP management plans will also be reviewed for relevance against this EP. Where required, updates to this EP will be conducted in accordance with the MoC process described in Section 9.7.

### 9.8.2 Communication

INPEX HSE requirements and matters are communicated throughout the organisation. This facilitates the cascading and implementation of business policies and standards through the business, and on to contractors who work on behalf of INPEX.

INPEX and its contractors adopt a number of methods to ensure that information relating to HSE risks and impacts are communicated to personnel, including:

- daily toolbox meetings
- vessel HSE meetings
- use of noticeboards, intranet, HSE alerts and newsflashes e.g. environmental aspects and events
- internal and external reporting.

### 9.8.3 Ongoing stakeholder consultation

#### Post-EP acceptance

A mechanism to enable further consultation and provide an opportunity to raise relevant matters, objections or claims will remain published online for the duration of the activity through the EP summary website. The EP summary website will enable INPEX to receive feedback from any relevant persons who become known to INPEX during the implementation of this EP.

An environmental performance outcome and standard in relation to maintaining a mechanism for ongoing consultation and feedback is presented in Table 9-7.

#### During EP implementation

Any relevant matters, objections or claims received from relevant persons post-EP acceptance or while the activity is ongoing will be considered and assessed as detailed in Section 5, using the same process and criteria described for the relevant person consultation undertaken during the development of this EP (Appendix C.1).

Any new information (Section 9.5) received by INPEX from relevant persons, will be assessed to confirm if it is a relevant matter or the objection/claim has merit. Where the EP is required to be updated to reflect the matters raised, it will be conducted in accordance with the MoC process described in Section 9.7.

In relation to an EP Implementation Strategy, Regulation 22(15) of the OPPGS (E) Regulations 2023 specifies a requirement for consultation with relevant authorities of the Commonwealth, a state or territory, and other relevant interested persons or organisations. Mechanisms that provide ongoing opportunities for consultation with relevant persons, in relation to the implementation of this EP (predominantly through notifications), are summarised in

Table 9-6 and an environmental performance outcome and standard is presented in Table 9-7.

**Table 9-6: Ongoing stakeholder consultation**

| Stakeholder | Information supplied | Frequency |
|---|---|---|
| Australian Hydrographic Office (Cwlth) | The AHO will be notified of the activity commencement and cessation via datacentre@hydro.gov.au, for promulgation of fortnightly Notice to Mariners. | 4 weeks prior to commencement and upon completion |
| Australian Maritime Safety Authority (AMSA; Cwlth) Joint Rescue Coordination Centre (JRCC) | INPEX to notify AMSA JRCC for promulgation of radio-navigation warnings 24-48 hours before operations commence and upon completion of the survey (Email: rccaus@amsa.gov.au; Phone: 1800 641 792 or +61 2 6230 6811).<br>AMSA's JRCC require the vessel names, IMO vessel numbers and call signs, and Maritime Mobile Service Identity (MMSI) numbers. | 24-48 hours before operations commence and upon completion |
| NOPSEMA (Cwlth) | NOPSEMA will be notified of the activity commencement and cessation, using the Regulation 54 Notification Form available from NOPSEMA website. | At least 10 days prior to commencement and within 10 days of completion |
| NOPTA (Cwlth) | NOPTA will be notified of the activity commencement and cessation via reporting@nopta.gov.au | 48 hours prior to commencement and upon completion |
| Department of Energy, Mines, Industry Regulation and Safety (WA) | DEMIRS will be notified of the activity commencement and cessation. | At least 10 days prior to commencement and within 10 days of completion |
| Department of Climate Change, Energy the Environment and Water – AUCHD | According to s40 of the UCH Act a person must notify the discovery of articles of UCH if:<br>• the article is in Australian waters; and<br>• the article is of suspected archaeological character.<br>A written notice must include a description of the article and the place, where the article is situated, with sufficient detail to enable the article to be located. Notification is to be submitted through the AUCHD: https://environment.gov.au/shipwreck/public/forms/notification.do?mode=add | Within 21 days of the discovery |
| Southern bluefin tuna, Western skipjack tuna and western tuna and billfish fishery licence holders | Notification of commencement of activity will include details of:<br>• the location<br>• expected start date and duration<br>• IMO vessel numbers and call signs<br>• vessel radio and satellite phone communication details<br>The notification of completion will confirm the date of completion and MODU/vessel demobilisation from the licence area. | At least 10 days prior to commencement and upon completion |

**Table 9-7: Environmental performance outcome, standards and measurement criteria for implementation of ongoing relevant person consultation**

| Environmental performance outcome | Environmental performance standard | Measurement criteria |
|---|---|---|
| Where requested, relevant persons will be kept informed of activities described in this EP. | Ongoing consultation with relevant persons undertaken in accordance with Table 9-6. | Relevant person consultation records. |
| Maintain the opportunity for consultation to occur by allowing persons to identify as relevant and provide feedback. | During the assessment and implementation of this EP, an EP summary website that allows for feedback to be provided to INPEX will be accessible | Records confirm EP summary website is published for the duration of the activity. |
| Ensure that relevant matters raised are assessed and decisions documented. | Any new information that is considered and assessed as a relevant matter or objection/claim with merit, that will require this EP to be updated, will be conducted in accordance with the MoC process described in Section 9.7. | EP MoC records |

### 9.8.4 Reconciliation action plan

INPEX maintains a reconciliation action plan (RAP[2]) which outlines the company's engagement with the Aboriginal and Torres Strait Islander communities that it works within. In implementing this EP and the RAP, INPEX acknowledges the national and international rights and cultural interests of Aboriginal and Torres Strait Islander peoples and the deep understanding and experience that they contribute.

## 9.9 Contractors and suppliers

Selection and management processes are in place to ensure that contractors working for, or on behalf of, INPEX are able and willing to meet the minimum business expectations of INPEX, including those related to HSE and risk management.

Contractors and suppliers are selected based on their capabilities and managed throughout the scope of works to deliver on HSE and process safety performance expectations.

The processes for pre-qualification, selection and management of suppliers and contractors are detailed within the INPEX BMS such that:

- HSE and process safety risks associated with the scope of work are identified and known
- contractors and suppliers are selected based on their organisational capability and personnel competence to execute the scope of work, including effective management of HSE and process safety risks
- roles and responsibilities, and minimum performance expectations are communicated to contractors and suppliers, and form part of contractual obligations

[2] Available online at https://www.inpex.com.au/media/skqfbqax/web-rap-inpex-january-2023-december-2025-spreads-5-1.pdf

- contractors are partnered to deliver desired HSE and process safety performance targets, and monitored for compliance with contractual requirements
- lessons learned from each scope of work are applied to future activities.

## 9.10 Security and emergency management

Regulation 22(8) of the OPGGS (E) Regulations requires the implementation strategy to contain an OPEP and the provision for the OPEP to be updated. In accordance with Regulation 22(9)) the OPEP must include arrangements to respond to and monitor oil pollution, including:

- the control measures necessary for a timely response to an oil pollution emergency
- the arrangements and response capability to implement a timely implementation of those controls, including ongoing maintenance of that capability
- the arrangements and capability for monitoring the effectiveness of the controls and ensuring that performance standards for those controls are met
- the arrangements and capability for monitoring oil pollution to inform response activities
- the provision for the OPEP to be updated.

These requirements are addressed through the INPEX Browse Regional OPEP, a summary of which is provided in Section 8.4 of this EP.

## 9.11 Incident investigation and lessons learned

### 9.11.1 HSE performance measurement and reporting

HSE performance data is monitored in accordance with the INPEX BMS. This enables the status of conformance with HSE obligations and goals to be determined, and also ensures HSE risks are being effectively managed to support continuous improvement. HSE is regularly reviewed by senior management.

### 9.11.2 Environmental incident reporting – internal

INPEX refers to environmental incidents and hazards as “environmental events”, which all personnel, including contractors, are required to report as soon as is reasonably practicable. Reporting must be in accordance with the INPEX *Event Reporting and Investigation Standard* and associated procedure.

All events will be documented and reviewed for their actual and potential consequence severity levels and investigated as appropriate. Corrective or preventative actions will be identified and documented, and their completion verified in an action register. These actions may include changes to the risk registers, standards, or procedures, or the need for training, different tools or equipment. Any actions will be recorded and tracked.

### 9.11.3 Environmental incident reporting – external

For the purposes of regulatory reporting to NOPSEMA, an incident is classified as either “Reportable” or “Recordable” based on the definitions contained in Regulation 5 of the OPGGS (E) Regulations 2023.

A “Reportable” incident is defined as “an incident relating to the activity that has caused, or has the potential to cause, moderate to significant environmental damage.” Environmental damage (or the potential to cause damage) includes social, economic and cultural features of the environment. For the purposes of this EP, such an incident is considered to have an environmental consequence level of Moderate (D) to Catastrophic (A) as defined in the INPEX Risk Matrix (Figure 6-1).

Based on the consequence assessments described in sections 7 and 8 of this EP, incidents identified as having the potential to be “Reportable” (i.e. Moderate (D) or above on the INPEX Risk Matrix) include:

- the introduction of IMS
- loss of well containment.

In accordance with NOPSEMA guidance (NOPSEMA 2024e), a reportable oral/verbal report shall be made to NOPSEMA **if in doubt** of the actual or potential environmental consequence of the incident; or an unexpected event occurs where the actual/potential environmental consequence is clearly a Moderate (D)/Significant (C) event. The incident classification may be changed from Reportable to Recordable at a later date, when the consequence of the incident can be confirmed to be Minor (E) or Insignificant (F).

A “Recordable” incident is defined as “a breach of an environmental performance outcome or environmental performance standard … that is not a reportable incident.” In terms of the activities within the scope of this EP, it is a breach of the performance standards and outcomes listed in Section 7, Section 8 or Section 9 of this EP.

For the purposes of regulatory reporting to DCCEEW, any significant impact to MNES, as classified using the INPEX Risk Matrix, will be reported to DCCEEW. The DNP will be notified of any oil/gas pollution incidences within or likely to impact an AMP as soon as possible (refer to INPEX Browse Regional OPEP).

### Reportable incidents

*Initial verbal notification*

In the event of a reportable incident, INPEX will give NOPSEMA an initial verbal notification of the occurrence as soon as is practicable; and in any case, not later than two hours after the first occurrence of the reportable incident; or if it is not detected at the time of the first occurrence, within two hours of the time that INPEX becomes aware of the incident.

The initial verbal notification will contain:

- all material facts and circumstances concerning the reportable incident that are known or can, by reasonable search or enquiry, be found out
- any action taken to avoid or mitigate any adverse environmental impacts of the reportable incident
- the corrective action that has been taken, or is proposed to be taken, to stop, control or remedy the reportable incident.

*Written notification*

As soon as possible after an initial verbal notification of a reportable incident, INPEX will provide a written record of the notification to:

- NOPSEMA
- the National Offshore Petroleum Titles Authority (Cwlth)
- the Department of Energy, Mines, Industry Regulation and Safety (WA).

In the event of a significant impact to MNES, INPEX will provide an initial notification to DCCEEW within 24 hours of becoming aware of the event.

In the event of a reportable incident, INPEX will provide a written report to NOPSEMA as soon as is practicable; and in any case, not later than three days after the first occurrence of the incident. If, within the three-day period, NOPSEMA specifies an alternative reporting period, INPEX will report accordingly. The report will contain:

- all material facts and circumstances concerning the reportable incident that are known or can, by reasonable search or enquiry, be found out
- any action taken to avoid or mitigate any adverse environmental impacts of the reportable incident
- the corrective action that has been taken, or is proposed to be taken, to stop, control or remedy the reportable incident
- the action that has been taken, or is proposed to be taken, to prevent a similar incident occurring in the future.

Within seven days of giving a written report of a reportable incident to NOPSEMA, INPEX will provide a copy of the report to:

- the National Offshore Petroleum Titles Authority (Cwlth)
- the Department of Energy, Mines, Industry Regulation and Safety (WA).

Following submission of the above, NOPSEMA may, by notice in writing, request INPEX to submit an additional report(s) of the incident. Where this is the case, NOPSEMA will identify the information to be contained in the report(s) or the matters to be addressed and will specify the submission date for the report(s). INPEX will prepare and submit the report(s) in accordance with the notice given.

In the event of a significant impact to MNES, INPEX will provide a written notification to DCCEEW (Cwlth) within three days of becoming aware of the event, and provide additional information as available, if requested by DCCEEW. This includes reporting any vessel strike incidents to the National Ship Strike database at <https://data.marinemammals.gov.au/report/shipstrike>.

Suspected or confirmed presence of any marine pest or disease will be reported to WA DPIRD within 24 hours by email (biosecurity@fish.wa.gov.au) or telephone. This includes any organism listed in the WA prevention list for introduced marine pests and any other non-indigenous organism that demonstrates invasive characteristics.

### Recordable incidents

*Reporting*

In the event of a recordable incident, INPEX will report the occurrence to NOPSEMA as soon as is practicable after the end of the calendar month in which it occurs; and in any case, not later than 15 days after the end of the calendar month. The report will contain:

- a record of all the recordable incidents that occurred during the calendar month
- all material facts and circumstances concerning the recordable incidents that are known or can, by reasonable search or enquiry, be found out
- any action taken to avoid or mitigate any adverse environmental impacts of the recordable incidents
- the corrective action that has been taken, or is proposed to be taken, to stop, control or remedy the recordable incident

- the action that has been taken, or is proposed to be taken, to prevent a similar incident occurring in the future.

### 9.11.4 Annual performance reporting – external

In accordance with Regulation 22(7) of the OPGGS (E) Regulations 2023, INPEX will undertake a review of its compliance with the environmental performance outcomes and standards set out in this EP and will provide a written report of its findings for the reporting period 1 January to December 31, to NOPSEMA on an annual basis, as agreed with NOPSEMA. The annual submission date for the environmental performance report will be April 1 of each year.

## 9.12 Monitor, review and audit

### 9.12.1 Management system audit

An audit and inspection program will be developed and implemented in accordance with the INPEX business standard for auditing. The program will include:

- self-assessment HSE audits against the INPEX BMS
- regular inspections of workplace equipment and activities
- reviews to evaluate compliance with legislative and other requirements.

Unscheduled audits may be initiated by INPEX in the event of an incident, non-compliance or for other valid reasons.

Audit teams will be appropriately qualified, experienced and competent in auditing techniques. They will include relevant technical expertise, as required, and the audit team structure will be commensurate with the scope of the audit. HSE audit and inspection findings will be summarised in a report. Non-conformances, actions and improvement plans resulting from audits will be managed in an action tracking system.

### 9.12.2 MODU and vessel inspections

Inspections will be undertaken to ensure that the environmental performance outcomes and standards documented in this EP can be achieved.

Pre-mobilisation HSE inspections will be conducted on relevant MODUs and vessels prior to drilling activities commencing.

During the activity, operational compliance against relevant EPO/EPSs will be assessed and maintained through the implementation of respective monthly environmental inspection checklists.

Non-conformances and relevant findings during the inspections will be converted into actions that will be tracked within an action tracking database until closed.

## 9.13 Management review

Through a process of adaptive management, lessons from management outcomes will be used for continual improvement. Formal reviews of the effectiveness and appropriateness of the HSE requirements as per the INPEX BMS are performed by senior management on a periodic basis. Learnings from this process, and iterative decision-making will then be used as feedback to improve future management.

Together with the annual environmental performance report described in Section 9.11.4, EP management reviews will enable the review of environmental performance, as well the efficacy of the implementation strategy used during the activity.

Management reviews of this EP shall assess whether:

- the environmental impacts and risks of the activity continue to be identified and reduced to a level that is ALARP
- control measures detailed in this EP are effective in reducing the environmental impacts and risks of the activity to ALARP and an acceptable level
- implementation of the MoC process has remained consistent with the commitment to ensuring impacts and risks are reduced to ALARP and are acceptable
- any changes in legislation, or matters relating to the EPBC Act, including policy statements and conservation management documentation, have occurred which affect or need to be taken into consideration in relation to this EP
- any changes in NOPSEMA guidance which may affect or need to be taken into consideration in relation to this EP
- the Operational and Scientific Monitoring Program (within the Browse Regional OPEP) remains fit for purpose
- lessons learned have been communicated and, where applicable, applied across all titleholder activities, as relevant.

Where the documented findings of the EP management reviews have implications for this EP, the EP will be updated in accordance with the EP MoC process (Section 9.7).

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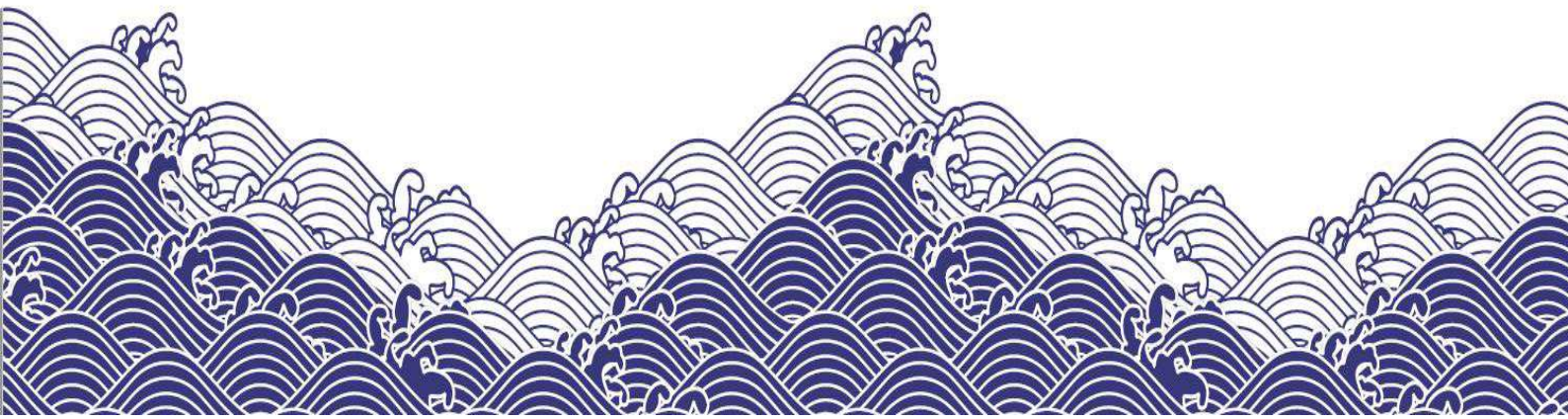
# Appendix A-
## EPBC Act Approval (2008/4208)
## Ministerial Conditions



On 27 May 2015, INPEX received revised conditions for Approval Decision EPBC 2008/4208 from DCCEEW, to reflect the outcomes of the Commonwealth Government's regulatory streamlining process. Condition 19 was added as a new condition and it requires INPEX to ensure elements of conditions which are no longer required to be implemented are included in Environment Plans submitted to NOPSEMA for assessment. This Appendix demonstrates how Condition 19 has been met.

| **Relevant EPBC 2008/4208 Ministerial Conditions** | **Location in Environment Plan submission** |
|---|---|
| 19. A plan, strategy or program (however described) required by conditions 1, 2, 5, 7, 8, 9 or 15 is automatically deemed to have been submitted to, and approved by, the Minister if the measures (as specified in the relevant condition) are included in an environment plan (or environment plans) relating to the taking of the action that: | This EP includes the elements of relevant conditions, as cross-referenced below. |
| a) was submitted to NOPSEMA after 27 February 2014; and | |
| b) either:<br>i. is in force under the OPGGS Environment Regulations; or<br>ii. has ended in accordance with Regulation 25A of the OPGGS Environment Regulations[1] | |
| 19B. Where an environment plan which includes measures specified in the conditions referred to in conditions 19 and 19A above, is in force under the OPGGS Environment Regulations that relates to the taking of the action, the person taking the action must comply with those measures as specified in that environment plan. | This EP |
| 1. Oil Spill Contingency Plan<br>The person taking the action must develop and submit to the Minister for approval, an Oil Spill Contingency Plan that demonstrates the response preparedness of the person taking the action for any hydrocarbon spills, including the capacity to respond to a spill and mitigate the environmental impacts on the Commonwealth marine area and listed species habitat within offshore areas and Darwin Harbour. The Plan must include, but is not limited to: | This EP |
| a) Oil spill trajectory modelling for potential spills from the action. This should include consideration of a well blow out or uncontrolled release. The modelling should be specific to the characteristics of the hydrocarbons contained in the Ichthys gas field, the likely volumes released in a worst-case scenario spill, and the potential time over which the oil may be released in a worst-case scenario spill, including a scenario of a minimum eleven (11) week uncontained spill; | Section 8.1, Section 8.2 and Section 8.3<br>Table 8-4, Table 8-5, Table 8-7 and Table 8-8. |

[1] Updated to be Regulation 46 of the OPGGS Environment Regulations 2023

| **Relevant EPBC 2008/4208 Ministerial Conditions** | **Location in Environment Plan submission** |
|---|---|
| b) A description of resources available for use in containing and minimising impacts in the event of a spill and arrangements for accessing them; | INPEX Browse Regional OPEP |
| c) A demonstrated capacity to respond to a spill at the site, including application of dispersants, if required and appropriate, and measures that can feasibly be applied within the first 12 hours of a spill occurring; | INPEX Browse Regional OPEP |
| d) Identification of sensitive areas that may be impacted by a potential spill, in particular, Browse Island, specific response measures for those areas and prioritisation of those areas during a response; | Section 4, Section 8.2.5 and Section 8.3.5 of this EP and INPEX Browse Regional OPEP |
| e) Details of the insurance arrangements that have been made in respect of paying the costs associated with operational and scientific monitoring, as outlined in the Operational and Scientific Monitoring Program required under condition 2 and repairing any environmental damage arising from potential oil spills, as determined necessary from the results of the Operational and Scientific Monitoring Program; | Section 1.5.2 of this EP |
| f) Training of staff in spill response measures and identifying roles and responsibilities of personnel during a spill response; and | INPEX Browse Regional OPEP |
| g) Procedures for reporting oil spill incidents to the Department. | Section 9.11.3 and INPEX Browse Regional OPEP |
| The person taking the action must not commence drilling activities until the Oil Spill Contingency Plan is approved.<br>The approved Oil Spill Contingency Plan must be implemented. | The accepted EP revision will be implemented as required under the OPGGS Act and OPGGS (E) Regulations. |
| 2. Operational and Scientific Monitoring Program<br>The person taking the action must develop and submit to the Minister for approval, an Operational and Scientific Monitoring Program that will be implemented in the event of an oil spill to determine the potential extent and ecosystem consequences of such a spill, including, but not limited to: | INPEX Browse Regional OPEP |
| a) Triggers for the initiation and termination of the Operational and Scientific Monitoring Program, including, but not limited to, spill volume, composition, extent, duration and detection of impacts; | INPEX Browse Regional OPEP |

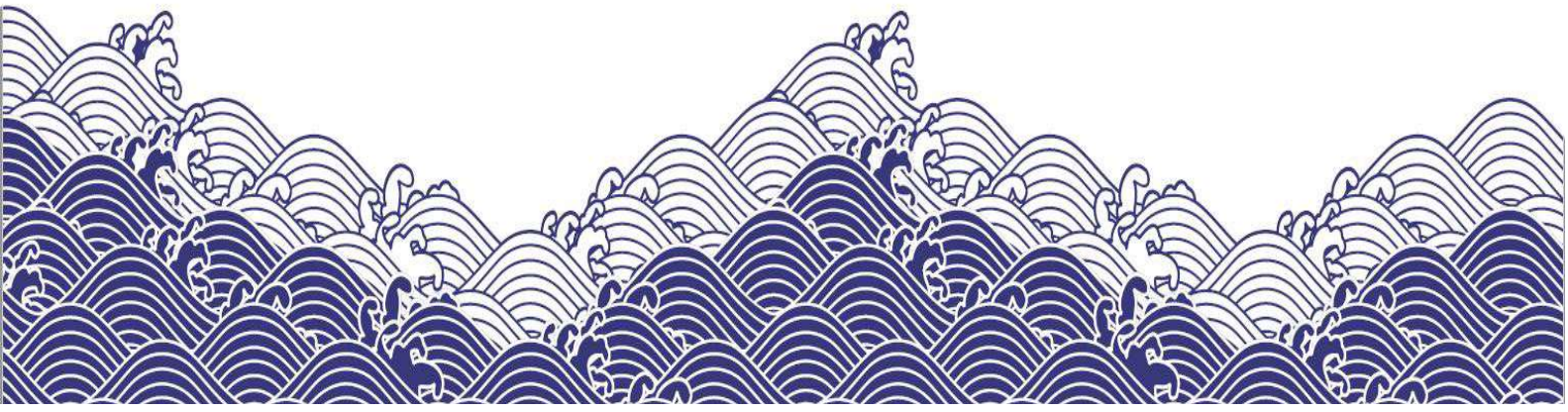
| **Relevant EPBC 2008/4208 Ministerial Conditions** | **Location in Environment Plan submission** |
|---|---|
| b) A description of the studies that will be undertaken to determine the operational response, potential extent of impacts, ecosystem consequences and potential environmental reparations required as a result of the oil spill. | INPEX Browse Regional OPEP |
| c) Details of the insurance arrangements that have been made in respect of paying the costs associated with operational and scientific monitoring, as outlined in the Operational and Scientific Monitoring Program, and repairing any environmental damage arising from potential oil spills, as determined necessary from the results of the Operational and Scientific Monitoring Program; | Section 1.5.2 of this EP |
| d) Inclusion of sufficient baseline information on the biota and the environment that may be impacted by a potential hydrocarbon spill, to enable an assessment of the impacts of such a spill; | Section 4, Table 8-5 and Table 8-8 and INPEX Browse Regional OPEP |
| e) A strategy to implement the Operational and Scientific Monitoring Program, including timelines for delivery of results and mechanisms for the timely peer review of studies; | INPEX Browse Regional OPEP |
| f) In the event of an oil spill the person taking the action must pay all costs associated with all operational and scientific monitoring undertaken in response to the spill, as outlined in the approved Operational and Scientific Monitoring Program and any environmental remediation determined necessary by the results of the approved Operational and Scientific Monitoring Program; and | Section 1.5.2 of this EP |
| g) Provision for periodic review of the program. | Section 9.13 of this EP and INPEX Browse Regional OPEP |
| The Operational and Scientific Monitoring Program must be submitted at least three months prior to the commencement of drilling activities. The person taking the action must not commence drilling activities until the Operational and Scientific Monitoring Program is approved. The approved Operational and Scientific Monitoring Program must be implemented. | The accepted EP revision will be implemented as required under the OPGGS Act and OPGGS (E) Regulations. |
| 7. Offshore Waste Management Plan<br>The person taking the action must submit for the Minister's approval an Offshore Waste Management Plan or plans to mitigate the environmental effects of any wastes generated from the proposal within the Commonwealth marine area. The Offshore Waste Management Plan(s) must address the following: | |

| **Relevant EPBC 2008/4208 Ministerial Conditions** | **Location in Environment Plan submission** |
|---|---|
| a) identify all sources of waste; | Table 3-8 and Section 7.2 of this EP |
| b) describe any impacts associated with disposal of these wastes; | Table 7-10 of this EP |
| c) clearly articulate the objectives of the plan and set measurable targets to demonstrate achievement of these; | Table 7-10 of this EP |
| d) outline measures to avoid impacts; | Table 7-10 of this EP |
| e) where impacts are unavoidable describe why they are unavoidable and measures to minimise impacts; | Section 7.2 of this EP |
| f) identify all regulatory requirements relating to the disposal of waste and how these will be met; | Table 2-1 and Table 7-10 of this EP |
| g) include a monitoring regime to determine achievement of objectives and success of measures used; | Table 7-10 of this EP and Section 9.12 of this EP |
| h) outline reporting and auditing arrangements; and | Section 9.11 and Section 9.12 of this EP |
| i) describe how the plan will apply the principles of adaptive management. | Section 9.13 of this EP |
| The plan(s) must be submitted prior to the commencement of the relevant activity to which they apply. The relevant activity may not commence until the plan is approved. The approved plan(s) must be implemented. | The accepted EP revision will be implemented as required under the OPGGS Act and OPGGS (E) Regulations. |
| 8. Liquid Discharge Management Plan<br>The person taking the action must submit for the Minister's approval a Liquid Discharge Management Plan or plans to mitigate the environmental effects of any liquid discharge from the proposal, including sewerage and surface water runoff. The Liquid Discharge Management Plan(s) must be for the protection of the Commonwealth marine area and habitat for listed species in Darwin Harbour and must: | This EP |
| a) identify all sources of liquid discharge; | Table 3-8 and Section 7.1.3 of this EP |

| **Relevant EPBC 2008/4208 Ministerial Conditions** | **Location in Environment Plan submission** |
|---|---|
| b) describe any impacts associated with the discharge of liquids, including the cumulative impacts associated with the discharge of sewerage; | Section 7.1.3 of this EP |
| c) clearly articulate the objectives of the plan and set measurable targets to demonstrate achievement of these; | Section 7.1.3 of this EP |
| d) outline measures to avoid impacts; | |
| e) where impacts are unavoidable describe why they are unavoidable and measures to minimise impacts; | |
| f) demonstrate how any discharges into Darwin Harbour are consistent with the guidelines for discharges, and the water quality objectives for Darwin Harbour, developed under the National Water Quality Management Strategy; | N/A |
| g) identify all regulatory requirements relating to the discharge of liquids and how these will be met; | Table 2-1 and Section 7.1.3 of this EP |
| h) include a monitoring regime to determine achievement of objectives and success of measures used; | Section 7.1.3 and Sections 9.12 of this EP |
| i) outline reporting and auditing arrangements; and | Section 9.11 and Section 9.12 of this EP |
| j) describe how the plan will apply the principles of adaptive management. | Section 9.13 of this EP |
| The plan(s) must be submitted prior to the commencement of the relevant activity to which they apply. The relevant activity may not commence until the plan is approved. Separate Liquid Discharge Management plans can be submitted for the management of liquid discharges in the Commonwealth Marine Area and Darwin Harbour. The approved plan(s) must be implemented. | The accepted EP revision will be implemented as required under the OPGGS Act and OPGGS (E) Regulations. |

# Appendix B

## B.1 EPBC Act Protected matters report WA-50-L
## B.2 EPBC Act Protected matters report EMBA/EPEI
## B.3 Species risk evaluation
## B.4 Cultural heritage report



# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 24-Oct-2024

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

| | |
|---|---|
| World Heritage Properties: | None |
| National Heritage Places: | None |
| Wetlands of International Importance (Ramsar | None |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | 2 |
| Listed Threatened Ecological Communities: | None |
| Listed Threatened Species: | 23 |
| Listed Migratory Species: | 36 |

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

| | |
|---|---|
| Commonwealth Lands: | None |
| Commonwealth Heritage Places: | None |
| Listed Marine Species: | 65 |
| Whales and Other Cetaceans: | 23 |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Australian Marine Parks: | None |
| Habitat Critical to the Survival of Marine Turtles: | 1 |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

| | |
|---|---|
| State and Territory Reserves: | None |
| Regional Forest Agreements: | None |
| Nationally Important Wetlands: | None |
| EPBC Act Referrals: | 24 |
| Key Ecological Features (Marine): | 2 |
| Biologically Important Areas: | 1 |
| Bioregional Assessments: | None |
| Geological and Bioregional Assessments: | None |

# Details

## Matters of National Environmental Significance

### Commonwealth Marine Area [ Resource Information ]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

| Feature Name | Buffer Status |
|---|---|
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |

### Listed Threatened Species [ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| BIRD | | | |
| Anous tenuirostris melanops | | | |
| Australian Lesser Noddy [26000] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Calidris acuminata | | | |
| Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Calidris canutus | | | |
| Red Knot, Knot [855] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Calidris ferruginea | | | |
| Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Numenius madagascariensis | | | |
| Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Papasula abbotti | | | |
| Abbott's Booby [59297] | Endangered | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Phaethon lepturus fulvus | | | |
| Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021] | Endangered | Species or species habitat may occur within area | In feature area |
| Phaethon rubricauda westralis | | | |
| Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824] | Endangered | Species or species habitat likely to occur within area | In feature area |
| MAMMAL | | | |
| Balaenoptera borealis | | | |
| Sei Whale [34] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera musculus | | | |
| Blue Whale [36] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera physalus | | | |
| Fin Whale [37] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| REPTILE | | | |
| Caretta caretta | | | |
| Loggerhead Turtle [1763] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Chelonia mydas | | | |
| Green Turtle [1765] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Dermochelys coriacea | | | |
| Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Eretmochelys imbricata | | | |
| Hawksbill Turtle [1766] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Lepidochelys olivacea | | | |
| Olive Ridley Turtle, Pacific Ridley Turtle [1767] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Natator depressus | | | |
| Flatback Turtle [59257] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| SHARK | | | |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Carcharodon carcharias<br>White Shark, Great White Shark [64470] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Glyphis garricki<br>Northern River Shark, New Guinea River Shark [82454] | Endangered | Species or species habitat may occur within area | In feature area |
| Pristis pristis<br>Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Pristis zijsron<br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| Rhincodon typus<br>Whale Shark [66680] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| Sphyrna lewini<br>Scalloped Hammerhead [85267] | Conservation Dependent | Species or species habitat likely to occur within area | In feature area |

| Listed Migratory Species | | [ Resource Information ] | |
|---|---|---|---|
| Scientific Name | Threatened Category | Presence Text | Buffer Status |
| Migratory Marine Birds | | | |
| Anous stolidus<br>Common Noddy [825] | | Species or species habitat may occur within area | In feature area |
| Calonectris leucomelas<br>Streaked Shearwater [1077] | | Species or species habitat known to occur within area | In feature area |
| Fregata ariel<br>Lesser Frigatebird, Least Frigatebird [1012] | | Species or species habitat likely to occur within area | In feature area |
| Fregata minor<br>Great Frigatebird, Greater Frigatebird [1013] | | Foraging, feeding or related behaviour likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Phaethon lepturus](#)<br>White-tailed Tropicbird [1014] | | Species or species habitat likely to occur within area | In feature area |
| **Migratory Marine Species** | | | |
| [Anoxypristis cuspidata](#)<br>Narrow Sawfish, Knifetooth Sawfish [68448] | | Species or species habitat may occur within area | In feature area |
| [Balaenoptera borealis](#)<br>Sei Whale [34] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| [Balaenoptera edeni](#)<br>Bryde's Whale [35] | | Species or species habitat likely to occur within area | In feature area |
| [Balaenoptera musculus](#)<br>Blue Whale [36] | Endangered | Species or species habitat likely to occur within area | In feature area |
| [Balaenoptera physalus](#)<br>Fin Whale [37] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| [Carcharhinus longimanus](#)<br>Oceanic Whitetip Shark [84108] | | Species or species habitat may occur within area | In feature area |
| [Carcharias taurus](#)<br>Grey Nurse Shark [64469] | | Species or species habitat may occur within area | In feature area |
| [Carcharodon carcharias](#)<br>White Shark, Great White Shark [64470] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Caretta caretta](#)<br>Loggerhead Turtle [1763] | Endangered | Species or species habitat likely to occur within area | In feature area |
| [Chelonia mydas](#)<br>Green Turtle [1765] | Vulnerable | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Dermochelys coriacea<br>Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Isurus oxyrinchus<br>Shortfin Mako, Mako Shark [79073] | | Species or species habitat likely to occur within area | In feature area |
| Isurus paucus<br>Longfin Mako [82947] | | Species or species habitat likely to occur within area | In feature area |
| Lepidochelys olivacea<br>Olive Ridley Turtle, Pacific Ridley Turtle [1767] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Megaptera novaeangliae<br>Humpback Whale [38] | | Species or species habitat known to occur within area | In feature area |
| Mobula alfredi as Manta alfredi<br>Reef Manta Ray, Coastal Manta Ray [90033] | | Species or species habitat may occur within area | In feature area |
| Mobula birostris as Manta birostris<br>Giant Manta Ray [90034] | | Species or species habitat may occur within area | In feature area |
| Natator depressus<br>Flatback Turtle [59257] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Orcinus orca<br>Killer Whale, Orca [46] | | Species or species habitat may occur within area | In feature area |
| Physeter macrocephalus<br>Sperm Whale [59] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Pristis pristis](#) | | | |
| Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Pristis zijsron](#) | | | |
| Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Rhincodon typus](#) | | | |
| Whale Shark [66680] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Tursiops aduncus (Arafura/Timor Sea populations)](#) | | | |
| Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900] | | Species or species habitat may occur within area | In feature area |
| **Migratory Wetlands Species** | | | |
| [Actitis hypoleucos](#) | | | |
| Common Sandpiper [59309] | | Species or species habitat may occur within area | In feature area |
| [Calidris acuminata](#) | | | |
| Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Calidris canutus](#) | | | |
| Red Knot, Knot [855] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Calidris ferruginea](#) | | | |
| Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| [Calidris melanotos](#) | | | |
| Pectoral Sandpiper [858] | | Species or species habitat may occur within area | In feature area |
| [Numenius madagascariensis](#) | | | |
| Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area | In feature area |

## Other Matters Protected by the EPBC Act

| Listed Marine Species | | | [ Resource Information ] |
|---|---|---|---|
| Scientific Name | Threatened Category | Presence Text | Buffer Status |
| Bird | | | |
| Actitis hypoleucos<br>Common Sandpiper [59309] | | Species or species habitat may occur within area | In feature area |
| Anous stolidus<br>Common Noddy [825] | | Species or species habitat may occur within area | In feature area |
| Anous tenuirostris melanops<br>Australian Lesser Noddy [26000] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Calidris acuminata<br>Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Calidris canutus<br>Red Knot, Knot [855] | Vulnerable | Species or species habitat may occur within area overfly marine area | In feature area |
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat may occur within area overfly marine area | In feature area |
| Calidris melanotos<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Calonectris leucomelas<br>Streaked Shearwater [1077] | | Species or species habitat known to occur within area | In feature area |
| Fregata ariel<br>Lesser Frigatebird, Least Frigatebird [1012] | | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Fregata minor<br>Great Frigatebird, Greater Frigatebird [1013] | | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Numenius madagascariensis<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Papasula abbotti<br>Abbott's Booby [59297] | Endangered | Species or species habitat may occur within area | In feature area |
| Phaethon lepturus<br>White-tailed Tropicbird [1014] | | Species or species habitat likely to occur within area | In feature area |
| Phaethon lepturus fulvus<br>Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021] | Endangered | Species or species habitat may occur within area | In feature area |
| Fish | | | |
| Bhanotia fasciolata<br>Corrugated Pipefish, Barbed Pipefish [66188] | | Species or species habitat may occur within area | In feature area |
| Campichthys tricarinatus<br>Three-keel Pipefish [66192] | | Species or species habitat may occur within area | In feature area |
| Choeroichthys brachysoma<br>Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194] | | Species or species habitat may occur within area | In feature area |
| Choeroichthys suillus<br>Pig-snouted Pipefish [66198] | | Species or species habitat may occur within area | In feature area |
| Corythoichthys amplexus<br>Fijian Banded Pipefish, Brown-banded Pipefish [66199] | | Species or species habitat may occur within area | In feature area |
| Corythoichthys flavofasciatus<br>Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Corythoichthys intestinalis<br>Australian Messmate Pipefish, Banded Pipefish [66202] | | Species or species habitat may occur within area | In feature area |
| Corythoichthys schultzi<br>Schultz's Pipefish [66205] | | Species or species habitat may occur within area | In feature area |
| Cosmocampus banneri<br>Roughridge Pipefish [66206] | | Species or species habitat may occur within area | In feature area |
| Doryrhamphus dactyliophorus<br>Banded Pipefish, Ringed Pipefish [66210] | | Species or species habitat may occur within area | In feature area |
| Doryrhamphus excisus<br>Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211] | | Species or species habitat may occur within area | In feature area |
| Doryrhamphus janssi<br>Cleaner Pipefish, Janss' Pipefish [66212] | | Species or species habitat may occur within area | In feature area |
| Filicampus tigris<br>Tiger Pipefish [66217] | | Species or species habitat may occur within area | In feature area |
| Halicampus brocki<br>Brock's Pipefish [66219] | | Species or species habitat may occur within area | In feature area |
| Halicampus dunckeri<br>Red-hair Pipefish, Duncker's Pipefish [66220] | | Species or species habitat may occur within area | In feature area |
| Halicampus grayi<br>Mud Pipefish, Gray's Pipefish [66221] | | Species or species habitat may occur within area | In feature area |
| Halicampus spinirostris<br>Spiny-snout Pipefish [66225] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Haliichthys taeniophorus<br>Ribboned Pipehorse, Ribboned Seadragon [66226] | | Species or species habitat may occur within area | In feature area |
| Hippichthys penicillus<br>Beady Pipefish, Steep-nosed Pipefish [66231] | | Species or species habitat may occur within area | In feature area |
| Hippocampus angustus<br>Western Spiny Seahorse, Narrow-bellied Seahorse [66234] | | Species or species habitat may occur within area | In feature area |
| Hippocampus histrix<br>Spiny Seahorse, Thorny Seahorse [66236] | | Species or species habitat may occur within area | In feature area |
| Hippocampus kuda<br>Spotted Seahorse, Yellow Seahorse [66237] | | Species or species habitat may occur within area | In feature area |
| Hippocampus planifrons<br>Flat-face Seahorse [66238] | | Species or species habitat may occur within area | In feature area |
| Hippocampus spinosissimus<br>Hedgehog Seahorse [66239] | | Species or species habitat may occur within area | In feature area |
| Micrognathus micronotopterus<br>Tidepool Pipefish [66255] | | Species or species habitat may occur within area | In feature area |
| Solegnathus hardwickii<br>Pallid Pipehorse, Hardwick's Pipehorse [66272] | | Species or species habitat may occur within area | In feature area |
| Solegnathus lettiensis<br>Gunther's Pipehorse, Indonesian Pipefish [66273] | | Species or species habitat may occur within area | In feature area |
| Solenostomus cyanopterus<br>Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Syngnathoides biaculeatus](#)<br>Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279] | | Species or species habitat may occur within area | In feature area |
| [Trachyrhamphus bicoarctatus](#)<br>Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280] | | Species or species habitat may occur within area | In feature area |
| [Trachyrhamphus longirostris](#)<br>Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281] | | Species or species habitat may occur within area | In feature area |
| **Reptile** | | | |
| [Aipysurus duboisii](#)<br>Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116] | | Species or species habitat may occur within area | In feature area |
| [Aipysurus laevis](#)<br>Olive Sea Snake, Olive-brown Sea Snake [1120] | | Species or species habitat may occur within area | In feature area |
| [Aipysurus mosaicus as Aipysurus eydouxii](#)<br>Mosaic Sea Snake [87261] | | Species or species habitat may occur within area | In feature area |
| [Caretta caretta](#)<br>Loggerhead Turtle [1763] | Endangered | Species or species habitat likely to occur within area | In feature area |
| [Chelonia mydas](#)<br>Green Turtle [1765] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| [Dermochelys coriacea](#)<br>Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Species or species habitat likely to occur within area | In feature area |
| [Emydocephalus annulatus](#)<br>Eastern Turtle-headed Sea Snake [1125] | | Species or species habitat may occur within area | In feature area |
| [Eretmochelys imbricata](#)<br>Hawksbill Turtle [1766] | Vulnerable | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Hydrophis coggeri<br>Cogger's Sea Snake [25925] | | Species or species habitat may occur within area | In feature area |
| Hydrophis elegans<br>Elegant Sea Snake, Bar-bellied Sea Snake [1104] | | Species or species habitat may occur within area | In feature area |
| Hydrophis hardwickii as Lapemis hardwickii<br>Spine-bellied Sea Snake [93516] | | Species or species habitat may occur within area | In feature area |
| Hydrophis kingii as Disteira kingii<br>Spectacled Sea Snake [93511] | | Species or species habitat may occur within area | In feature area |
| Hydrophis macdowelli as Hydrophis mcdowelli<br>MacDowell's Sea Snake, Small-headed Sea Snake, [75601] | | Species or species habitat may occur within area | In feature area |
| Hydrophis major as Disteira major<br>Olive-headed Sea Snake [93512] | | Species or species habitat may occur within area | In feature area |
| Hydrophis ornatus<br>Spotted Sea Snake, Ornate Reef Sea Snake [1111] | | Species or species habitat may occur within area | In feature area |
| Hydrophis peronii as Acalyptophis peronii<br>Horned Sea Snake [93509] | | Species or species habitat may occur within area | In feature area |
| Hydrophis platura as Pelamis platurus<br>Yellow-bellied Sea Snake [93746] | | Species or species habitat may occur within area | In feature area |
| Hydrophis stokesii as Astrotia stokesii<br>Stokes' Sea Snake [93510] | | Species or species habitat may occur within area | In feature area |
| Lepidochelys olivacea<br>Olive Ridley Turtle, Pacific Ridley Turtle [1767] | Endangered | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Natator depressus<br>Flatback Turtle [59257] | Vulnerable | Species or species habitat likely to occur within area | In feature area |

| Whales and Other Cetaceans | | | [ Resource Information ] |
|---|---|---|---|
| Current Scientific Name | Status | Type of Presence | Buffer Status |
| Mammal | | | |
| Balaenoptera borealis<br>Sei Whale [34] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera edeni<br>Bryde's Whale [35] | | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera musculus<br>Blue Whale [36] | Endangered | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera physalus<br>Fin Whale [37] | Vulnerable | Species or species habitat likely to occur within area | In feature area |
| Delphinus delphis<br>Common Dolphin, Short-beaked Common Dolphin [60] | | Species or species habitat may occur within area | In feature area |
| Feresa attenuata<br>Pygmy Killer Whale [61] | | Species or species habitat may occur within area | In feature area |
| Globicephala macrorhynchus<br>Short-finned Pilot Whale [62] | | Species or species habitat may occur within area | In feature area |
| Grampus griseus<br>Risso's Dolphin, Grampus [64] | | Species or species habitat may occur within area | In feature area |
| Kogia breviceps<br>Pygmy Sperm Whale [57] | | Species or species habitat may occur within area | In feature area |

| Current Scientific Name | Status | Type of Presence | Buffer Status |
| --- | --- | --- | --- |
| [Kogia sima](#)<br>Dwarf Sperm Whale [85043] | | Species or species habitat may occur within area | In feature area |
| [Megaptera novaeangliae](#)<br>Humpback Whale [38] | | Species or species habitat known to occur within area | In feature area |
| [Orcinus orca](#)<br>Killer Whale, Orca [46] | | Species or species habitat may occur within area | In feature area |
| [Peponocephala electra](#)<br>Melon-headed Whale [47] | | Species or species habitat may occur within area | In feature area |
| [Physeter macrocephalus](#)<br>Sperm Whale [59] | | Species or species habitat may occur within area | In feature area |
| [Pseudorca crassidens](#)<br>False Killer Whale [48] | | Species or species habitat likely to occur within area | In feature area |
| [Stenella attenuata](#)<br>Spotted Dolphin, Pantropical Spotted Dolphin [51] | | Species or species habitat may occur within area | In feature area |
| [Stenella coeruleoalba](#)<br>Striped Dolphin, Euphrosyne Dolphin [52] | | Species or species habitat may occur within area | In feature area |
| [Stenella longirostris](#)<br>Long-snouted Spinner Dolphin [29] | | Species or species habitat may occur within area | In feature area |
| [Steno bredanensis](#)<br>Rough-toothed Dolphin [30] | | Species or species habitat may occur within area | In feature area |
| [Tursiops aduncus](#)<br>Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418] | | Species or species habitat likely to occur within area | In feature area |

| Current Scientific Name | Status | Type of Presence | Buffer Status |
|---|---|---|---|
| Tursiops aduncus (Arafura/Timor Sea populations) | | | |
| Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900] | | Species or species habitat may occur within area | In feature area |
| Tursiops truncatus s. str. | | | |
| Bottlenose Dolphin [68417] | | Species or species habitat may occur within area | In feature area |
| Ziphius cavirostris | | | |
| Cuvier's Beaked Whale, Goose-beaked Whale [56] | | Species or species habitat may occur within area | In feature area |

| Habitat Critical to the Survival of Marine Turtles | | | [ Resource Information ] |
|---|---|---|---|
| Scientific Name | Behaviour | Presence | Buffer Status |
| Dec - Jan | | | |
| Chelonia mydas | | | |
| Green Turtle [1765] | Nesting | Known to occur | In feature area |

## Extra Information

| EPBC Act Referrals | | | | [ Resource Information ] |
|---|---|---|---|---|
| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
| Controlled action | | | | |
| Develop Ichthys gas-condensate field permit area W | 2006/2767 | Controlled Action | Completed | In feature area |
| Development of Browse Basin Gas Fields (Upstream) | 2008/4111 | Controlled Action | Completed | In feature area |
| Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline | 2008/4208 | Controlled Action | Post-Approval | In feature area |
| Prelude Floating Liquefied Natural Gas Facility and Gas Field Development | 2008/4146 | Controlled Action | Post-Approval | In feature area |
| Not controlled action | | | | |
| Adele Trend TQ3D Seismic Survey | 2001/252 | Not Controlled Action | Completed | In feature area |
| Drilling of 12 Hydrocarbon Exploration Wells, Permit Area WA-371-P | 2006/3005 | Not Controlled Action | Completed | In feature area |
| Kaleidoscope exploration well | 2001/182 | Not Controlled Action | Completed | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action | | | | |
| P30 Hydrocarbon Exploration Well | 2001/293 | Not Controlled Action | Completed | In feature area |
| Not controlled action (particular manner) | | | | |
| 2D seismic survey in permit areas WA-274P and WA-281P | 2004/1521 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Aurora MC3D Marine Seismic Survey | 2010/5510 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Caswell MC3D Marine Seismic Survey | 2012/6594 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Deep Water Northwest Shelf 2D Seismic Survey | 2007/3260 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Exploration Drilling Campaign | 2011/6047 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Exploration Drilling Campaign, Browse Basin, WA-341-P, AC-P36 and WA-343-P | 2013/6898 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Gicea 3D Marine Seismic Survey | 2008/4389 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Ichthys 3D Marine Seismic Survey | 2010/5550 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Kingtree & Ironstone-1 Exploration Wells | 2011/5935 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT | 2014/7223 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Schild MC3D Marine Seismic Survey | 2012/6373 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action (particular manner) | | | | |
| Schild Phase 11 MC3D Marine Seismic Survey, Browse Basin | 2013/6894 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Vampire 2D Non Exclusive Seismic Survey, WA | 2010/5543 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Westralia SPAN Marine Seismic Survey, WA & NT | 2012/6463 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Referral decision | | | | |
| BRSN08 3D Marine Seismic Survey | 2008/4582 | Referral Decision | Completed | In feature area |
| Seismic Data Acquisition, Browse Basin | 2010/5475 | Referral Decision | Completed | In feature area |

## Key Ecological Features [ Resource Information ]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

| Name | Region | Buffer Status |
|---|---|---|
| Ancient coastline at 125 m depth contour | North-west | In feature area |
| Continental Slope Demersal Fish Communities | North-west | In feature area |

## Biologically Important Areas [ Resource Information ]

| Scientific Name | Behaviour | Presence | Buffer Status |
|---|---|---|---|
| Sharks | | | |
| Rhincodon typus | | | |
| Whale Shark [66680] | Foraging | Known to occur | In feature area |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.


Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 24-Oct-2024

# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

| | |
|---|---|
| World Heritage Properties: | None |
| National Heritage Places: | None |
| Wetlands of International Importance (Ramsar | 1 |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | 9 |
| Listed Threatened Ecological Communities: | None |
| Listed Threatened Species: | 31 |
| Listed Migratory Species: | 58 |

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at https://www.dcceew.gov.au/parks-heritage/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

| | |
|---|---|
| Commonwealth Lands: | 3 |
| Commonwealth Heritage Places: | 2 |
| Listed Marine Species: | 95 |
| Whales and Other Cetaceans: | 27 |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Australian Marine Parks: | 6 |
| Habitat Critical to the Survival of Marine Turtles: | 1 |

## Extra Information

This part of the report provides information that may also be relevant to the area you have

| | |
|---|---|
| State and Territory Reserves: | 3 |
| Regional Forest Agreements: | None |
| Nationally Important Wetlands: | 1 |
| EPBC Act Referrals: | 91 |
| Key Ecological Features (Marine): | 5 |
| Biologically Important Areas: | 30 |
| Bioregional Assessments: | None |
| Geological and Bioregional Assessments: | None |

# Details

## Matters of National Environmental Significance

### Wetlands of International Importance (Ramsar Wetlands) [ Resource Information ]

| Ramsar Site Name | Proximity | Buffer Status |
|---|---|---|
| Ashmore reef national nature reserve | Within Ramsar site | In feature area |

### Commonwealth Marine Area [ Resource Information ]

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.

| Feature Name | Buffer Status |
|---|---|
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |
| Commonwealth Marine Areas (EPBC Act) | In feature area |

### Listed Threatened Species [ Resource Information ]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| BIRD | | | |
| Anous tenuirostris melanops | | | |
| Australian Lesser Noddy [26000] | Vulnerable | Breeding known to occur within area | In feature area |
| Calidris acuminata | | | |
| Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat known to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Calidris canutus<br>Red Knot, Knot [855] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| Charadrius leschenaultii<br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| Limnodromus semipalmatus<br>Asian Dowitcher [843] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| Limosa lapponica menzbieri<br>Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432] | Endangered | Species or species habitat known to occur within area | In feature area |
| Numenius madagascariensis<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| Papasula abbotti<br>Abbott's Booby [59297] | Endangered | Species or species habitat may occur within area | In feature area |
| Phaethon lepturus fulvus<br>Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Phaethon rubricauda westralis<br>Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird [91824] | Endangered | Breeding known to occur within area | In feature area |
| Rostratula australis<br>Australian Painted Snipe [77037] | Endangered | Species or species habitat may occur within area | In feature area |
| MAMMAL | | | |
| Balaenoptera borealis<br>Sei Whale [34] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Balaenoptera musculus](#)<br>Blue Whale [36] | Endangered | Migration route known to occur within area | In feature area |
| [Balaenoptera physalus](#)<br>Fin Whale [37] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| REPTILE | | | |
| [Aipysurus apraefrontalis](#)<br>Short-nosed Sea Snake, Short-nosed Seasnake [1115] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| [Aipysurus foliosquama](#)<br>Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| [Aipysurus fuscus](#)<br>Dusky Sea Snake [1119] | Endangered | Species or species habitat known to occur within area | In feature area |
| [Caretta caretta](#)<br>Loggerhead Turtle [1763] | Endangered | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Chelonia mydas](#)<br>Green Turtle [1765] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Dermochelys coriacea](#)<br>Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| [Eretmochelys imbricata](#)<br>Hawksbill Turtle [1766] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Lepidochelys olivacea](#)<br>Olive Ridley Turtle, Pacific Ridley Turtle [1767] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Natator depressus](#) | | | |
| Flatback Turtle [59257] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| SHARK | | | |
| [Carcharodon carcharias](#) | | | |
| White Shark, Great White Shark [64470] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Glyphis garricki](#) | | | |
| Northern River Shark, New Guinea River Shark [82454] | Endangered | Species or species habitat may occur within area | In feature area |
| [Pristis clavata](#) | | | |
| Dwarf Sawfish, Queensland Sawfish [68447] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Pristis pristis](#) | | | |
| Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Pristis zijsron](#) | | | |
| Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Rhincodon typus](#) | | | |
| Whale Shark [66680] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Sphyrna lewini](#) | | | |
| Scalloped Hammerhead [85267] | Conservation Dependent | Species or species habitat known to occur within area | In feature area |

| Listed Migratory Species | | | [ Resource Information ] |
|---|---|---|---|
| Scientific Name | Threatened Category | Presence Text | Buffer Status |
| Migratory Marine Birds | | | |
| [Anous stolidus](#) | | | |
| Common Noddy [825] | | Breeding known to occur within area | In feature area |
| [Ardenna pacifica](#) | | | |
| Wedge-tailed Shearwater [84292] | | Breeding known to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Calonectris leucomelas<br>Streaked Shearwater [1077] | | Species or species habitat known to occur within area | In feature area |
| Fregata ariel<br>Lesser Frigatebird, Least Frigatebird [1012] | | Breeding known to occur within area | In feature area |
| Fregata minor<br>Great Frigatebird, Greater Frigatebird [1013] | | Breeding known to occur within area | In feature area |
| Hydroprogne caspia<br>Caspian Tern [808] | | Breeding known to occur within area | In feature area |
| Onychoprion anaethetus<br>Bridled Tern [82845] | | Breeding known to occur within area | In feature area |
| Phaethon lepturus<br>White-tailed Tropicbird [1014] | | Breeding known to occur within area | In feature area |
| Phaethon rubricauda<br>Red-tailed Tropicbird [994] | | Breeding known to occur within area | In feature area |
| Sterna dougallii<br>Roseate Tern [817] | | Breeding known to occur within area | In feature area |
| Sternula albifrons<br>Little Tern [82849] | | Congregation or aggregation known to occur within area | In feature area |
| Sula dactylatra<br>Masked Booby [1021] | | Breeding known to occur within area | In feature area |
| Sula leucogaster<br>Brown Booby [1022] | | Breeding known to occur within area | In feature area |
| Sula sula<br>Red-footed Booby [1023] | | Breeding known to occur within area | In feature area |
| Migratory Marine Species | | | |
| Anoxypristis cuspidata<br>Narrow Sawfish, Knifetooth Sawfish [68448] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Balaenoptera borealis<br>Sei Whale [34] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Balaenoptera edeni<br>Bryde's Whale [35] | | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera musculus<br>Blue Whale [36] | Endangered | Migration route known to occur within area | In feature area |
| Balaenoptera physalus<br>Fin Whale [37] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Carcharhinus longimanus<br>Oceanic Whitetip Shark [84108] | | Species or species habitat may occur within area | In feature area |
| Carcharias taurus<br>Grey Nurse Shark [64469] | | Species or species habitat may occur within area | In feature area |
| Carcharodon carcharias<br>White Shark, Great White Shark [64470] | Vulnerable | Species or species habitat may occur within area | In feature area |
| Caretta caretta<br>Loggerhead Turtle [1763] | Endangered | Foraging, feeding or related behaviour known to occur within area | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| Crocodylus porosus<br>Salt-water Crocodile, Estuarine Crocodile [1774] | | Species or species habitat likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Dermochelys coriacea](#)<br>Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| [Dugong dugon](#)<br>Dugong [28] | | Breeding known to occur within area | In feature area |
| [Eretmochelys imbricata](#)<br>Hawksbill Turtle [1766] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Isurus oxyrinchus](#)<br>Shortfin Mako, Mako Shark [79073] | | Species or species habitat likely to occur within area | In feature area |
| [Isurus paucus](#)<br>Longfin Mako [82947] | | Species or species habitat likely to occur within area | In feature area |
| [Lepidochelys olivacea](#)<br>Olive Ridley Turtle, Pacific Ridley Turtle [1767] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| [Megaptera novaeangliae](#)<br>Humpback Whale [38] | | Breeding known to occur within area | In feature area |
| [Mobula alfredi as Manta alfredi](#)<br>Reef Manta Ray, Coastal Manta Ray [90033] | | Species or species habitat known to occur within area | In feature area |
| [Mobula birostris as Manta birostris](#)<br>Giant Manta Ray [90034] | | Species or species habitat likely to occur within area | In feature area |
| [Natator depressus](#)<br>Flatback Turtle [59257] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Orcinus orca](#)<br>Killer Whale, Orca [46] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Physeter macrocephalus](#)<br>Sperm Whale [59] | | Species or species habitat may occur within area | In feature area |
| [Pristis clavata](#)<br>Dwarf Sawfish, Queensland Sawfish [68447] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Pristis pristis](#)<br>Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] | Vulnerable | Species or species habitat may occur within area | In feature area |
| [Pristis zijsron](#)<br>Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Rhincodon typus](#)<br>Whale Shark [66680] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| [Tursiops aduncus (Arafura/Timor Sea populations)](#)<br>Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900] | | Species or species habitat likely to occur within area | In feature area |
| **Migratory Terrestrial Species** | | | |
| [Cecropis daurica](#)<br>Red-rumped Swallow [80610] | | Species or species habitat may occur within area | In feature area |
| [Cuculus optatus](#)<br>Oriental Cuckoo, Horsfield's Cuckoo [86651] | | Species or species habitat known to occur within area | In feature area |
| [Hirundo rustica](#)<br>Barn Swallow [662] | | Species or species habitat known to occur within area | In feature area |
| [Motacilla cinerea](#)<br>Grey Wagtail [642] | | Species or species habitat known to occur within area | In feature area |
| [Motacilla flava](#)<br>Yellow Wagtail [644] | | Species or species habitat known to occur within area | In feature area |
| **Migratory Wetlands Species** | | | |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| [Acrocephalus orientalis](#)<br>Oriental Reed-Warbler [59570] | | Species or species habitat known to occur within area | In feature area |
| [Actitis hypoleucos](#)<br>Common Sandpiper [59309] | | Species or species habitat known to occur within area | In feature area |
| [Calidris acuminata](#)<br>Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Calidris canutus](#)<br>Red Knot, Knot [855] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Calidris ferruginea](#)<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| [Calidris melanotos](#)<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area | In feature area |
| [Charadrius leschenaultii](#)<br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Limnodromus semipalmatus](#)<br>Asian Dowitcher [843] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| [Limosa lapponica](#)<br>Bar-tailed Godwit [844] | | Species or species habitat known to occur within area | In feature area |
| [Numenius madagascariensis](#)<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| [Thalasseus bergii](#)<br>Greater Crested Tern [83000] | | Breeding known to occur within area | In feature area |

# Other Matters Protected by the EPBC Act

## Commonwealth Lands [ Resource Information ]

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

| Commonwealth Land Name | State | Buffer Status |
|---|---|---|
| Unknown | | |
| Commonwealth Land - [52278] | ACI | In feature area |
| Commonwealth Land - [52276] | ACI | In feature area |
| Commonwealth Land - [52277] | ACI | In feature area |

## Commonwealth Heritage Places [ Resource Information ]

| Name | State | Status | Buffer Status |
|---|---|---|---|
| Natural | | | |
| Ashmore Reef National Nature Reserve | EXT | Listed place | In feature area |
| Scott Reef and Surrounds - Commonwealth Area | EXT | Listed place | In feature area |

## Listed Marine Species [ Resource Information ]

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Bird | | | |
| Acrocephalus orientalis<br>Oriental Reed-Warbler [59570] | | Species or species habitat known to occur within area overfly marine area | In feature area |
| Actitis hypoleucos<br>Common Sandpiper [59309] | | Species or species habitat known to occur within area | In feature area |
| Anous minutus<br>Black Noddy [824] | | Breeding known to occur within area | In feature area |
| Anous stolidus<br>Common Noddy [825] | | Breeding known to occur within area | In feature area |
| Anous tenuirostris melanops<br>Australian Lesser Noddy [26000] | Vulnerable | Breeding known to occur within area | In feature area |
| Ardenna pacifica as Puffinus pacificus<br>Wedge-tailed Shearwater [84292] | | Breeding known to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Calidris acuminata<br>Sharp-tailed Sandpiper [874] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| Calidris canutus<br>Red Knot, Knot [855] | Vulnerable | Species or species habitat known to occur within area overfly marine area | In feature area |
| Calidris ferruginea<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat known to occur within area overfly marine area | In feature area |
| Calidris melanotos<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Calonectris leucomelas<br>Streaked Shearwater [1077] | | Species or species habitat known to occur within area | In feature area |
| Cecropis daurica as Hirundo daurica<br>Red-rumped Swallow [80610] | | Species or species habitat may occur within area overfly marine area | In feature area |
| Charadrius leschenaultii<br>Greater Sand Plover, Large Sand Plover [877] | Vulnerable | Species or species habitat known to occur within area | In feature area |
| Fregata ariel<br>Lesser Frigatebird, Least Frigatebird [1012] | | Breeding known to occur within area | In feature area |
| Fregata minor<br>Great Frigatebird, Greater Frigatebird [1013] | | Breeding known to occur within area | In feature area |
| Hirundo rustica<br>Barn Swallow [662] | | Species or species habitat known to occur within area overfly marine area | In feature area |
| Hydroprogne caspia as Sterna caspia<br>Caspian Tern [808] | | Breeding known to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Limnodromus semipalmatus<br>Asian Dowitcher [843] | Vulnerable | Species or species habitat known to occur within area overfly marine area | In feature area |
| Limosa lapponica<br>Bar-tailed Godwit [844] | | Species or species habitat known to occur within area | In feature area |
| Motacilla cinerea<br>Grey Wagtail [642] | | Species or species habitat known to occur within area overfly marine area | In feature area |
| Motacilla flava<br>Yellow Wagtail [644] | | Species or species habitat known to occur within area overfly marine area | In feature area |
| Numenius madagascariensis<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| Onychoprion anaethetus as Sterna anaethetus<br>Bridled Tern [82845] | | Breeding known to occur within area | In feature area |
| Papasula abbotti<br>Abbott's Booby [59297] | Endangered | Species or species habitat may occur within area | In feature area |
| Phaethon lepturus<br>White-tailed Tropicbird [1014] | | Breeding known to occur within area | In feature area |
| Phaethon lepturus fulvus<br>Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Phaethon rubricauda<br>Red-tailed Tropicbird [994] | | Breeding known to occur within area | In feature area |
| Rostratula australis as Rostratula benghalensis (sensu lato)<br>Australian Painted Snipe [77037] | Endangered | Species or species habitat may occur within area overfly marine area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Sterna dougallii<br>Roseate Tern [817] | | Breeding known to occur within area | In feature area |
| Sternula albifrons as Sterna albifrons<br>Little Tern [82849] | | Congregation or aggregation known to occur within area | In feature area |
| Sula dactylatra<br>Masked Booby [1021] | | Breeding known to occur within area | In feature area |
| Sula leucogaster<br>Brown Booby [1022] | | Breeding known to occur within area | In feature area |
| Sula sula<br>Red-footed Booby [1023] | | Breeding known to occur within area | In feature area |
| Thalasseus bengalensis as Sterna bengalensis<br>Lesser Crested Tern [66546] | | Breeding known to occur within area | In feature area |
| Thalasseus bergii as Sterna bergii<br>Greater Crested Tern [83000] | | Breeding known to occur within area | In feature area |
| Fish | | | |
| Bhanotia fasciolata<br>Corrugated Pipefish, Barbed Pipefish [66188] | | Species or species habitat may occur within area | In feature area |
| Campichthys tricarinatus<br>Three-keel Pipefish [66192] | | Species or species habitat may occur within area | In feature area |
| Choeroichthys brachysoma<br>Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194] | | Species or species habitat may occur within area | In feature area |
| Choeroichthys suillus<br>Pig-snouted Pipefish [66198] | | Species or species habitat may occur within area | In feature area |
| Corythoichthys amplexus<br>Fijian Banded Pipefish, Brown-banded Pipefish [66199] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Corythoichthys flavofasciatus<br>Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200] | | Species or species habitat may occur within area | In feature area |
| Corythoichthys intestinalis<br>Australian Messmate Pipefish, Banded Pipefish [66202] | | Species or species habitat may occur within area | In feature area |
| Corythoichthys schultzi<br>Schultz's Pipefish [66205] | | Species or species habitat may occur within area | In feature area |
| Cosmocampus banneri<br>Roughridge Pipefish [66206] | | Species or species habitat may occur within area | In feature area |
| Doryrhamphus dactyliophorus<br>Banded Pipefish, Ringed Pipefish [66210] | | Species or species habitat may occur within area | In feature area |
| Doryrhamphus excisus<br>Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211] | | Species or species habitat may occur within area | In feature area |
| Doryrhamphus janssi<br>Cleaner Pipefish, Janss' Pipefish [66212] | | Species or species habitat may occur within area | In feature area |
| Filicampus tigris<br>Tiger Pipefish [66217] | | Species or species habitat may occur within area | In feature area |
| Halicampus brocki<br>Brock's Pipefish [66219] | | Species or species habitat may occur within area | In feature area |
| Halicampus dunckeri<br>Red-hair Pipefish, Duncker's Pipefish [66220] | | Species or species habitat may occur within area | In feature area |
| Halicampus grayi<br>Mud Pipefish, Gray's Pipefish [66221] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Halicampus spinirostris<br>Spiny-snout Pipefish [66225] | | Species or species habitat may occur within area | In feature area |
| Haliichthys taeniophorus<br>Ribboned Pipehorse, Ribboned Seadragon [66226] | | Species or species habitat may occur within area | In feature area |
| Hippichthys penicillus<br>Beady Pipefish, Steep-nosed Pipefish [66231] | | Species or species habitat may occur within area | In feature area |
| Hippocampus angustus<br>Western Spiny Seahorse, Narrow-bellied Seahorse [66234] | | Species or species habitat may occur within area | In feature area |
| Hippocampus histrix<br>Spiny Seahorse, Thorny Seahorse [66236] | | Species or species habitat may occur within area | In feature area |
| Hippocampus kuda<br>Spotted Seahorse, Yellow Seahorse [66237] | | Species or species habitat may occur within area | In feature area |
| Hippocampus planifrons<br>Flat-face Seahorse [66238] | | Species or species habitat may occur within area | In feature area |
| Hippocampus spinosissimus<br>Hedgehog Seahorse [66239] | | Species or species habitat may occur within area | In feature area |
| Micrognathus micronotopterus<br>Tidepool Pipefish [66255] | | Species or species habitat may occur within area | In feature area |
| Solegnathus hardwickii<br>Pallid Pipehorse, Hardwick's Pipehorse [66272] | | Species or species habitat may occur within area | In feature area |
| Solegnathus lettiensis<br>Gunther's Pipehorse, Indonesian Pipefish [66273] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Solenostomus cyanopterus<br>Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183] | | Species or species habitat may occur within area | In feature area |
| Syngnathoides biaculeatus<br>Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279] | | Species or species habitat may occur within area | In feature area |
| Trachyrhamphus bicoarctatus<br>Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280] | | Species or species habitat may occur within area | In feature area |
| Trachyrhamphus longirostris<br>Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281] | | Species or species habitat may occur within area | In feature area |
| **Mammal** | | | |
| Dugong dugon<br>Dugong [28] | | Breeding known to occur within area | In feature area |
| **Reptile** | | | |
| Aipysurus apraefrontalis<br>Short-nosed Sea Snake, Short-nosed Seasnake [1115] | Critically Endangered | Species or species habitat known to occur within area | In feature area |
| Aipysurus duboisii<br>Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116] | | Species or species habitat may occur within area | In feature area |
| Aipysurus foliosquama<br>Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118] | Critically Endangered | Species or species habitat may occur within area | In feature area |
| Aipysurus fuscus<br>Dusky Sea Snake [1119] | Endangered | Species or species habitat known to occur within area | In feature area |
| Aipysurus laevis<br>Olive Sea Snake, Olive-brown Sea Snake [1120] | | Species or species habitat may occur within area | In feature area |
| Aipysurus mosaicus as Aipysurus eydouxii<br>Mosaic Sea Snake [87261] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Aipysurus tenuis<br>Brown-lined Sea Snake, Mjoberg's Sea Snake [1121] | | Species or species habitat may occur within area | In feature area |
| Caretta caretta<br>Loggerhead Turtle [1763] | Endangered | Foraging, feeding or related behaviour known to occur within area | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| Crocodylus porosus<br>Salt-water Crocodile, Estuarine Crocodile [1774] | | Species or species habitat likely to occur within area | In feature area |
| Dermochelys coriacea<br>Leatherback Turtle, Leathery Turtle, Luth [1768] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Emydocephalus annulatus<br>Eastern Turtle-headed Sea Snake [1125] | | Species or species habitat may occur within area | In feature area |
| Ephalophis greyae as Ephalophis greyi<br>Mangrove Sea Snake [93738] | | Species or species habitat may occur within area | In feature area |
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |
| Hydrelaps darwiniensis<br>Port Darwin Sea Snake, Black-ringed Mangrove Sea Snake [1100] | | Species or species habitat may occur within area | In feature area |
| Hydrophis coggeri<br>Cogger's Sea Snake [25925] | | Species or species habitat may occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Hydrophis elegans<br>Elegant Sea Snake, Bar-bellied Sea Snake [1104] | | Species or species habitat may occur within area | In feature area |
| Hydrophis hardwickii as Lapemis hardwickii<br>Spine-bellied Sea Snake [93516] | | Species or species habitat may occur within area | In feature area |
| Hydrophis kingii as Disteira kingii<br>Spectacled Sea Snake [93511] | | Species or species habitat may occur within area | In feature area |
| Hydrophis macdowelli as Hydrophis mcdowelli<br>MacDowell's Sea Snake, Small-headed Sea Snake, [75601] | | Species or species habitat may occur within area | In feature area |
| Hydrophis major as Disteira major<br>Olive-headed Sea Snake [93512] | | Species or species habitat may occur within area | In feature area |
| Hydrophis ornatus<br>Spotted Sea Snake, Ornate Reef Sea Snake [1111] | | Species or species habitat may occur within area | In feature area |
| Hydrophis peronii as Acalyptophis peronii<br>Horned Sea Snake [93509] | | Species or species habitat may occur within area | In feature area |
| Hydrophis platura as Pelamis platurus<br>Yellow-bellied Sea Snake [93746] | | Species or species habitat may occur within area | In feature area |
| Hydrophis stokesii as Astrotia stokesii<br>Stokes' Sea Snake [93510] | | Species or species habitat may occur within area | In feature area |
| Hydrophis zweiffei as Enhydrina schistosa<br>Australian Beaked Sea Snake [93514] | | Species or species habitat may occur within area | In feature area |
| Lepidochelys olivacea<br>Olive Ridley Turtle, Pacific Ridley Turtle [1767] | Endangered | Foraging, feeding or related behaviour likely to occur within area | In feature area |

| Scientific Name | Threatened Category | Presence Text | Buffer Status |
|---|---|---|---|
| Natator depressus | | | |
| Flatback Turtle [59257] | Vulnerable | Foraging, feeding or related behaviour known to occur within area | In feature area |

| Whales and Other Cetaceans | | | [ Resource Information ] |
|---|---|---|---|
| Current Scientific Name | Status | Type of Presence | Buffer Status |
| Mammal | | | |
| Balaenoptera borealis | | | |
| Sei Whale [34] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Balaenoptera edeni | | | |
| Bryde's Whale [35] | | Species or species habitat likely to occur within area | In feature area |
| Balaenoptera musculus | | | |
| Blue Whale [36] | Endangered | Migration route known to occur within area | In feature area |
| Balaenoptera physalus | | | |
| Fin Whale [37] | Vulnerable | Foraging, feeding or related behaviour likely to occur within area | In feature area |
| Delphinus delphis | | | |
| Common Dolphin, Short-beaked Common Dolphin [60] | | Species or species habitat may occur within area | In feature area |
| Feresa attenuata | | | |
| Pygmy Killer Whale [61] | | Species or species habitat may occur within area | In feature area |
| Globicephala macrorhynchus | | | |
| Short-finned Pilot Whale [62] | | Species or species habitat may occur within area | In feature area |
| Grampus griseus | | | |
| Risso's Dolphin, Grampus [64] | | Species or species habitat may occur within area | In feature area |
| Indopacetus pacificus | | | |
| Longman's Beaked Whale [72] | | Species or species habitat may occur within area | In feature area |

| Current Scientific Name | Status | Type of Presence | Buffer Status |
| --- | --- | --- | --- |
| Kogia breviceps<br>Pygmy Sperm Whale [57] | | Species or species habitat may occur within area | In feature area |
| Kogia sima<br>Dwarf Sperm Whale [85043] | | Species or species habitat may occur within area | In feature area |
| Lagenodelphis hosei<br>Fraser's Dolphin, Sarawak Dolphin [41] | | Species or species habitat may occur within area | In feature area |
| Megaptera novaeangliae<br>Humpback Whale [38] | | Breeding known to occur within area | In feature area |
| Mesoplodon densirostris<br>Blainville's Beaked Whale, Dense-beaked Whale [74] | | Species or species habitat may occur within area | In feature area |
| Mesoplodon ginkgodens<br>Gingko-toothed Beaked Whale, Gingko-toothed Whale, Gingko Beaked Whale [59564] | | Species or species habitat may occur within area | In feature area |
| Orcinus orca<br>Killer Whale, Orca [46] | | Species or species habitat may occur within area | In feature area |
| Peponocephala electra<br>Melon-headed Whale [47] | | Species or species habitat may occur within area | In feature area |
| Physeter macrocephalus<br>Sperm Whale [59] | | Species or species habitat may occur within area | In feature area |
| Pseudorca crassidens<br>False Killer Whale [48] | | Species or species habitat likely to occur within area | In feature area |
| Stenella attenuata<br>Spotted Dolphin, Pantropical Spotted Dolphin [51] | | Species or species habitat may occur within area | In feature area |

| Current Scientific Name | Status | Type of Presence | Buffer Status |
|---|---|---|---|
| Stenella coeruleoalba<br>Striped Dolphin, Euphrosyne Dolphin [52] | | Species or species habitat may occur within area | In feature area |
| Stenella longirostris<br>Long-snouted Spinner Dolphin [29] | | Species or species habitat may occur within area | In feature area |
| Steno bredanensis<br>Rough-toothed Dolphin [30] | | Species or species habitat may occur within area | In feature area |
| Tursiops aduncus<br>Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418] | | Species or species habitat likely to occur within area | In feature area |
| Tursiops aduncus (Arafura/Timor Sea populations)<br>Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900] | | Species or species habitat likely to occur within area | In feature area |
| Tursiops truncatus s. str.<br>Bottlenose Dolphin [68417] | | Species or species habitat may occur within area | In feature area |
| Ziphius cavirostris<br>Cuvier's Beaked Whale, Goose-beaked Whale [56] | | Species or species habitat may occur within area | In feature area |

| Australian Marine Parks | | [ Resource Information ] |
|---|---|---|
| Park Name | Zone & IUCN Categories | Buffer Status |
| Argo-Rowley Terrace | Multiple Use Zone (IUCN VI) | In feature area |
| Kimberley | Multiple Use Zone (IUCN VI) | In feature area |
| Argo-Rowley Terrace | National Park Zone (IUCN II) | In feature area |
| Ashmore Reef | Recreational Use Zone (IUCN IV) | In feature area |
| Ashmore Reef | Sanctuary Zone (IUCN Ia) | In feature area |
| Cartier Island | Sanctuary Zone (IUCN Ia) | In feature area |

| Habitat Critical to the Survival of Marine Turtles | | | [ Resource Information ] |
|---|---|---|---|
| Scientific Name | Behaviour | Presence | Buffer Status |
| Dec - Jan | | | |

| Scientific Name | Behaviour | Presence | Buffer Status |
|---|---|---|---|
| Chelonia mydas | | | |
| Green Turtle [1765] | Nesting | Known to occur | In feature area |

## Extra Information

| State and Territory Reserves | | | [ Resource Information ] |
|---|---|---|---|
| Protected Area Name | Reserve Type | State | Buffer Status |
| Browse Island | Nature Reserve | WA | In feature area |
| Scott Reef | Nature Reserve | WA | In feature area |
| Unnamed WA41775 | 5(1)(h) Reserve | WA | In feature area |

| Nationally Important Wetlands | | [ Resource Information ] |
|---|---|---|
| Wetland Name | State | Buffer Status |
| Ashmore Reef | EXT | In feature area |

| EPBC Act Referrals | | | | [ Resource Information ] |
|---|---|---|---|---|
| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
| | | | | |
| Browse to North West Shelf Development, Indian Ocean, WA | 2018/8319 | | Approval | In feature area |
| Marine Route Survey for Subsea Fibre Optic Data Cable System - Australia West | 2024/09826 | | Completed | In feature area |
| Project Crux Cable Lay and Operation | 2022/09441 | | Completed | In feature area |
| Controlled action | | | | |
| 2-D seismic survey Scott Reef | 2000/125 | Controlled Action | Post-Approval | In feature area |
| Browse FLNG Development, Commonwealth Waters | 2013/7079 | Controlled Action | Post-Approval | In feature area |
| Conduct an exploration drilling campaign | 2010/5718 | Controlled Action | Completed | In feature area |
| Develop Ichthys gas-condensate field permit area W | 2006/2767 | Controlled Action | Completed | In feature area |
| Development of Browse Basin Gas Fields (Upstream) | 2008/4111 | Controlled Action | Completed | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Controlled action | | | | |
| Ichthys Gas Field, Offshore and onshore processing facilities and subsea pipeline | 2008/4208 | Controlled Action | Post-Approval | In feature area |
| Montara 4, 5, and 6 Oil Production Wells, and Montara 3 Gas Re-Injection Well | 2002/755 | Controlled Action | Post-Approval | In feature area |
| Prelude Floating Liquefied Natural Gas Facility and Gas Field Development | 2008/4146 | Controlled Action | Post-Approval | In feature area |
| PTTEP AA Floating LNG Facility | 2011/6025 | Controlled Action | Completed | In feature area |
| Torosa South Initial Appraisal Drilling | 2007/3500 | Controlled Action | Completed | In feature area |
| Not controlled action | | | | |
| 3D marine seismic survey in WA 314P and WA 315P | 2004/1927 | Not Controlled Action | Completed | In feature area |
| Adele Trend TQ3D Seismic Survey | 2001/252 | Not Controlled Action | Completed | In feature area |
| Crux-A and Crux-B appraisal wells, Petroleum Permit Area AC/P23 | 2006/2748 | Not Controlled Action | Completed | In feature area |
| Crux gas-liquids development in permit AC/P23 | 2006/3154 | Not Controlled Action | Completed | In feature area |
| Drilling of 12 Hydrocarbon Exploration Wells, Permit Area WA-371-P | 2006/3005 | Not Controlled Action | Completed | In feature area |
| Drilling of exploration wells, Permit areas WA-301-P to WA-305-P | 2002/769 | Not Controlled Action | Completed | In feature area |
| Echuca Shoals-2 Exploration of Appraisal Well | 2006/3020 | Not Controlled Action | Completed | In feature area |
| Exploration Well AC/P23 | 2001/234 | Not Controlled Action | Completed | In feature area |
| Kaleidoscope exploration well | 2001/182 | Not Controlled Action | Completed | In feature area |
| Marine Seismic Survey in WA-239-P | 2000/24 | Not Controlled Action | Completed | In feature area |
| Marine Survey for the Australia-ASEAN Power Link AAPL | 2020/8714 | Not Controlled Action | Completed | In feature area |
| Montara-3 Offshore Hydrocarbon Exploration Well Permit Area AC/RL3 | 2001/489 | Not Controlled Action | Completed | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action | | | | |
| P30 Hydrocarbon Exploration Well | 2001/293 | Not Controlled Action | Completed | In feature area |
| Project Highclere Geophysical Survey | 2021/9023 | Not Controlled Action | Completed | In feature area |
| Saucepan 1 Exploration Well ACP23 | 2000/2 | Not Controlled Action | Completed | In feature area |
| Not controlled action (particular manner) | | | | |
| 2 (3D) Marine Seismic Surveys | 2009/4994 | Not Controlled Action (Particular Manner) | Completed | In feature area |
| 2D and 3D Seismic Survey | 2011/6197 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 2D Marine Seismic Survey | 2009/4728 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 2D marine seismic survey of Braveheart,Kurrajong,Sunshine and Crocodile | 2006/2917 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 2D Seismic Marine Survey | 2001/363 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 2D Seismic survey | 2009/5076 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 2D seismic survey in permit areas WA-274P and WA-281P | 2004/1521 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 2 geotechnical surveys - preliminary and final | 2006/2886 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 3D Marine Seismic Survey | 2008/4437 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 3D Marine Seismic Survey, Permit AC/P 23 | 2005/2364 | Not Controlled Action (Particular | Post-Approval | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action (particular manner) | | | | |
| | | Manner) | | |
| 3D marine seismic Survey - Maxima 3D MSS | 2006/2945 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 3D Seismic Survey, Browse Basin, WA | 2009/5048 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| 3D Seismic Survey, near Scott Reef, Browse Basin | 2005/2126 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| AC/P37 3D Seismic Survey Ashmore Cartier | 2007/3774 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Aurora MC3D Marine Seismic Survey | 2010/5510 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Bassett 3D Marine Seismic Survey | 2010/5538 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Bonaparte 2D & 3D marine seismic survey | 2011/5962 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Braveheart 2D Infill Marine Seismic Survey 100km offshore | 2008/4442 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Braveheart 2D Marine Seismic Survey | 2005/2322 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Canis 3D Marine Seismic Survey | 2008/4492 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Cartier East and Cartier West 3D Marine Seismic Surveys | 2009/5230 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action (particular manner) | | | | |
| Caswell MC3D Marine Seismic Survey | 2012/6594 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Conduct an exploration drilling campaign | 2011/5964 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Deep Water Northwest Shelf 2D Seismic Survey | 2007/3260 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Drilling of Exploration & Appraisal Wells Braveheart-1 & Cornea-3 | 2009/5160 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Endurance 3D Marine Seismic Data Acquisition Survey | 2007/3667 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Exploration Drilling Campaign | 2011/6047 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Exploration Drilling Campaign, Browse Basin, WA-341-P, AC-P36 and WA-343-P | 2013/6898 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Exploration Drilling Program - Permit areas - WA-314-P, WA-315-P, WA-398-P. | 2008/4064 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Geoscience Australia - Marine survey in Browse Basin to acquire data to assist assessment of CO2 sto | 2013/6747 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Gicea 3D Marine Seismic Survey | 2008/4389 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Gigas 2D Pilot Ocean Bottom Cable Marine Seismic Survey | 2007/3839 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Ichthys 3D Marine Seismic Survey | 2010/5550 | Not Controlled Action (Particular | Post-Approval | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action (particular manner) | | | | |
| | | Manner) | | |
| Kingtree & Ironstone-1 Exploration Wells | 2011/5935 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Kraken, Lusca & Asperus 3D Marine Seismic Survey | 2013/6730 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Mariner Non-Exclusive 2D Seismic Survey | 2011/6172 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Octantis 3D Marine Seismic Survey, Permit Area AC/P41 off northern Western Australia | 2007/3369 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Offshore Exploration Drilling Campaign | 2011/6222 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Offshore Fibre Optic Cable Network Construction & Operation, Port Hedland WA to Darwin NT | 2014/7223 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Offshore Gas Exploration Drilling Campaign | 2012/6384 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Outer Canning exploration drilling program off NW coast of WA | 2012/6618 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Pilot Appraisal Well - Torosa South 1 | 2008/3991 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Rosebud 3D Marine Seismic Survey in WA-30-R and TR/5 | 2012/6493 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Schild MC3D Marine Seismic Survey | 2012/6373 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action (particular manner) | | | | |
| Schild Phase 11 MC3D Marine Seismic Survey, Browse Basin | 2013/6894 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Scott Reef Seismic Research | 2006/2647 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Searcher bathymetry & geochemical seismic survey, Brawse Basin,Timor Sea,WA | 2013/6980 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Tiffany 3D Seismic Survey | 2010/5339 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Torosa-5 Apraisal Well, WA-30-R | 2008/4430 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Tow West Atlas wreck from present location to boundary of EEZ | 2010/5652 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Tridacna 3D Ocean Bottom Cable Marine Seismic Survey | 2011/5959 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Vampire 2D Non Exclusive Seismic Survey, WA | 2010/5543 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Veritas Voyager 2D Marine Seismic Survey | 2009/5151 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Westralia SPAN Marine Seismic Survey, WA & NT | 2012/6463 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Woodside Southern Browse 3D Seismic Survey, WA | 2007/3534 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Zeemeermin MC3D seismic survey, Browse Basin, Offshore WA | 2009/5023 | Not Controlled Action (Particular | Post-Approval | In feature area |

| Title of referral | Reference | Referral Outcome | Assessment Status | Buffer Status |
|---|---|---|---|---|
| Not controlled action (particular manner) | | | | |
| | | Manner) | | |
| Zeppelin 3D Seismic Survey | 2011/6148 | Not Controlled Action (Particular Manner) | Post-Approval | In feature area |
| Referral decision | | | | |
| 2D Marine Seismic Survey | 2008/4623 | Referral Decision | Completed | In feature area |
| Aurora extension MC3D Marine Seismic Survey | 2011/5887 | Referral Decision | Completed | In feature area |
| BRSN08 3D Marine Seismic Survey | 2008/4582 | Referral Decision | Completed | In feature area |
| Experimental Study of Behavioural and Physiological Impact on Fish of Seismic Ex | 2006/2625 | Referral Decision | Completed | In feature area |
| Pilot Appraisal Well - Torosa South-1 | 2008/3985 | Referral Decision | Completed | In feature area |
| Seismic Data Acquisition, Browse Basin | 2010/5475 | Referral Decision | Completed | In feature area |

## Key Ecological Features [ Resource Information ]

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

| Name | Region | Buffer Status |
|---|---|---|
| Ancient coastline at 125 m depth contour | North-west | In feature area |
| Ashmore Reef and Cartier Island and surrounding Commonwealth waters | North-west | In feature area |
| Carbonate bank and terrace system of the Sahul Shelf | North-west | In feature area |
| Continental Slope Demersal Fish Communities | North-west | In feature area |
| Seringapatam Reef and Commonwealth waters in the Scott Reef Complex | North-west | In feature area |

## Biologically Important Areas [ Resource Information ]

| Scientific Name | Behaviour | Presence | Buffer Status |
|---|---|---|---|
| Dugong | | | |
| Dugong dugon | | | |
| Dugong [28] | Breeding | Known to occur | In feature area |

| Scientific Name | Behaviour | Presence | Buffer Status |
|---|---|---|---|
| Dugong dugon<br>Dugong [28] | Calving | Known to occur | In feature area |
| Dugong dugon<br>Dugong [28] | Foraging | Known to occur | In feature area |
| Dugong dugon<br>Dugong [28] | Foraging (high density seagrass beds) | Known to occur | In feature area |
| Dugong dugon<br>Dugong [28] | Nursing | Known to occur | In feature area |
| **Marine Turtles** | | | |
| Chelonia mydas<br>Green Turtle [1765] | Foraging | Likely to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Internesting | Known to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Internesting | Likely to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Internesting buffer | Known to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Internesting buffer | Likely to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Mating | Likely to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Nesting | Known to occur | In feature area |
| Chelonia mydas<br>Green Turtle [1765] | Nesting | Likely to occur | In feature area |
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Foraging | Likely to occur | In feature area |
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Internesting buffer | Likely to occur | In feature area |

| Scientific Name | Behaviour | Presence | Buffer Status |
|---|---|---|---|
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Internesting buffer | Known to occur | In feature area |
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Nesting | Likely to occur | In feature area |
| Eretmochelys imbricata<br>Hawksbill Turtle [1766] | Nesting | Known to occur | In feature area |
| **Seabirds** | | | |
| Ardenna pacifica<br>Wedge-tailed Shearwater [84292] | Breeding | Known to occur | In feature area |
| Fregata ariel<br>Lesser Frigatebird [1012] | Breeding | Known to occur | In feature area |
| Fregata minor<br>Greater Frigatebird [1013] | Breeding | Known to occur | In feature area |
| Phaethon lepturus<br>White-tailed Tropicbird [1014] | Breeding | Known to occur | In feature area |
| Sterna dougallii<br>Roseate Tern [817] | Breeding | Known to occur | In feature area |
| Sternula albifrons sinensis<br>Little Tern [82850] | Resting | Known to occur | In feature area |
| Sula leucogaster<br>Brown Booby [1022] | Breeding | Known to occur | In feature area |
| Sula sula<br>Red-footed Booby [1023] | Breeding | Known to occur | In feature area |
| Thalasseus bengalensis<br>Lesser Crested Tern [66546] | Breeding | Known to occur | In feature area |
| **Sharks** | | | |
| Rhincodon typus<br>Whale Shark [66680] | Foraging | Known to occur | In feature area |
| **Whales** | | | |
| Balaenoptera musculus brevicauda<br>Pygmy Blue Whale [81317] | Foraging | Known to occur | In feature area |

| Scientific Name | Behaviour | Presence | Buffer Status |
| --- | --- | --- | --- |
| Balaenoptera musculus brevicauda | | | |
| Pygmy Blue Whale [81317] | Migration | Known to occur | In feature area |

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data is available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on the contents of this report.

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded breeding sites; and
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact us page.


Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601 Australia
+61 2 6274 1111

| Fauna Type | Conservation management documents | Summary of relevant aspects / threats identified from conservation management documents | Summary of relevant actions from conservation management documents | Relevant exposure / risk evaluation section of EP |
|---|---|---|---|---|
| EPBC-listed fishes and sharks | Whale shark management. 2013. Wildlife management program no. 57. Department of Parks and Wildlife. State of Western Australia.<br><br>Threatened Species Scientific Committee. 2015. Approved Conservation Advice for *Rhincodon typus* (whale shark). Commonwealth of Australia.<br><br>Department of Sustainability, Environment, Water, Population and Communities. 2013. Recovery Plan for the White Shark (*Carcharodon carcharias*). Department of Sustainability, Environment, Water, Population and Communities.<br><br>Threatened Species Scientific Committee. 2014. Approved Conservation Advice for *Glyphis garricki* (northern river shark). Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2009. Commonwealth Conservation Advice on *Pristis clavata* (dwarf sawfish). Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2008. Approved Conservation Advice for *Pristis zijsron* (green sawfish). Commonwealth of Australia.<br><br>Department of the Environment. 2015. Sawfish and River Sharks - Multispecies Recovery Plan. Commonwealth of Australia.<br><br>Department of Environment and Energy. 2018. Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans. Commonwealth of Australia.<br><br>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT. | • Waste / marine debris<br>• Noise and vibration<br>• Introduced Marine Species<br>• Vessel strike<br>• Benthic habitat degradation / seabed disturbance<br>• Emissions and discharges<br>• Oil spill | • Identify populations and areas of high conservation priority (sawfishes).<br>• Ensure there is no anthropogenic disturbance / implement measures to reduce adverse impacts of habitat degradation and/or modification (northern river shark).<br>• Ensure all future developments will not significantly impact upon sawfish and river shark habitats critical to the survival of the species or impede upon the migration of individual sawfish or river sharks. Implement measures to reduce adverse impacts of habitat degradation and/or modification.<br>• Review and assess the potential threat of introduced species, pathogens and pollutants.<br>• Minimise offshore developments and transit time of large vessels in areas close to marine features likely to correlate with whale shark aggregations (Ningaloo Reef,) and along the northward migration route that follows the northern WA coastline along the 200 m isobath.<br>• Contribute to the long-term prevention of the incidence of harmful marine debris. | • EP Section 7.2 – Waste management<br>• EP Section 7.3 - Noise and vibration<br>• EP Section 7.4.1 - Introduction of invasive marine species<br>• EP Section 7.4.2 - Interaction with marine fauna<br>• EP Section 7.5 - Seabed disturbance<br>• EP Section 7.1.3 - Routine discharges<br>• EP Section 8 - Emergency conditions (oil spills). |
| EPBC-listed marine reptiles | Department of the Environment and Energy. 2017. Recovery Plan for Marine Turtles in Australia, Commonwealth of Australia 2017.<br><br>Threatened Species Scientific Committee. 2011. Commonwealth Conservation Advice on *Aipysurus apraefrontalis* (Short-nosed Seasnake). Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2011. Commonwealth Conservation Advice on *Aipysurus foliosquama* (Leaf-scaled Seasnake). Commonwealth of Australia.<br><br>Department of Climate Change, Energy, the Environment and Water. 2024. Conservation Advice for *Aipysurus fuscus* (dusky sea snake). Canberra: Department of Climate Change, Energy, the Environment and Water. | • Waste / marine debris<br>• Noise and vibration<br>• Introduced Marine Species<br>• Vessel strike<br>• Benthic habitat degradation / seabed disturbance<br>• Emissions and discharges<br>• Oil spill<br>• Light emissions | • Manage artificial light from onshore and offshore sources to ensure biologically important behaviours of nesting adults and dispersing hatchlings can continue.<br>• Artificial light within or adjacent to habitat critical to the survival of marine turtles will be managed such that marine turtles are not displaced from these habitats and implementation of best practice light management guidelines for developments adjacent to marine turtle nesting beaches.<br>• Identify the cumulative impact on turtles from multiple sources of onshore and offshore light pollution.<br>• Support retrofitting of lighting at coastal communities and industrial developments, including imposing restrictions around nesting seasons.<br>• Manage anthropogenic activities to ensure marine turtles are not displaced from identified habitat critical for survival. | • EP Section 7.1.1 - Light emissions<br>• EP Section 7.2 – Waste management<br>• EP Section 7.3 - Noise and vibration<br>• EP Section 7.4.1 - Introduction of invasive marine species<br>• EP Section 7.4.2 - Interaction with marine fauna<br>• EP Section 7.5 - Seabed disturbance<br>• EP Section 7.1.3 - Routine discharges<br>• EP Section 8 - Emergency conditions (oil spills). |

| Fauna Type | Conservation management documents | Summary of relevant aspects / threats identified from conservation management documents | Summary of relevant actions from conservation management documents | Relevant exposure / risk evaluation section of EP |
|---|---|---|---|---|
| | Department of Environment and Energy. 2018. Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans. Commonwealth of Australia.<br><br>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.<br><br>Department of the Environment and Energy. 2020. Light pollution guidelines – National light pollution guidelines for wildlife: Including marine turtles, seabirds and migratory shorebirds. Commonwealth of Australia, Canberra, ACT.<br><br>Department of the Environment and Energy. 2017. National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Fauna. Commonwealth of Australia, Canberra, ACT. | | • Contribute to the reduction in the source of marine debris.<br>• Ensure that spill risk strategies and response programs include management for turtles and their habitats, particularly in reference to slow to recover habitats, e.g. seagrass meadows or corals.<br>• Implement best practices to minimise impacts to turtle health and habitats from chemical discharges.<br>• Identify populations and areas of high conservation priority (sea snakes).<br>• Ensure there is no anthropogenic disturbance / implement measures to reduce adverse impacts of habitat degradation and/or modification (sea snakes).<br>• Increased reporting of vessel collision (a requirement of the EPBC Act).<br>• Reduce risk of collision with cetaceans (and turtles) such as maintaining look out, consider reducing vessel speed and course alterations away from sightings. | |
| EPBC-listed seabirds and shorebirds | Department of the Environment. 2015. EPBC Act Policy Statement 3.21 - Industry guidelines for avoiding, assessing and mitigating impacts on EPBC listed migratory shorebird species.<br><br>Department of the Environment. 2015. Wildlife conservation plan for migratory shorebirds. Commonwealth of Australia.<br><br>Department of the Environment. 2015. Draft referral guideline for 14 birds listed as migratory under the EPBC Act. Commonwealth of Australia.<br><br>Department of Sustainability, Environment, Water, Population and Communities. 2012. Species group report card - seabirds and migratory shorebirds. Supporting the marine bioregional plan for the North-west Marine Region. Prepared under the Environment Protection and Biodiversity Conservation Act 1999. Commonwealth of Australia.<br><br>Department of the Environment, Water, Heritage and the Arts. 2009. Threat abatement plan to reduce the impacts of exotic rodents on biodiversity on Australian offshore islands of less than 100 000 hectares. Commonwealth of Australia.<br><br>Department of Environment and Energy. 2018. Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans. Commonwealth of Australia.<br><br>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.<br><br>Department of Climate Change, Energy, the Environment and Water. 2024. Conservation Advice | • Waste / marine debris<br>• Introduced Marine Species<br>• Introduced Terrestrial Pests (rodents)<br>• Benthic habitat degradation / seabed disturbance<br>• Emissions and discharges<br>• Oil spill<br>• Light emissions | • Reduce risk of rodents gaining access to key vessels at key ports<br>• Contribute to the long-term prevention of the incidence of harmful marine debris<br>• Identify threats to important (migratory shorebird) habitat and develop conservation measures for managing them.<br>• Avoid degradation of migratory shorebird habitat that may occur through the introduction of exotic species, changes to hydrology or water quality (including toxic inflows), fragmentation of habitat or exposure to litter, pollutants and acid sulphate soils. Minimise human disturbance, a major threat to migratory shorebirds<br>• Best practice waste management should be implemented. | • EP Section 7.1.1 - Light emissions<br>• EP Section 7.1.2 - Atmospheric emissions<br>• EP Section 7.1.3 - Routine discharges<br>• EP Section 7.2. – Waste management<br>• EP Section 7.4.1 - Introduction of invasive marine species<br>• EP Section 8 - Emergency conditions (oil spills). |

| Fauna Type | Conservation management documents | Summary of relevant aspects / threats identified from conservation management documents | Summary of relevant actions from conservation management documents | Relevant exposure / risk evaluation section of EP |
|---|---|---|---|---|
| | for *Calidris canutus* (red knot). Department of Climate Change, Energy, the Environment and Water. Canberra, ACT.<br><br>Department of Climate Change, Energy, the Environment and Water. 2023. Conservation Advice for *Calidris ferruginea* (curlew sandpiper). Department of Climate Change, Energy, the Environment and Water. Canberra, ACT.<br><br>Threatened Species Scientific Committee. 2023. Conservation Advice for *Charadrius leschenaultii* (Greater Sand Plover). Commonwealth of Australia.<br><br>Department of Climate Change, Energy, the Environment and Water. 2024. Conservation Advice for *Limnodromus semipalmatus* (Asian dowitcher). Department of Climate Change, Energy, the Environment and Water. Canberra, ACT.<br><br>Department of Climate Change, Energy, the Environment and Water. 2024. Conservation Advice *Limosa lapponica menzbieri* — Northern Siberian Bar-tailed Godwit. Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2020. Conservation Advice for the Abbott's Booby - *Papasula abbotti*. Department of Agriculture, Water and Environment.<br><br>Department of Climate Change, Energy, the Environment and Water. 2023. Conservation Advice for *Numenius madagascariensis* (far eastern curlew). Commonwealth of Australia.<br><br>Department of the Environment. 2014. Conservation Advice *Phaethon lepturus fulvus* white-tailed tropicbird (Christmas Island) Commonwealth of Australia.<br><br>Department of Climate Change, Energy, the Environment and Water. 2023. Conservation Advice for *Phaethon rubricauda westralis* (Indian Ocean red-tailed tropicbird). Canberra, ACT.<br><br>Threatened Species Scientific Committee. 2015. Approved Conservation Advice for *Anous tenuirostris melanops* (Australian lesser noddy). Commonwealth of Australia.<br><br>Department of Climate Change, Energy, the Environment and Water. 2022. National Recovery Plan for the Australian Painted Snipe (*Rostratula australis*), Commonwealth of Australia.<br><br>Department of the Environment and Energy. 2020. Light pollution guidelines – National light pollution guidelines for wildlife: Including marine turtles, seabirds and migratory shorebirds. Commonwealth of Australia, Canberra, ACT. | | | |

| Fauna Type | Conservation management documents | Summary of relevant aspects / threats identified from conservation management documents | Summary of relevant actions from conservation management documents | Relevant exposure / risk evaluation section of EP |
|---|---|---|---|---|
| | Australian Government. Wildlife Conservation Plan for Seabirds, Commonwealth of Australia 2020. | | | |
| EPBC-listed cetaceans | Department of the Environment. 2015. Conservation Management Plan for the Blue Whales - A Recovery Plan under the Environment Protection and Biodiversity Conservation Act 1999 (2015-2025). Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2015. *Balaenoptera borealis* (Sei Whale) Conservation Advice. Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2022. Listing Advice for *Megaptera novaeangliae* (humpback whale). Commonwealth of Australia.<br><br>Threatened Species Scientific Committee. 2015. Approved Conservation Advice for *Balaenoptera physalus* — Fin Whale. Commonwealth of Australia.<br><br>EPBC Act Regulations 2000. Part 8 Interacting with cetaceans and whale watching. Division 8.1 Interacting with cetaceans. Commonwealth of Australia.<br><br>Department of Environment and Energy, 2017. Australian National Guidelines for Whale and Dolphin Watching 2017. Commonwealth of Australia.<br><br>Department of Environment and Energy. 2018. Threat abatement plan for the impacts of marine debris on the vertebrate wildlife of Australia's coasts and oceans. Commonwealth of Australia.<br><br>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.<br><br>Department of the Environment and Energy. 2017. National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Fauna. Commonwealth of Australia, Canberra, ACT. | • Waste / marine debris<br>• Noise and vibration<br>• Introduced Marine Species<br>• Vessel strike<br>• Benthic habitat degradation / seabed disturbance<br>• Emissions and discharges<br>• Oil spill | • Ensure all vessel strike incidents are reported in the National Ship Strike Database.<br>• Ensure the risk of vessel strikes on blue whales is considered when assessing actions that increase vessel traffic in areas where blue whales occur and, if required, appropriate mitigation measures are implemented.<br>• Protect habitat important to the survival of the species (humpback whales); assess and manage physical disturbance and development activities (such as ship-strike and pollution).<br>• Ensure the risk of vessel strike on humpback whales is considered when assessing actions that increase vessel traffic in areas where humpback whales occur and, if required appropriate mitigation measures are implemented to reduce the risk of vessel strike.<br>• Environmental assessment processes must ensure that existing information about coastal habitat requirements of humpback whales, environmental suitability of coastal locations, historic high use and emerging areas are taken into consideration.<br>• Contribute to the long-term prevention of the incidence of harmful marine debris.<br>• if a whale or dolphin surfaces in the vicinity of a vessel travelling for a purpose other than whale and dolphin watching, take all care necessary to avoid collisions. This may include stopping, slowing down and/or steering away from the animal.<br>• Increased reporting of vessel collision (a requirement of the EPBC Act).<br>• Reduce risk of collision with cetaceans (and turtles) such as maintaining look out, consider reducing vessel speed and course alterations away from sightings. | • EP Section 7.1.3 - Routine discharges<br>• EP Section 7.2 – Waste Management<br>• EP Section 7.3 - Noise and Vibration<br>• EP Section 7.4.1 - Introduction of invasive marine species<br>• EP Section 7.4.2 - Interaction with marine fauna<br>• EP Section 7.5 - Seabed disturbance<br>• EP Section 8 - Emergency conditions (oil spills). |

# Aboriginal Cultural Heritage Inquiry System

## List of Aboriginal Cultural Heritage (ACH) Register



### Search Criteria

No Aboriginal Cultural Heritage (ACH) Register in Shapefile - PER340665_SC1B_ANN_ProjectEMBA_F1gm2_E100ppb_D50ppb_CLEANED

### Disclaimer

Aboriginal heritage holds significant value to Aboriginal people for their social, spiritual, historical, scientific, or aesthetic importance within Aboriginal traditions, and provides an essential link for Aboriginal people to their past, present and future. In Western Australia Aboriginal heritage is protected under the *Aboriginal Heritage Act 1972*.

All Aboriginal cultural heritage in Western Australia is protected, whether or not the ACH has been reported or exists on the Register.

The information provided is made available in good faith and is predominately based on the information provided to the Department of Planning, Lands and Heritage by third parties. The information is provided solely on the basis that readers will be responsible for making their own assessment as to the accuracy of the information. If you find any errors or omissions in our records, including our maps, it would be appreciated if you provide the details to the Department via https://achknowledge.dplh.wa.gov.au/ach-enquiry-form and we will make every effort to rectify it as soon as possible.

### Copyright

**Coordinates**

Map coordinates are based on the GDA 94 Datum.

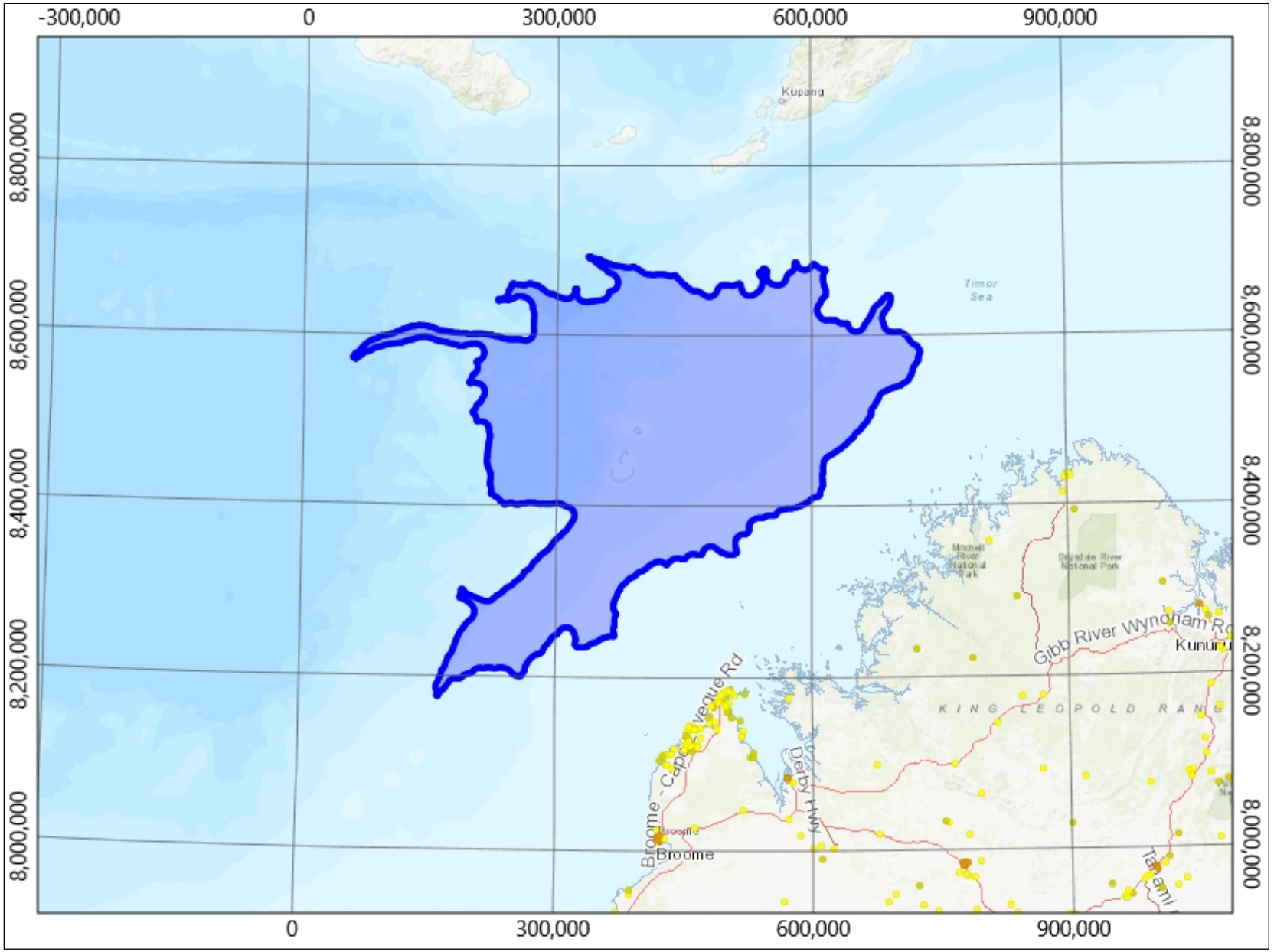
**Basemap Copyright**

Department of Planning, Lands and Heritage

# Aboriginal Cultural Heritage Inquiry System

## Map of Aboriginal Cultural Heritage (ACH) Register






## Legend

- Aboriginal Cultural Heritage (ACH) Register
- Search Area
- Aboriginal Community
  - *Permanent*
  - *Seasonal*
  - *Town Based*
- Town
- Road
- River
- Local Government Authority

231.58 kilometres

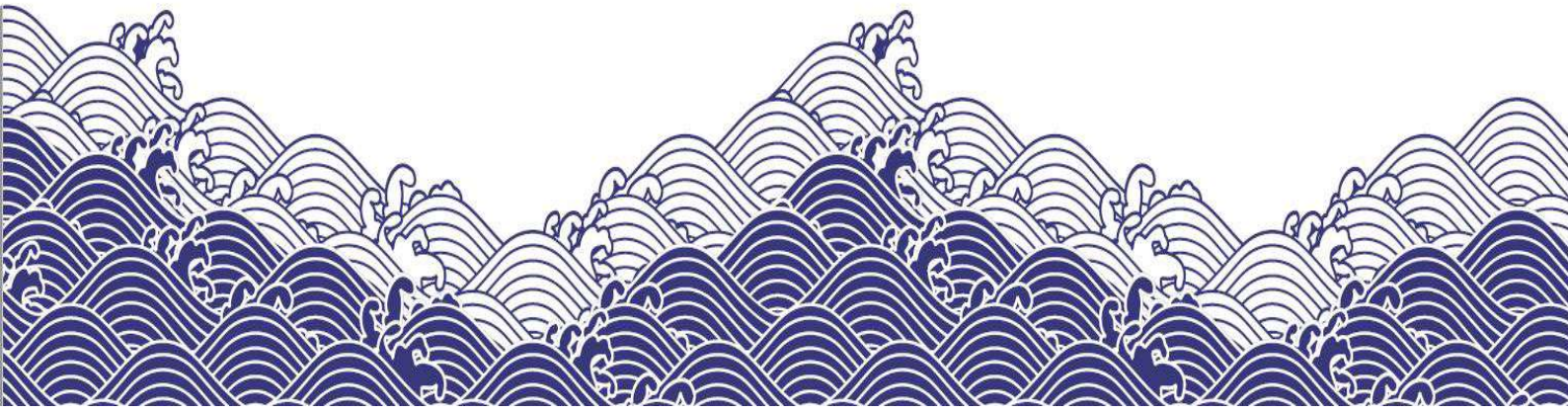
Map Scale 1 : 7,020,000

MGA Zone 51 (GDA94)



# Appendix C

## C1 INPEX Australia Relevant Persons Determination and Consultation Methodology for Offshore Environment Plans
## C2 List of relevant persons
## C3 Consultation materials
## C4 Consultation summary report



# INPEX Australia Relevant Persons Determination and Consultation Methodology for Offshore Environment Plans

## Methodology

Document No.: 0000-AH-MST-70000
Security Classification: Public

| Rev | Date | Issue Reason | Prepared | Checked | Endorsed | Approved |
|---|---|---|---|---|---|---|
| 1 | 26 Apr 2023 | Issued for use | S Bolitho<br>O Akerman | S Ovenden<br>V Ee<br>H McGahan<br>J Wesley | J Williams | J Prout |
| 2 | 01 Aug 2023 | Issued to NOPSEMA | O Akerman | S Cook | J Prout | C Serginson |
| 3 | 21 Sep 2023 | Issued to NOPSEMA | O Akerman | S Cook | J Prout | C Serginson |
| 4 | 16 Oct 2024 | Issued to NOPSEMA | O Akerman | S Cook | J Prout | C Serginson |

**RECORD OF AMENDMENT**

| Revision | Section | Amendment |
|---|---|---|
| 2 | Section 1.1.1 | Updated to reflect Department of Foreign Affairs and Trade correspondence. |
| | Section 3.2.1 | Updated in accordance with NOPSEMA request for further information. |
| 3 | Section 1.1.1 | Updated in accordance with NOPSEMA request for further information. |
| | Section 2 | Updated to include guiding principles of offshore EP consultation |
| | Section 3.2.2 | Updated to describe unascertainable relevant persons |
| 4 | Throughout document | Updated to reflect changes in the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 including regulation/subregulation numbers and text associated with these, as applicable.<br>Updated to reflect change in terminology from potential exposure zone (PEZ) to environment that may be affected (EMBA). |
| | | Updated to reflect change in timeframe described as the Consultation Period i.e. 30 business days (six weeks) to be 40 business days (eight weeks). |
| | Section 3.1.1 | Updated to provide more detail on how oil spill modelling is used to determine relevant persons. |
| | Section 3.3.1 | Updated to reflected use of third parties to facilitate consultation and distribution of information on behalf of INPEX. |

## DOCUMENT DISTRIBUTION

| | Name |
|---|---|
| 00 | Document Control |
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| 10 | |

## NOTICE

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## LIST OF FIGURES



## TABLE OF APPENDICES

| Abbreviation / Acronym / Terms | Meaning |
|---|---|
| Appeal Decision | *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193* |
| DCCEEW | Department of Climate Change, Energy, the Environment and Water |
| EMBA | environment that may be affected |
| EP | environment plan |
| GIS | geographic information system |
| NOPSEMA | National Offshore Petroleum Safety and Environmental Management Authority |
| NT | Northern Territory |
| OPGGS Act | *Offshore Petroleum and Greenhouse Gas Storage Act 2006* |
| OPGGS (E) Regulations | Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 |
| SME | subject matter expert |
| this document | INPEX Australia Relevant Persons Determination and Consultation Methodology for Offshore Environment Plans (0000-AH-MST-70000) |
| WA | Western Australia |

# 1 INTRODUCTION

## 1.1 Background

The National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) is responsible for regulating environmental management arrangements for offshore petroleum and greenhouse gas activities in Commonwealth waters. The primary legislation regulating these activities is the *Offshore Petroleum and Greenhouse Gas Storage Act* 2006 (OPGGS Act) and associated regulations.

Petroleum and greenhouse gas activities undertaken in Commonwealth waters do not require individual referral, assessment or approval under the *Environment Protection and Biodiversity Conservation Act 1999* provided they are undertaken in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 [1] (OPGGS (E) Regulations). This requires such activities to be managed in accordance with an environment plan (EP) accepted by NOPSEMA.

When developing or revising an EP in accordance with the OPGGS (E) Regulations, titleholders must consult with relevant persons as described further in Section 1.1.1.

INPEX recognises that through consultation it will have an opportunity to receive information that it might not otherwise have received from others who may be affected by a proposed activity. The INPEX Australia Relevant Persons Determination and Consultation Methodology for Offshore Environment Plans (**this document**) details INPEX's approach to the identification of, and consultation with, relevant persons as required under the OPGGS (E) Regulations.

### 1.1.1 Regulatory requirements

The OPGGS Act and associated regulations provides the legal framework for the exploration and recovery of petroleum and greenhouse gas activities in Commonwealth waters (those areas that are more than three nautical miles from the territorial sea baseline).

The OPGGS (E) Regulations require that a petroleum or greenhouse gas activity is undertaken in an ecologically sustainable manner, and in accordance with an accepted EP.

OPGGS (E) Regulation 25 requires a titleholder to undertake consultation with relevant authorities, persons and organisations, etc. in the course of preparing a new or a revision to an EP. Specifically OPGGS (E) Regulation 25 requires:

1. *In the course of preparing an environment plan (including a revised environment plan referred to in Division 5) a titleholder must consult each of the following (a relevant person):*
    a. *each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the environment plan may be relevant*
    b. *if the plan relates to activities in the offshore area of a State—the Department of the responsible State Minister*

[1] The Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023, came into effect on 10 January 2024, repealing the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009. The revisions to the regulations are limited to minor amendments and have resulted in restructuring and renumbering of regulatory provisions. A concordance table outlining the equivalent provision for each provision previously recognised in the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009, can be found at: https://www.legislation.gov.au/F2023L00998/latest/text/explanatory-statement

*c. if the plan relates to activities in the Principal Northern Territory offshore area—the Department of the responsible Northern Territory Minister*

*d. a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the environment plan*

*e. any other person or organisation that the titleholder considers relevant.*

*2. For the purpose of the consultation, the titleholder must give each relevant person sufficient information to allow the relevant person to make an informed assessment of the possible consequences of the activity on the functions, interests or activities of the relevant person.*

*3. The titleholder must allow a relevant person a reasonable period for the consultation.*

*4. The titleholder must tell each relevant person the titleholder consults that:*

*a. the relevant person may request that particular information the relevant person provides in the consultation not be published; and*

*b. information subject to such a request is not to be published under this Part.*

## 1.2 Purpose

The purpose of this document is to provide a detailed methodology for determining and consulting with relevant persons, which is to be followed when developing a new EP or a revision to an EP. It covers the:

- process for identifying relevant persons applicable to an offshore activity that requires a new EP or a revision to an EP under the OPGGS (E) Regulations
- preparation of appropriate consultation materials and forms of consultation for each relevant person identified
- process of consultation including assessment of information and feedback received
- information required to be presented in the EP submission to demonstrate to NOPSEMA that appropriate consultation has been undertaken in accordance with the OPGGS (E) Regulations including any additional information incorporated into the EP as a result of consultation.

## 1.3 Objective

To have a robust approach to undertaking the identification of, and consultation with relevant persons for offshore activities that require an EP under the OPGGS (E) Regulations.

# 2 GUIDING PRINCIPLES OF OFFSHORE EP CONSULTATION

Guiding principles adopted key by INPEX for offshore EP consultation, are described in Table 2-1.

**Table 2-1: Guiding principles and key concepts of INPEX offshore EP consultation**

| Guiding principle | Key concept |
|---|---|
| Consultation provides an opportunity for free and open exchange of information to occur between a titleholder and relevant person that may be affected by a proposed activity | • The process provides a genuine opportunity for relevant persons to be heard and provide feedback.<br>• The process includes mechanisms for titleholders to receive information from relevant persons that they might not have otherwise received.<br>• The process enables a titleholder to gain better understanding about the environment that may be affected and measures that may be necessary to mitigate the potential environmental impacts and risks associated with either a petroleum or greenhouse gas activity[2,3].<br>• Consultation does not carry with it any obligation on the titleholder either to seek or reach agreement; nor requires consent on the activity subject to the consultation; however, the titleholder should be receptive to suggestions from a relevant person, where these may improve the overall environmental outcome[3,4]. |
| The consultation process must be capable of practicable and reasonable discharge | • The obligation to consult is a real world obligation that must be construed in a practical and pragmatic way that makes a process both reasonable and workable[5].<br>• Where communal interests are held, the process of consultation needs to reasonably reflect the characteristics of the communal interests affected, and does not necessarily require communications with each and every person who is a member of the relevant community[6].<br>• The obligation to identify relevant persons for the purpose of consultation must be reasonably capable of discharged (i.e. relevant persons need to be ascertainable) within a reasonable time[7]. |

[2] *Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193* (Appeal Decision), paragraphs [49], [54], [57], [89] and [141].

[3] Replacement Explanatory Statement, Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulation 2023, 06 November 2023

[4] NOPSEMA. 2023. *Consultation on Offshore Environment Plans – Information for the Community*, May 2023

[5] Appeal Decision, paragraphs at [89], [109], [136], [138] and [141].

[6] Appeal Decision paragraphs [48], [89], [104], [108], [109], [141] and [153].

[7] Appeal Decision paragraphs [136], [141] and [153].

| Guiding principle | Key concept |
|---|---|
| Consultation involves provision of sufficient information on a proposed activity to relevant persons and allows for a reasonable period of time a relevant person to consider the information | • Information provided to a relevant person should be sufficient to allow them to make an informed assessment of consequence of the proposed activity on their functions, interests or activities[8].<br>• The nature, scale, and complexity of a proposed activity, as well as the extent of potential impacts and risks on a relevant person's functions, interests, or activities, is considered when determining a reasonable period for consultation. |
| Relevant person participation in the consultation process is voluntary | • Relevant persons are not obligated to respond to a titleholder's request to participate in the consultation process[4,3].<br>• A titleholder is not required to wait indefinitely for a response where sufficient information and reasonable period of time has been afforded to the relevant person[3]. |

[8] As relevant to the categories of persons defined in the 25(1) (OPGGS (E) Regulations.

## 2.1 Definitions

As described in Section 1.2 and 1.3, INPEX has developed this document to ensure a consistent approach to identifying and consulting with relevant persons in relation to offshore EPs. The definitions included in Table 2-2 have been used as the basis for this methodology.

**Table 2-2: List of definitions**

| Term | Definition |
|---|---|
| Activities | In relation to subregulation 25(1) (d), activities are considered to be what other persons or organisations are already doing. |
| Claims | Evidence provided that suggests that there are potential adverse impacts from the petroleum or greenhouse gas activities to which the EP relates. |
| Consultation Period | INPEX generally defines the Consultation Period during the development of an EP as being 40 business days (eight weeks), subject to the nature and scale of the proposed activity. Where dialogue with relevant persons is ongoing after this period, INPEX will continue to consult with these persons until INPEX believes that it has provided sufficient evidence/justification to close the consultation. |
| Enquiry Boundary | Generated by overlaying all INPEX's modelling outputs for offshore oil spill scenarios related to current active INPEX EPs. The geographical area within the Enquiry Boundary is used as the basis for identifying those to be included in INPEX's register of persons, organisations, departments, agencies and authorities. |
| Environment | OPGGS (E) Regulations defines this as:<br>(a) ecosystems and their constituent parts, including people and communities; and<br>(b) natural and physical resources; and<br>(c) the qualities and characteristics of locations, places and areas; and<br>(d) the heritage value of places;<br>and includes the social, economic and cultural features of the matters mentioned in paragraphs (a), (b), (c) and (d). |

| Term | Definition |
|---|---|
| Environment that may be affected (EMBA) | This is the environment that may be affected as outlined in the OPGGS (E) Regulations. The spatial extent of the EMBA is determined from stochastic spill modelling using the low hydrocarbon exposure thresholds for social impacts (no ecological impact). Note, the EMBA does not define the area of affect to a relevant person's functions, interest or activities, but instead it is used as an initial input to develop a broad list of possible relevant persons that may be affected in a geographical area for the activity. Each relevant person is then further assessed in direct context of the effect the activity may have on their own specific functions, interests and activities. |
| EP Draft Register | A register of potentially relevant persons that may require consultation, developed for each activity specific EP and pre-populated ahead of the relevant person identification workshop. |
| Functions | In relation to subregulation 25(1) (d), functions refer to a power or duty to do something. |
| Interests | In relation to subregulation 25(1) (d), interests represent a connection to the values described in the EP. Any interest possessed by an individual, whether or not the interest amounts to a legal right or is a proprietary or financial interest or relates to reputation. However, an interest does not extend to general public interest in an activity[4,9]. |
| Objection | A reason or argument that asserts that there are potential adverse impacts arising from the petroleum or greenhouse gas activities to which the EP relates. |
| Petroleum/Greenhouse Gas Activity | A planned offshore petroleum or greenhouse gas storage activity for which an EP is required. This also includes activities undertaken in the event of an emergency condition such as oil spill response. |
| Reasonable period | A reasonable time for relevant persons to identify the effect of a proposed activity on their functions, interests or activities and make a response detailing their objections or claims.<br>INPEX generally defines a reasonable period for a relevant person to review and provide an initial response (i.e. the Consultation Period) as being 40 business days (eight weeks), subject to the nature and scale of the proposed activity. Where dialogue with relevant persons is ongoing after this period, INPEX will continue to consult with these persons until INPEX believes that it has provided sufficient evidence/justification to close the consultation (i.e. they have been provided sufficient information and reasonable time). |

[9] Appeal Decision, paragraphs at [151] and [154].

| Term | Definition |
|---|---|
| Reasonable attempt | During the Consultation Period, INPEX will make all reasonable attempts to contact all identified relevant persons for the EP (where a reasonable and workable avenue exists). Recognising that specific consultation methods of engagement and ways to share information may be more appropriate for certain groups of relevant persons. |
| Relevant matter | A matter raised that has been assessed as being relevant to the petroleum/greenhouse gas activity (refer to Section 3.4.2), comprises a request to INPEX for further relevant information, or provides information to INPEX that is relevant to the activity or the EP. |
| Relevant person | Can be a person, organisation, department, agency or authority that falls within one of the categories defined by subregulation 25(1) of the OPGGS (E) Regulations; however, it does not include those whose functions, interests or activities will only be affected by an activity in an immaterial or negligible way[10]. |
| Subject matter experts (SMEs) | Specialists from within INPEX such as Aboriginal Affairs, Government Affairs, Environment team members and other technical experts relative to an activity. |
| Values | Values within an EP are broadly defined as:<br>• Natural values—habitats, species and ecological communities within the EMBA.<br>• Cultural values—living and cultural heritage recognising Indigenous beliefs, practices and obligations for country, places of cultural significance and cultural heritage sites within the EMBA.<br>• Heritage values—non-Indigenous heritage within the EMBA that has aesthetic, historic, scientific or social significance.<br>• Socio-economic values— people, communities and/or businesses that operate within the EMBA. |

[10] Appeal Decision paragraph [67] and noting, OPGGS (Environment) Regulations 4(c) provide that a petroleum or greenhouse gas activity is carried out in a manner by which the environmental impacts and risks of the activity will be of an acceptable level.

# 3 IDENTIFICATION OF RELEVANT PERSONS AND CONSULTATION METHODOLOGY

When an EP is required, the process outlined in the following section will be followed. This section describes INPEX's process to identify relevant persons and develop forms of consultation in relation to each EP. An overview of the approach to relevant person determination and consultation is shown in Figure 3-1.

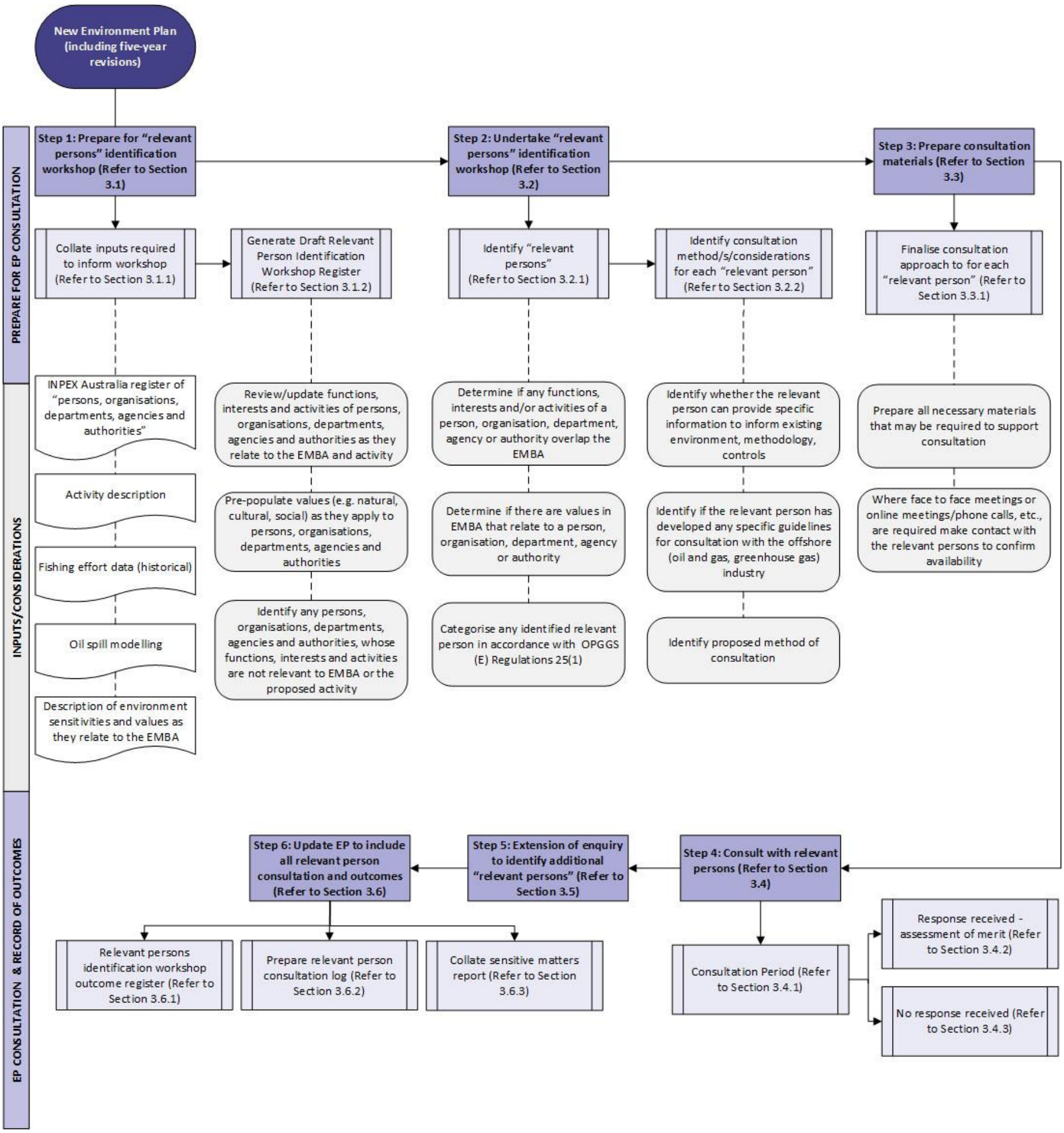


**Figure 3-1: Overall approach to relevant person determination and consultation**

## 3.1 Step 1 – Prepare for relevant persons identification workshop

Prior to undertaking a workshop to identify relevant persons for the purpose of EP consultation, a number of inputs are required. Preparation of these inputs, described in Section 3.1.1, may take several weeks to collate and this time should be allowed for when preparing for the workshop. Once the input data has been compiled it will be used as the basis for pre-population of the draft register of relevant persons for an EP (refer Section 3.1.2) prior to the relevant persons identification workshop (refer Section 3.2).

### 3.1.1 Workshop inputs

#### INPEX register of persons, organisations, departments, agencies and authorities

The **Enquiry Boundary** for identifying persons, organisations, departments, agencies and authorities was defined by overlaying all modelling outputs for offshore oil spill scenarios related to current active INPEX EPs. The extent of this is shown in Figure 3-2.

INPEX maintains a comprehensive register that includes persons, organisations, departments, agencies and authorities that have the potential to fall within; or have jurisdiction over matters within the Enquiry Boundary.

This extensive register was developed for INPEX by an external consultant that specialises in consultation and community relations. The register includes existing INPEX contacts that have been consulted with during the development and operation of the Ichthys Project (since 2008). Other persons have been identified and included in the register based on previous relationships with INPEX and/or proximity to offshore oil spills.

Categories in the register include Government departments, agencies and authorities, local government authorities, Aboriginal and Torres Strait Islander community members, commercial fishing licence holders, businesses, environmental organisations (non-government) and other offshore (oil and gas or greenhouse gas) titleholders. Various data sources were used to identify the persons, organisation, departments, agencies or authorities within the Enquiry Boundary, these are presented in Table 3-1 for each category.

The register includes contact details and a general description for each entity. Where possible, the register includes alternative contact details/mechanisms.

The register is maintained by INPEX Corporate Affairs function with input from environmental specialists and other technical subject matter experts (SMEs). The register is reviewed on a regular basis to ensure it remains current and accurate, as outlined in Section 5.2.1. The review considers name changes (e.g. government agencies, government ministers, changes in key personnel), new persons and organisations that have been identified as potentially relevant since the previous review of the register.

The content of the register is used to generate a new draft register of potentially relevant persons that may require consultation as part of the development of a specific EP (**EP Draft Register**). The EP Draft Register is reviewed and populated during relevant person identification workshops that are held for all new EPs, as detailed in Section 3.1.2.




**Figure 3-2: Enquiry Boundary**

**Table 3-1: Data sources used to identify persons, organisations, departments, agencies and/or authorities**

| Category | Data sources | Logic applied in relation to the enquiry boundary list |
|---|---|---|
| Government departments, agencies and authorities | The following data sources were used to determine potentially relevant Government departments, agencies and authorities :<br>• http://www.directory.gov.au/departments-and-agencies<br>• https://www.wa.gov.au/agency<br>• https://nt.gov.au/about-government/government-agencies<br>• Relevant Decision Makers (nopta.gov.au) | Agencies and authorities, with jurisdiction and/or authority over/within the Enquiry Boundary are included, in addition to departments of the responsible State/Northern Territory ministers that are a member of the Offshore Petroleum Joint Authority for an offshore area adjacent to where a planned activity may occur. |
| Local Government Authorities (LGAs) | The following data sources were used to determine potentially relevant LGAs:<br>• Find your council \| NT.GOV.AU<br>• WA Online Local Government Directory \| WALGA \| WALGA<br>• https://walga.asn.au/who-we-are/corporate-governance/zones | LGAs with coastal boundaries that overlap or are adjacent to the Enquiry Boundary are included. |
| Aboriginal and Torres Strait Islander peoples, Traditional Owners and Site Custodians, Native Title Representative Bodies, Prescribed Body Corporates and other relevant Indigenous community organisations | The following data sources were used to determine potentially relevant Indigenous peoples and community organisations:<br>• Relevant data previously obtained by INPEX.<br>• Input from internal and external technical SMEs.<br>• National Native Title Tribunal Register of Native Title Claims and Determinations http://www.nntt.gov.au/Pages/Home-Page.aspx.<br>• Prescribed Body Corporate website https://www.nativetitle.org.au.<br>• Aboriginal and Torres Strait Islander peoples ranger groups https://www.countryneedspeople.org.au/what_are_indigenous_rangers<br>• Values of marine parks \| Australian Marine Parks (parksaustralia.gov.au)<br>• Joint management in the Kimberley - Google My Maps<br>• Joint management in the south-west Kimberley and Pilbara - Google My Maps | Aboriginal and Torres Strait Islander peoples that have Native Title claims or determinations, and / or coastal boundaries including possible sea country that overlap or adjacent to the Enquiry Boundary are included. This may also include Aboriginal and Torres Strait Islander Ranger Groups within the Enquiry Boundary. |

| Category | Data sources | Logic applied in relation to the enquiry boundary list |
|---|---|---|
| Commercial fishing (licence holders, fisheries, associations/councils) and recreational fishing associations | The following data sources were used to determine potentially relevant commercial and recreational fishers and associated organisations:<br>• Use of Fishery GIS layers to determine overlapping Commonwealth, State and Territory fishery management areas.<br>• Request to Department of Primary Industries and Regional Development – Fisheries Branch for licence holder details.<br>• Request to Department of Industry, Tourism and Trade - Fisheries Division for licence holder details.<br>• Request to the Australian Fishery Management Authority (AFMA) for licence holder details.<br>• AFMA list of fishing industry associations (Petroleum industry consultation with the commercial fishing industry \| Australian Fisheries Management Authority (afma.gov.au).<br>• Fisheries Research Development Commission list of commercial fisheries related organisations, industry councils, recreational fishing organisations (Useful links \| FRDC). | Commercial fishery management areas and recreational fishing association boundaries that overlap the Enquiry Boundary are included. |
| Businesses | The following data sources were used to determine potentially relevant Chambers of Commerce's, fishing charters and tourism operators:<br>• Operator data previously obtained by INPEX<br>• Google Maps. | Businesses within the Enquiry Boundary that rely on the ocean for business and tourism operators along coast that might be affected due to an environmental incident (e.g. coastal accommodation and tour providers etc.) are included. |
| Oil and gas or greenhouse gas titleholders | The following data sources were used to determine potentially relevant oil and gas or greenhouse gas titleholders:<br>• NOPTA title search and use of interactive map (https://public.neats.nopta.gov.au/Map).<br>• Australian Securities & Investments Commission (ASIC Home \| ASIC) | Active titleholders that overlap the Enquiry Boundary are included. |

| Category | Data sources | Logic applied in relation to the enquiry boundary list |
|---|---|---|
| Environmental organisations (non-government) | The following data source was used to determine potentially relevant environmental organisations:<br>• Google search for those with an active interest in areas of WA and the NT. | Those with advocacy functions in relation to WA and NT marine and coastal environments. |

### EP activity description

The environment team member responsible for the development of the EP will engage with the relevant INPEX department (e.g., drilling, subsurface, operations, etc.) to define the activity description applicable to the proposed activity. The activity description should include as much quantified information as practicable, including the scope and extent of the activity, timing, duration, and location. This should provide an understanding of the nature and scale of the activity with respect to emissions, discharges and wastes and how they may interact with the receiving environment.

The activity description is used to help provide context to the workshop attendees. It provides information on types of activities, duration and timing/schedule to help ascertain how the activity may potentially impact on those with functions, interest or activities in the EMBA.

### EP activity specific oil spill modelling

Oil spill modelling will be obtained for the proposed activity. This defines the outer extent of the EMBA which represents the environment that may be affected in an emergency condition oil spill scenario e.g. the furthest a spill could go based on stochastic modelling. The method of identifying the outer boundary of the EMBA is highly conservative as it is based on hundreds of modelled scenarios that are overlain to create the EMBA.

The EMBA boundary is used by workshop attendees to identify if persons, organisation, department, agencies or authorities have functions, interest or activities that overlap or are adjacent to the EMBA and therefore may be identified as relevant persons.

The oil spill thresholds used to define an EMBA are presented in Table 3-2. Note, whilst shoreline contact is considered it is not the determining basis for identifying relevant persons. The oil spill model algorithms use many conservative assumptions including dispersion rates, entrainment rates and biological degradation rates, which collectively result in an over-prediction of entrained oil concentrations over large distances. The consequence of these conservative assumptions results in the over-estimation of the volumes of oil being calculated by the model, to be arriving at a shoreline.

In addition, the model algorithms include multiple conservative assumptions related to the processes of oil stranding on a shoreline, including over calculation of oil-patches arriving on a shoreline, simplification of shoreline contours, absence of wetting/drying effects and realistic intertidal zone widths, which may be large in areas with higher tidal ranges and/or gradual slopes. The outcome of this combination of factors is very likely to be resulting in the model over-reporting locations of shoreline contact. Further details on the limitations of oil spill modelling are provided in Appendix A.

**Table 3-2: Oil spill thresholds applicable to the EMBA**

| Oil state | Threshold | Description |
|---|---|---|
| Surface oil | 1 g/m$^2$ | Equivalent to a rainbow sheen on the water surface, no ecological impacts. |
| Entrained oil | 100 ppb | Approximates potential toxic effects, sublethal effects to sensitive species. |
| Dissolved oil | 50 ppb | Approximates potential toxic effects, sublethal effects to sensitive species. |

| Oil state | Threshold | Description |
|---|---|---|
| Shoreline contact | 10 g/m$^2$ | Equivalent to 2 teaspoons of oil per square metre, no ecological impacts. |

Where no environmental or ecological impacts are predicted within a geographical area, there can be no corresponding impacts on a person's functions, interests or activities. Further, there may be instances where potential environmental or ecological impacts are predicted to occur within an area; however, despite a geographical overlap this will not necessarily equate to an impact on a person's functions, interests or activities.

Where a person's functions, interests or activities within the EMBA are not affected, or are only affected in an immaterial or negligible way, they will not be identified as a relevant person.

### Description of the existing environment

An "Existing Environment" reference document has been developed and is maintained by INPEX's Environment team that describes the environmental values within an area off northern Australia. The area has been defined by overlaid EMBAs associated with INPEX offshore activities. This reference document is used to form the basis of the existing environment section for all new INPEX EPs.

The existing environment document is compiled using published scientific literature and publicly available scientific data, ensuring data is relevant and current. Information sources include, but are not limited, to the following:

- EPBC Act Protected Matters Search Tool (Department of Climate Change, Energy, the Environment and Water (DCCEEW))
- Relevant Marine Park Management Plans published by State, Territory and/or Commonwealth Departments
- Conservation Management Plans (recovery plans and advice) published by DCCEEW
- Searches of Commonwealth, State and Territory heritage registers (may include world heritage, national heritage, underwater cultural heritage databases) administered by the relevant Commonwealth, State and/or Territory Departments
- Searches of sacred sites registers administered by the relevant Commonwealth, State and/or Territory Departments
- Searches of Aboriginal land and Native Title registers administered by the relevant Commonwealth, State and/or Territory Departments including the National Native Title Tribunal Register of Claims and Determination GIS database.
- Published ecological survey monitoring data or scientific studies (including water and sediment quality)
- Craft Tracking System (Australian Maritime Safety Authority vessel tracking data).

The existing environment document contains GIS mapping that may be suitable for use in the identification of relevant persons workshop. Existing maps will be reviewed in relation to the proposed activity and associated oil spill modelling and updated as required.

The existing environment document is used by workshop attendees to identify potential environmental values applicable to those that have functions, interest or activities within the EMBA and therefore may be relevant persons.

**Fishing effort data**

Fishing effort data can be used in the workshop to assist with the identification of relevant commercial fisheries that may be active within the EMBA. Fisheries can be distinguished between those that:

- may overlap the area of the planned activity; and
- overlap the EMBA but not the area of the planned activity.

Historic fishing effort data gathered during the development and consultation for previous INPEX EPs may also be utilised when preparing for the relevant persons identification workshop.

Databases, fishery reports or publications developed/maintained by relevant Commonwealth/State/Territory departments, may be able to provide fishing effort, catch and seasonality data. Where data is not up to date, a request for current data may be required.

### 3.1.2 Pre-population of draft register of relevant persons for the EP

In preparation for the relevant persons identification workshop, a copy of the latest version of the INPEX register of all persons, organisations, departments, agencies or authorities is to be requested from Corporate Affairs by the environmental advisor responsible for the preparation of the EP.

The following steps will be undertaken when preparing a new draft register prior to the relevant person identification workshop:

1. Create draft Relevant Person Identification Workshop Register (Draft EP Register): Pre-populate relevant person identification workshop with latest INPEX register of persons, organisations, departments, agencies or authorities.
2. Review the functions, interests and activities of each person, organisation, department, agency or authority in context of the proposed activity and environment that may be affected (i.e. the EMBA) by the activity.
3. Pre-populate the draft register with any environmental values (natural, heritage, cultural or socio-economic) as they apply to a person, organisation, department, agency or authority. Note, not all will necessarily have a value that applies.
4. Identify persons, organisations, departments, agencies or authorities, whose functions, interests or activities are not relevant to EMBA or the proposed activity and include a reason for omission and lack of relevancy in the register. For example a fishery management area that does not overlap the EMBA would be omitted. Similarly, a government agency/authority/department with no function in relation to the activity or location of the activity would also be omitted.

## 3.2 Step 2 – Undertake relevant persons identification workshop

The workshop will utilise the inputs described in Section 3.1.1, including GIS mapping.

Workshop attendees will include relevant SMEs from across INPEX including Corporate Affairs, Environment, and Aboriginal Affairs.

A workshop facilitator will record attendance at the workshop and retain all records for future audit/inspection.

The following questions and prompts are provided to help guide the discussion during the workshop:

- Does the function, interest or activities of the person, organisation, department, agency or authority overlap or are adjacent to the EMBA?
- Are there any values within the EMBA that the person, organisation, department, agency or authority may be interested in?
- Does the relevant person have any specific information needs?

The output of the workshop is a completed register of all relevant persons that need to be consulted about the proposed activity that includes a summary of the specific information needs.

### 3.2.1 Identify relevant persons

The process of identifying relevant persons for a proposed activity is presented in Figure 3-3.

The initial screening question to establish if the person, organisation, department, agency or authority is a relevant person in relation to an EP, is whether they have functions, interest or activities that overlap or are adjacent to the EMBA. When considering this question during the workshop, various sources of information as described in Section 3.1.1, will be used.

Where there is overlap or are adjacent to the EMBA, the person, organisation, department, agency or authority is identified as a relevant person. Once identified, each relevant person shall be classified into one of the categories as defined by subregulation 25(1) of the OPGGS (E) Regulations and presented in Table 3-4.

Where there is no affect (or the affect is immaterial/negligible) on a relevant person's functions, interest or activities, the person, organisation, department, agency or authority is not considered a relevant person for the EP[10]. INPEX maintains information on proposed activities on their publicly accessible website and where the EP relates to an exploration activity, the person, organisation, department, agency or authority has an opportunity to provide feedback during the public comment period in accordance with Regulation 30 of the OPGGS (E) Regulations.

If INPEX considers that the person, organisation, department, agency or authority, although not a relevant person, may be able to provide input into the development of the EP they can be categorised as a relevant person under subregulation 25(1) (e) *any other person or organisation that the titleholder considers relevant*.

In addition, in circumstances where there is uncertainty as to whether the functions, interests or activities of a person, organisation, department, agency or authority may be affected by the activity (e.g. those adjacent to the EMBA), then these persons are categorised as a relevant person under subregulation 25(1) (e) *any other person or organisation that the titleholder considers relevant.*

Table 3-3 presents factors that INPEX considers when assessing relevance of a person, organisation, department, agency or authority.

It is acknowledged that through either the process of consulting with a relevant person or via the extension of enquiry process (Section 3.5), additional relevant persons may be brought to INPEX's attention. In these scenarios, newly identified relevant persons will be consulted in the manner described in this methodology. Further, the new relevant persons will be added to the universal list in preparation for future EPs.

Relevant persons identified are then consulted in the most appropriate manner. Those that are identified as not relevant but have expressed an interest in INPEX activities can be directed to INPEX's website or where applicable, informed of the public comment process for exploration EPs.

During the consultation process, new information may become available to inform the extent of effect of an activity on a relevant person's functions, interests or activities, which may result in an identified relevant person being removed from the relevant persons list. For example, a relevant person identified by INPEX, may advise that they do not believe they are relevant, or new information may become available which further informs/clarifies a relevant person's actual functions, interests or activities which are not to the extent as previously perceived by INPEX during the initial selection process.

**Table 3-3: Factors considered when assessing relevance of a person, organisation, department, agency or authority**

| Person, organisation, department, agency or authority | Factors considered |
|---|---|
| Government departments, agencies and authorities | Government agencies and authorities defined under subregulation 25(1) (a), are deemed relevant where their functions or activities overlap the EMBA.<br>Relevant persons defined under subregulation 25(1) (b) and (c), are limited to departments of responsible State/Northern Territory ministers that are a member of the Offshore Petroleum Joint Authority for the offshore area adjacent to where the planned activity would occur. |
| Local Government Authorities (LGAs) | Only LGAs with coastal boundaries and where shoreline contact is predicted are deemed relevant.<br>Consideration is given to whether an LGA is located in an area of INPEX's long-term areas of operational presence. |
| Aboriginal and Torres Strait Islander peoples, Traditional Owners and Site Custodians, Native Title Representative Bodies, Prescribed Body Corporates and other relevant Indigenous community organisations | PBCs/Native Title Representative Bodies/Organisations representing Aboriginal people who are not associated with coastal areas are excluded.<br>PBCs/Native Title Representative Bodies/Organisations representing Aboriginal people who are associated with coastal areas adjacent to the EMBA, are considered relevant persons (category 25(1) (e)) conservatively, on the basis of uncertainty as to whether their functions, interests or activities would be affected by activities.<br>Consideration is given to whether Aboriginal and Torres Strait Islander peoples, Traditional Owners and Site Custodians, Native Title Representative Bodies, Prescribed Body Corporates or other organisation is located in an area of INPEX's long-term areas of operational presence. |
| Commercial fishing (licence holders, fisheries, associations/councils) and recreational fishing associations | Only those commercial fisheries with fishery management areas that overlap the EMBA are considered relevant persons.<br>Only recreational fishing associations with activities that overlap the EMBA are considered relevant persons. |

| Person, organisation, department, agency or authority | Factors considered |
|---|---|
| Businesses | Only businesses reliant on marine or coastal environments were considered relevant if they overlapped areas of shoreline contact or EMBA.<br>Where a EMBA is adjacent to community with marine based businesses, business websites were reviewed to determine if they had any activities that could overlap the EMBA (e.g. fishing charter day trips).<br>Consideration is given to whether a business is located in an area of INPEX's long-term areas of operational presence. |
| Oil and gas or greenhouse gas titleholders | Only those titleholders that have activities or interests that overlap or are adjacent to (within a 100km radius of) the petroleum/greenhouse title activities would occur in. |
| Environmental organisations (non-government) | ENGOs are limited to those with invested local interests within the area of possible consequence of the activity (i.e. state, territory and local area organisations), and other organisations that have self-identified as being relevant due to a specific function, interest or activity that directly relates to the possible consequences of the activity.<br>ENGOs acting as a legal service are not considered relevant; however, persons they represent may be, where their functions, interests or activities directly relate to the possible consequences of the activity. |

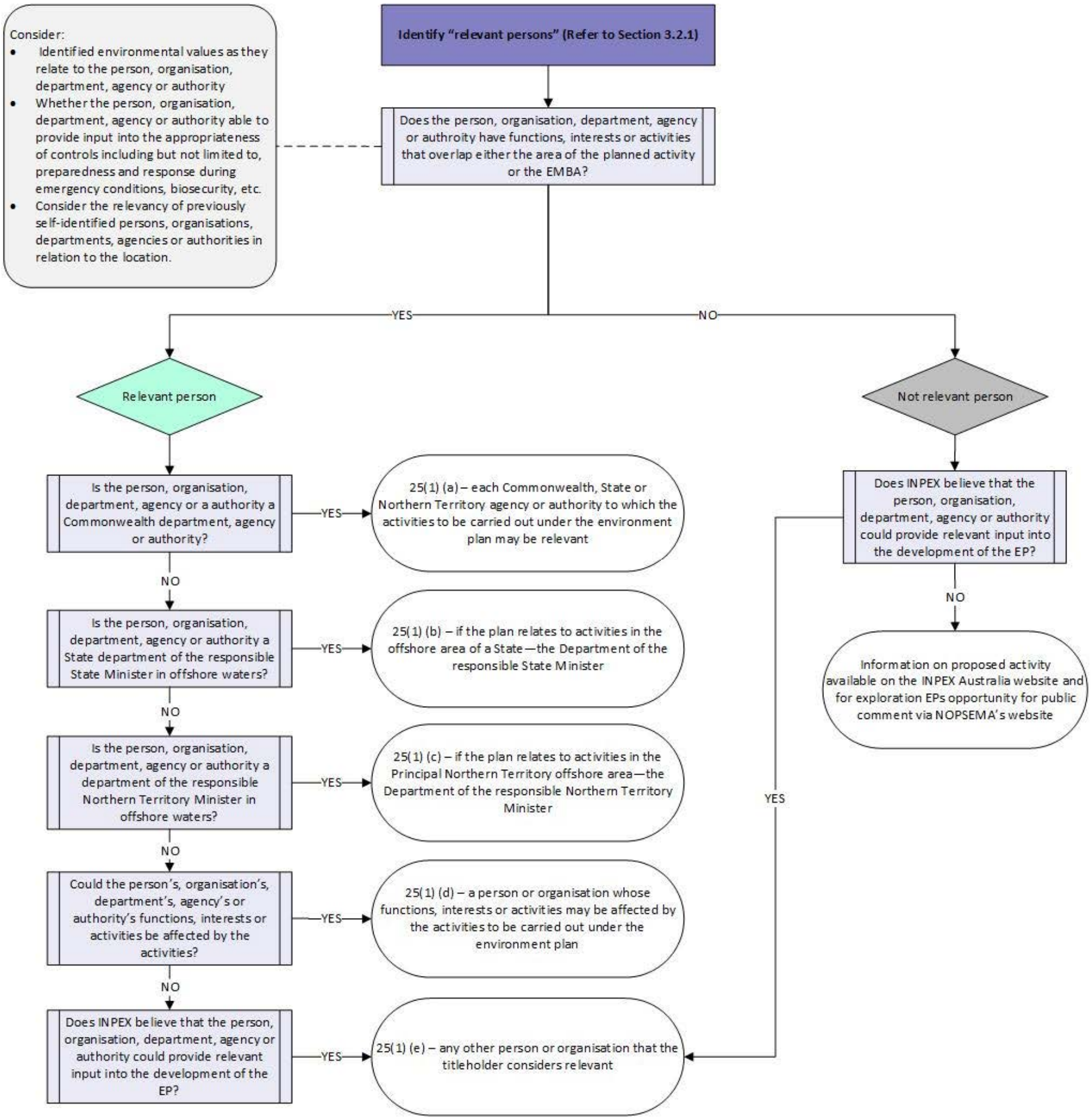


**Figure 3-3: Determination of relevant persons**

**Table 3-4: Definition of relevant persons**

| Category | Definition | Examples of relevant persons | General consultation approach |
|---|---|---|---|
| 25(1) (a) | Each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the environment plan may be relevant | This category includes, but is not limited to:<br>• Commonwealth agencies or authorities such as DCCEEW-Underwater cultural heritage branch, Department of Agriculture, Fisheries and Forestry-Biosecurity branch, the Australian Maritime Safety Authority, the Department of Defence, the Director of National Parks, etc.<br>• State or Territory agencies or authorities such as the NT Department of Lands, Planning and Environment, NT Department of Logistics and Infrastructure, WA Department of Transport, WA Department of Primary Industries and Regional Development, etc. | Commonwealth, State and Northern Territory agencies or authorities maybe be consulted at a high level using a basic factsheet or may receive detailed information specific to their functions, interests or activities. |
| 25(1) (b) | If the plan relates to activities in the offshore area of a State—the Department of the responsible State Minister | This category refers to the responsible State Minister who is a member of the Offshore Petroleum Joint Authority. In WA this is the Department of Energy, Mines, Industry Regulation and Safety. | Departments of relevant responsible ministers may receive a basic factsheet or may receive detailed information specific to their functions, interests or activities. |
| 25(1) (c) | If the plan relates to activities in the Principal Northern Territory offshore area—the Department of the responsible Northern Territory Minister | This category refers to the responsible Northern Territory Minister who is a member of the Offshore Petroleum Joint Authority for the NT; the Department of Mining and Energy. | Departments of relevant responsible ministers may receive a basic factsheet or may receive detailed information specific to their functions, interests or activities. |

| Category | Definition | Examples of relevant persons | General consultation approach |
|---|---|---|---|
| 25(1) (d) | A person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the environment plan. | This category includes relevant persons such as Aboriginal land councils/body corporate representatives, industry (e.g. commercial fishing, tourism) representative bodies, other industries (e.g. fisheries, petroleum) that overlap with the EMBA, etc. | Different consultation approaches may be required for certain relevant persons in this category (refer to Section 3.3.1). This may range from high level basic factsheets, to the provision of detailed information on the activity location and timing. Meetings (e.g. community, town hall or in-person) may be required and cultural considerations may need to be taken into account. Note that initial consultation, as a first line of enquiry may be sought with Aboriginal land councils/body corporate or industry representatives which may then facilitate further identification and engagement with other relevant persons. |
| 25(1) (e) | Any other person or organisation that the titleholder considers relevant. | Due to the uncertainty of the extent of sea country, it also includes Aboriginal land councils/body corporate representatives that do not overlap the EMBA, but where the EMBA is adjacent to the coastline of these relevant persons. | Other persons the titleholder considers relevant maybe be consulted at a high-level using a basic factsheet or may receive detailed information, including timing of activities, specific to their functions, interests or activities. |

### 3.2.2 Identify consultation requirements specific to each relevant person

Once assessed as relevant, during the workshop, any specific requirements for consultation with relevant persons should be established. Government departments, agencies and authorities may have guidelines applicable to the offshore industry on how they wish to be consulted and what information they require. For example, this may require the completion of a proforma or specific GIS mapping to highlight the location of the proposed activity.

During the workshop, the potential for a relevant person to provide INPEX with specific information that can be used to support the development of the EP should also be considered. This may include scientific or other information to support the existing environment section. In addition, the appropriate method of consultation with Aboriginal and Torres Strait Islander relevant persons will be discussed and agreed. This will ensure that consultation with Aboriginal and Torres Strait Islander relevant persons, is effective and undertaken in a culturally appropriate manner and in accordance with the INPEX Aboriginal & Torres Strait Islander Engagement Standard (0000-A0-STD-60006).

INPEX utilises a range of tools to consult with relevant persons in the most appropriate manner considering best practice standards and codes of practice. For a proposed activity, identified relevant persons may be consulted using one or more of the following methods:

- high level factsheets/summaries/letters
- phone calls and emails
- meetings (community, town hall or in-person) and briefings with presentation slides, handouts
- focus groups with particular community groupings
- detailed descriptions of proposed controls
- GIS mapping highlighting values in relation to a relevant person's functions, interest, or activities
- provision of specific information as outlined in guidance material issued by certain relevant persons (refer to Section 3.3.1).

INPEX's strategy is to develop and maintain long-term relationships with stakeholders (including relevant persons) in areas where INPEX has an operational presence, both onshore and offshore, which may result in consultation and engagement at levels above and beyond that required for the purposes of compliance with the OPGGS (E) Regulations.

INPEX uses the categories and descriptors presented in Table 3-5 and Table 3-6 to ensure that potentially relevant persons receive appropriate consultation materials.

**Table 3-5: Consultation categories for relevant persons**

| Category | Description of category |
|---|---|
| Category 1 | Relevant persons who may be affected directly by planned activities.<br>Relevant persons who have published / known requirements on how they wish to be consulted with. |
| Category 2 | Relevant persons who may be affected directly by unplanned activities (within the EMBA).<br>Relevant persons who require information regarding unplanned activities (i.e. spills). |

| Category | Description of category |
|---|---|
| Category 3 | Other relevant persons who may be indirectly impacted by the activities or have interests.<br>Includes relevant persons who are not known to INPEX but may make themselves known through the extended enquiry (refer to Section 3.3). |

**Table 3-6: Consultation strategy level**

| Consultation strategy level | Description of strategy |
|---|---|
| Level A | Work with relevant person to ensure targeted and tailored information is provided to enable an effective consultation process.<br>This may include meetings or presentations, scheduled phone calls and specific information. As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches. |
| Level B | Specific information based on known information needs (e.g. published industry guidance notes or proformas outlining what information a relevant person wishes to receive).<br>May require ongoing, iterative consultation over an extended period of time. As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches. |
| Level C | Broader, higher level consultation.<br>This may include emailed factsheets or information, with access to EP summary website or similar. |
| Level D | Extended enquiry – advertisements in newspapers throughout Australia, social media/media information directing people to an EP summary website. |

### Unascertainable relevant persons

In some cases INPEX may identify a group of relevant persons that may be potentially affected; however, is unable to confirm individual contact details as these are not ascertainable[11], through normal mechanisms (e.g. associated government agencies, organisations or groups who hold these details or who can advise who these individuals are). As such consulting with such relevant persons is not capable of being discharged within a reasonable time due to the "*opacity as to the identity of those with whom consultations are to take place*"[11].

The opportunity exists for such persons to contact INPEX, via the publicly accessible INPEX Australia website.

[11] Appeal Decision, paragraph [136].

## 3.3 Step 3 – Prepare for relevant person consultation

Prior to preparing materials for consultation, the Corporate Affairs function will review the consultation methods proposed in workshop and finalise the consultation approach for each relevant person. Depending on the nature and scale of the activity and the complexity of consultation with relevant persons, a specific consultation strategy may be developed. Where meetings (either in-person or via other means) are required, the relevant person should be contacted to ascertain availability.

Where consultation for several EPs/proposed activities is required in a similar timeframe, an overall strategy to consultation will be considered to avoid relevant person 'fatigue'. Examples where this may be appropriate include:

- where multiple, but different, proposed activities are occurring in the same geographical area and permit area within a similar timeframe. For example, a seismic and drilling campaign are proposed in the same permit area within short succession of each other.
- where similar proposed activities are required in the same geographical location but different permit areas. For example, two separate exploration drilling campaigns are proposed in different permits, but within the same geographical location.

In accordance with subregulation 25(2) of the OPGGS (E) Regulations, when developing consultation materials, the following information will be provided:

- A summary of the activity description including location, timing and duration including distances from the Australian coastline and a map with coordinates listed.
- A high-level description of the environment that may be exposed in relation to values associated with the EMBA such as marine protected areas, protected species habitats, socio-economic and cultural features etc.
- A summary of potential impacts associated with the activity including a high-level description of emissions, discharges and wastes.
- A summary of management controls to be implemented.

### 3.3.1 Specific consultation approaches and information requirements for certain relevant persons

*Relevant persons who have indicated specific information needs*

Some relevant persons have developed guidance documents or have information on their websites, which outline specific information they require from a titleholder during EP consultation. Any specific guidance will be identified during the relevant persons identification workshop (refer to Section 3.2.2). When preparing consultation materials for such relevant persons any guidance should be reviewed to ensure all requested relevant information is provided.

*Other petroleum or greenhouse gas titleholders*

Given that other titleholders understand the offshore petroleum and greenhouse gas industry and the potential consequences of associated activities; INPEX will only notify titleholders who either overlap the planned activities or have permits within a 100 km radius of the location of the activity (the permit the activity is occurring in). Some titleholders may be notified directly by INPEX and others, where relevant, may be notified via established joint venture partner communication arrangements. Note, INPEX will not necessarily follow-up with other titleholders, unless there is the potential they could be affected directly by the proposed activity (i.e. by simultaneous operations or concurrent operations).

*Commercial fishers*

Fishers whose fishing management area overlaps the planned activity or EMBA, but where there is no actual fishing effort are provided less information (i.e. they would be sent the basic fact sheet). Whereas fishers that are active in the planned activity area or are active in close proximity to this area, would be provided with more detailed specific information about the proposed activity regarding timing and durations, etc. INPEX may also request additional information from them with regards to peak timing of fishing seasons and any potential closures so this can be reflected in the EP. They may also be sent information on INPEX's claims process.

In some instances, INPEX may opt to use a third-party provider such as the West Australian Fishing Industry Council that offers a paid for service to identify fisheries that overlap the activity and relay information to them.

*Aboriginal and Torres Strait Islander peoples*

INPEX's Aboriginal Affairs team will be engaged to provide guidance on culturally appropriate consultation approaches in accordance with the INPEX Aboriginal & Torres Strait Islander Engagement Policy (0000-A0-POL-60003) Aboriginal & Torres Strait Islander Engagement Standard (0000-A0-STD-60006). As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches.

INPEX will engage with Aboriginal and Torres Strait Islander relevant persons in a culturally appropriate manner ensuring that local traditions, customs and protocols are considered prior to scheduling engagements. Distances that Aboriginal and Torres Strait Islander peoples may need to travel to attend a meeting will also be taken into consideration.

Where possible, INPEX will engage land councils and registered prescribed body corporates recognised under the *Native Title Act* and other relevant State/Territory legislation (e.g. *Aboriginal Land Rights (Northern Territory) Act 1976*), to facilitate consultation with Aboriginal and Torres Strait Islander relevant persons. This initial consultation may be used as a first line of enquiry, the outcome of which may then facilitate further identification and engagement with other Aboriginal and Torres Strait Islander peoples that are relevant persons for the purposes of the EP.

INPEX may opt to use a third-party provider to identify Aboriginal and Torres Strait Islander relevant persons that overlap the activity and facilitate/support INPEX's consultation activities.

## 3.4 Step 4 – Consult with relevant persons

The process of consulting with identified relevant persons for a proposed activity is presented in Figure 3-4. The process details the recommended timeframes and provides a prompt on when, and if it is appropriate, to seek alternative methods of consultation if responses or acknowledgments are not received. Where responses are received, an assessment of relevant matters, claims or objections is undertaken so that a response can be provided and the matter considered to be addressed, enabling the consultation for development of the EP to be closed.

As described in Section 3.2.2, a number of methods of consultation may be used during consultation with relevant persons; noting that each relevant person may require a different level of information in order to make an assessment of the possible consequences of the activity on their functions, interest or activities. Emails, factsheets, letters, and meeting invites issued will include a request for acknowledgement of receipt of the materials. Relevant persons shall also be informed of the timeframes associated with the Consultation Period to ensure they are aware of when the EP Consultation Period will close and can provide feedback in a timely manner.

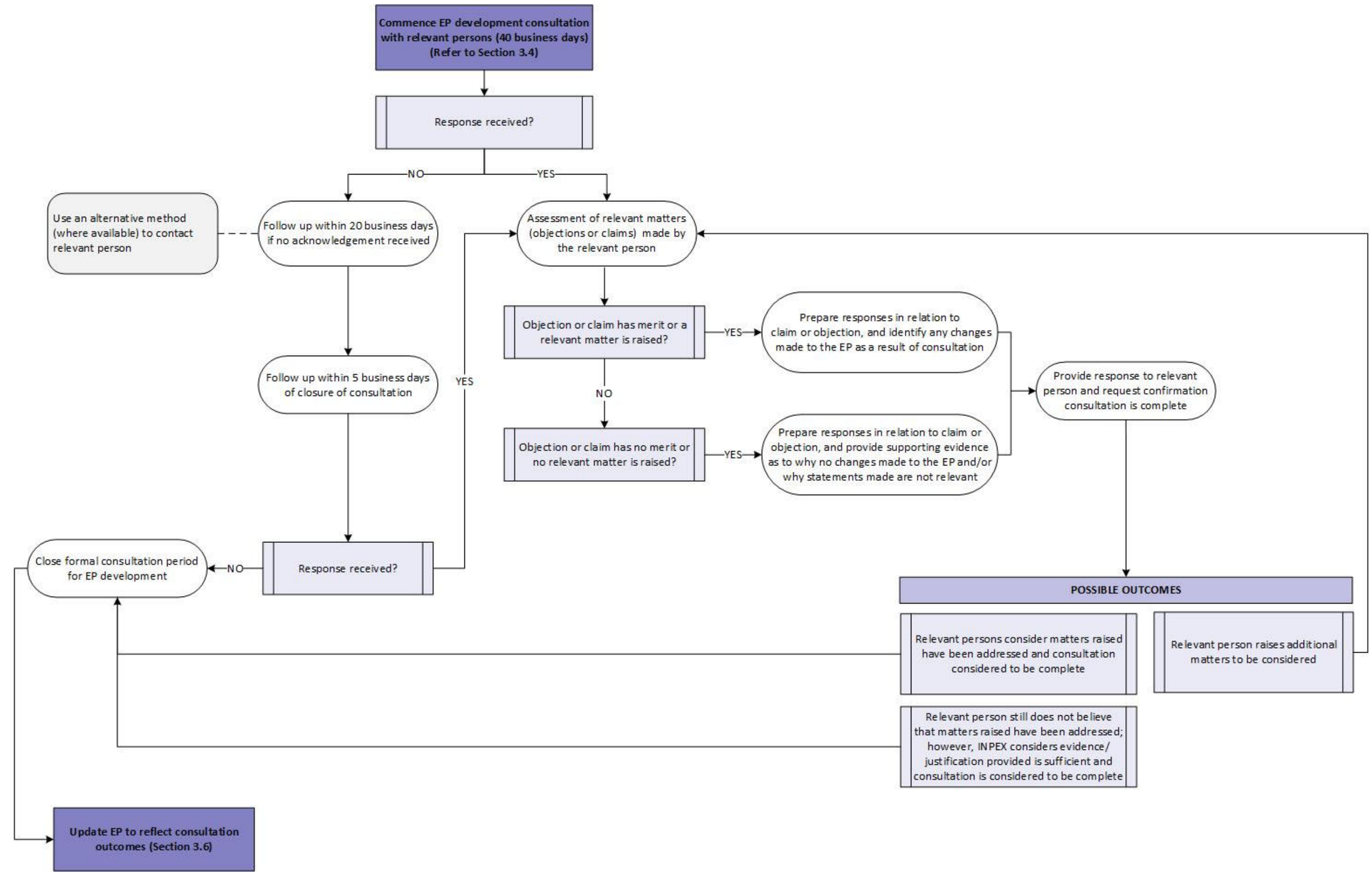


**Figure 3-4: Consultation with relevant persons**

### 3.4.1 Consultation period

#### Reasonable period

As defined in Table 2-2, for consultation to be effective, relevant persons need to be afforded a 'reasonable period' to identify the effect of the proposed activity.

Consultation with relevant persons during the development of an EP will generally run for 40 business days (eight weeks) (**Consultation Period)**. This duration has been identified by INPEX as reasonable time for relevant persons to make an informed assessment of the possible consequences of the activity on their functions, interests or activities, in accordance with the requirements of subregulation 25(3) of the OPGGS (E) Regulations and provide an initial response.

Where dialogue with relevant persons is ongoing after this period, INPEX will continue to consult with these persons until INPEX believes that it has provided sufficient evidence/justification to close the consultation.

#### Follow-up

If INPEX does not receive an acknowledgement of receipt or a response from relevant persons contacted, this will be followed up after 20 business days (4 weeks). If no response is received a further, and final follow-up will be undertaken 5 days prior to the closure of the Consultation Period. This will ensure that INPEX makes a reasonable attempt to contact all identified relevant persons during the preparation of an EP.

If, no acknowledgement or response is received from attempts to contact a relevant person, then INPEX may try an alternative method of contact, where this information is available. This may include phone calls, using alternative addresses or identifying an alternative contact person, or using relevant person industry body newsletters/websites (e.g. fishing bodies) to broadcast information to their members, extended enquiry process (Section 3.5), etc.

The INPEX register of persons, organisations, departments, agencies and authorities, should list alternative contact details for each entity where practicable.

INPEX, recognises that emailed information may be inappropriate for some relevant persons, and in some cases community, town hall or in-person meetings may be more effective.

As an additional mechanism for making a reasonable attempt to reach relevant persons, where alternative contact details are unknown, INPEX will advertise in local, regional and national newspapers ,as part of its extended enquiry (Section 3.5), during the Consultation Period. Further, the extended enquiry process will also act as a means for sharing information to identified relevant persons and providing an ongoing mechanism for feedback.

#### Close formal consultation period

The Consultation Period will close after 40 business days. Where dialogue with relevant persons is ongoing after this period, INPEX will continue to consult with these persons until INPEX believes that it has provided sufficient evidence/justification to close the consultation.

### 3.4.2 Assessment of merit for responses received

#### Objections or claims and relevant matters

INPEX's assessment of relevance and assessment of merit considers four broad categories:

1. **objection or claim has merit** – the objection or claim raised is relevant to both the planned activity and the relevant persons or organisations functions, activities or interests. The objection or claim has merit if there is a reasonable / scientific basis for related effects or impacts to occur and/or there is a reasonable basis for the objection or claim to be addressed in the EP.
2. **objection or claim does not have merit –** the objection or claim raised may be relevant to the planned activity or the relevant persons or organisations functions, activities or interests, however, the objection or claim raised has no credible or scientific basis.
3. **relevant matter** – the matter raised does not fit the criteria descriptions for objections or claims with/without merit. However, the matter raised is relevant to the planned activity, comprises a request to INPEX for further relevant information, or provides information to INPEX that is relevant to the activity or the EP.
4. **not a relevant matter** – correspondence does not relate to the planned activity or the relevant persons or organisations functions; interests or activities being affected by the activity. Non relevant matters may also be generic in nature with no specific issues raised (e.g. salutations, acknowledgements, meeting arrangements, etc.).

#### Responding to relevant persons

Upon receipt of comments made by relevant persons during the Consultation Period, INPEX will complete an assessment of merit as described in Section 3.4.2. For all comments received INPEX will draft and return responses where appropriate to the relevant persons who made the comment. INPEX's response will include the basis on which INPEX has assessed the matter to be relevant or not, and whether the objection or claim has merit.

The responses must be completed by relevant SMEs and include a reasonable/scientific justification. The responses may include a summary of changes made to the EP as a result of the objection or claim or the relevant matter raised. Information provided by relevant persons, that has been incorporated into the EP, will also be described in any responses.

Where INPEX has assessed matters to not be relevant or the objection or claim has no basis (scientific or other), then a response to explain and justify INPEX's position shall be provided to the relevant person.

INPEX shall request confirmation when providing responses to relevant persons that the matters raised have been addressed so that the Consultation Period can be considered closed.

Should new additional objections or claims, or matters be raised they will be assessed and appropriate responses made to the relevant persons as presented in Figure 3-4.

### 3.4.3 No responses received

Where no responses have been received from relevant persons after 40 business days (eight weeks), INPEX will close the EP development Consultation Period. The EP will be updated to reflect the outcomes of the Consultation Period as described in Section 3.6.

As noted in Section 2, relevant persons are not obligated to respond to a titleholder requests to participate in the consultation process. In cases where no response has been received from a relevant person, after relevant follow-ups, and where sufficient information and reasonable period of time has been afforded to the relevant person, INPEX will consider consultation to be closed for the purposes of the preparation of the EP.

Note, relevant persons can continue to contact INPEX via the EP summary website during both the NOPSEMA assessment and implementation phases of the EP. The EP summary website includes multiple options for relevant persons to contact INPEX (e.g. via a link on the website, email, or phone).

## 3.5 Step 5 – Extension of enquiry to identify additional relevant persons

Through the comprehensive process described in Section 3.1 and 3.2, relevant persons for each EP specific activity will be identified. However, INPEX recognises that there may be instances where other persons, organisations, departments, agencies or authorities may consider themselves relevant and wish to be included in the consultation process. As an additional proactive step, INPEX will undertake an advertising campaign and publish information on the proposed activity to help identify any other relevant persons that may not have been identified.

The advertising campaign will include publication of notices on INPEX's website and social media channels. Notices will also be published in State/Territory and regional newspapers (as appropriate) to capture those with limited access to the internet.

Where a person, organisation, department, agency or authorities identifies themselves to INPEX via these campaigns, INPEX will use this document as a basis to:

- assess if the person, organisation, department, agency or authority is a relevant person, for the purposes of the EP (Section 3.2.1)
- if relevant, identify whether they have raised a relevant matter or objection or claim and provide a response to them (Section 3.4.2).

Further, as previously described in Section 3.4, the extended enquiry process will also act as a means for sharing information to identified relevant persons and providing an ongoing mechanism for feedback.

## 3.6 Step 6 – Updates to the EP to incorporate consultation feedback

The outcome of the consultation may involve an update to the EP to incorporate any appropriate information obtained by INPEX during the Consultation Period. This may include additional information presented in the existing environment section, or impact and risk evaluations. Where applicable this could include the inclusion of new controls. This is considered as part of the assessment merit of responses/information received, as described in Section 3.4.2.

### 3.6.1 EP relevant persons register

For transparency, the list of relevant persons identified during the workshop, as described in Section 3.2, will be presented in the EP as an appendix. This will provide a demonstration on how INPEX has assessed all persons, organisations, departments, agencies and authorities to confirm relevancy for the activity described in the EP.

### 3.6.2 Relevant persons consultation summary report

During consultation (refer Section 3.4) INPEX will retain all incoming and outgoing communications associated with the EP. A summary of consultation with relevant persons will be provided to NOPSEMA as part of the EP submission.

The consultation log will summarise feedback from relevant persons and INPEX's response to the feedback. INPEX will also present an assessment of merit for all responses received so that any objections or claims, and relevant matters as defined in Section 3.4.2, are fully considered. Where relevant matters are raised, which require an update to the EP, INPEX will include a reference to the sections of the EP that have been amended as a result of the consultation feedback.

### 3.6.3 Sensitive matters report

Sensitive information, as defined in Regulation 5 of the OPGGS (E) Regulations, must be submitted to NOPSEMA in a separate report (referred to as the sensitive matters report) and will not form part of the publicly available EP.

The sensitive matters report will contain a record of all consultation activities undertaken with relevant persons for the specific EP. The report will include all outgoing and incoming emails and letters, fact sheets that have been issued, meeting slides used for presentations, handout materials, meeting minutes, completed telephone call proformas and relevant persons contributions.

The sensitive matters report will contain evidence of the use of alternative methods of communication (e.g. phone calls instead of emails), for example in the event that no response or acknowledgment of receipt of consultation materials is received.

A central consultation email inbox will be established and also a repository for saving all relevant files that can be used to collate the sensitive matters report.

# 4 ONGOING CONSULTATION REQUIREMENTS

INPEX recognises that consultation with relevant persons in relation to activities covered by an EP is an iterative process.

In order to facilitate ongoing consultation INPEX will maintain a dedicated webpage for active EPs. This will provide identified relevant persons and any new relevant persons an opportunity to provide feedback during the implementation of the EP.

Where a person, organisation, department, agency or authority is identified by INPEX post-EP development (refer Figure 4-1), INPEX will use this document as a basis to:

- assess if the person, organisation, department, agency or authority is a relevant person, for the purposes of the EP
- if relevant, identify whether they have raised a relevant matter or objection or claim and provide a response to them (making any updates to the EP where required)
- if not relevant, assess whether they should be directed to the INPEX Community Grievance Procedure (0000-A0-PRC-60026).

In addition to the above, relevant persons may have requested to be informed of certain events or stages of the activity during the implementation of the EP. These requirements are described in the implementation strategy of the EP as commitments and commonly include notifications of start and end dates for an activity, or notifications in the event of an oil spill.

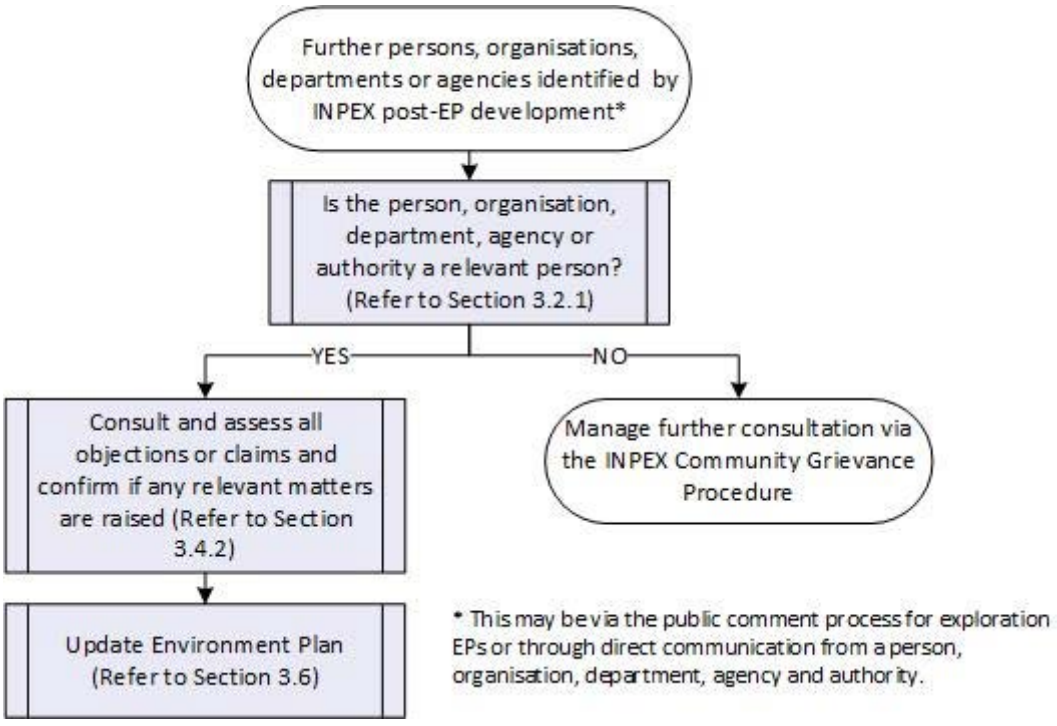


**Figure 4-1: Ongoing consultation post-EP development**

# 5 REVIEW OF RELEVANT PERSONS IDENTIFICATION PROCEDURE

## 5.1 Review of this document

INPEX's Environment team is responsible for initiating the review process for this document.

This document shall be reviewed at a minimum frequency as stated in the INPEX Business Management System Standard, (currently at least every three (3) years).

The following shall also trigger a review of this document:

- a relevant change to applicable Australian legislation or regulations
- feedback from audits and/or inspections (internal and external).

## 5.2 Review of inputs

### 5.2.1 Maintenance and update of INPEX register of persons, organisations, departments, agencies and authorities

INPEX will review its existing register of persons, organisations, departments, agencies and authorities on the following basis:

- Annual review of all entities in the register
- Ad-hoc review of register in instances including, but not limited to, the following:
  - change in structure of Government departments, agencies or authorities
  - change in person or organisation contact details
  - notifications received from any entity, which may impact the accuracy of the register
  - as requested by any relevant SME within INPEX.

INPEX will maintain an up-to-date and fit-for-purpose register of persons, organisations, departments, agencies and authorities, to a practicable and reasonable extent.

# APPENDIX A: TECHNICAL NOTE - RPS

# Response to Inpex questions on Oil Spill Modelling

The following technical guidance has been prepared by me, Scott Langtry, as a subject matter expert in oil spill modelling as applied to environmental management of oil field operations within the offshore waters of Australia. The details provided constitute my opinions based on specialised knowledge developed through my education, training, study, and experience, including working experience carrying out oil spill modelling for risk assessment and response to real spill incidents over 26 years.

This report has been compiled in response to a request by Inpex Australia to provide answers to the following questions:

## 1.0 Base Scope

| Question | Answer |
|---|---|
| a) Describe generally the purpose of oil spill modelling. | See addendum, Section 1.0. |
| b) Develop a report which describes the model conservatism, and how the conservatisms affect model outputs and results, as related to the thresholds presented in (c) and (d) below. | See addendum, Section 2.0 and details below. |
| c) 10 ppb entrained oil threshold: | |
| (i) Can you confirm that the 10 ppb entrained threshold, when evaluated through the model, is based on 'instantaneous exposure", when the 10 ppb threshold is actually derived from dissolved oil exposure over a time-weighted average? | Yes.<br>The model calculations are analysed for distributions of oil mass in different states (floating, entrained, dissolved, stranded, evaporated) at each model time step.<br>Typically, 15-minute time steps (or less) are used to maximise accuracy of the weathering and transport calculations.<br>Consequently, entrained oil >10 ppb (parts per billion) calculated for durations as short as 15 minutes during any replicate simulation would flag a location as 'affected'.<br>This flag would only need to occur during 1 of 300 simulations (=0.3% probability of occurrence) for that location to be enclosed by a polygon defining the |

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| | Environment that May Be Affected (EMBA) as defined in the NOPSEMA guideline (2019).<br><br>A 10 ppb entrained threshold is not based on evidence that 10 ppb of entrained oil droplets (alone) is harmful for either short term (e.g., 15 minutes or for any longer duration (e.g., 48-96 hrs).<br><br>The NOPSEMA guideline has applied the same threshold for both dissolved and entrained hydrocarbon concentrations as instantaneous exposures. The dissolved threshold concentration was calculated by toxicity studies applying long-term exposures (48-96 hrs of exposure) to the components of oil that can dissolve into water from oil mixtures and no correction for shorter exposure durations has been applied in the NOPSEMA guidelines (see below; part ii).<br><br>At the outer bounds of the EMBA calculated for a blowout simulation spanning 70 or more days, entrained oil would be present as widely dispersed and insoluble droplets with small diameter (10-50 µm). No insoluble compounds will remain to dissolve into the water to trigger the toxic effects demonstrated by toxicity testing on marine organisms.<br><br>Direct contact with droplets or consumption of droplets may have influence but risks of influence would depend upon encounter rates, which would depend on the concentration of droplets and the duration that they are present.<br><br>As an indication of the meaning of the 10 ppb concentration threshold that the NOPSEMA guidelines recommend for entrained oil, this would represent one insoluble droplet suspended in 40,000 L of water for a droplet of 25 µm diameter. It would be necessary to have one million droplets of this size to form a standard drop of oil from an oil dropper (0.05 ml).<br><br>Consequently, the potential for direct contact by marine biota with a droplet at this threshold concentration when triggered by durations as short as 15 minutes is highly conservative for any consequence through direct contact with droplets. |
| (ii) Can you describe how the use of instantaneous thresholds in the model may affect the model outputs/geographical areas exposed above threshold? | Instantaneous thresholds have a very large influence upon the geographic extent that is mapped as the EMBA, an influence larger than all other conservative measures applied.<br><br>Hydrocarbons impose a narcotic effect on organisms through absorption of soluble hydrocarbons from water into their tissue, and it takes longer than 15 minutes for |

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| | harmful soluble compounds to accumulate to levels that impose effect when the concentration of harmful, soluble, hydrocarbons in the water is higher than 10 ppb.<br><br>Species vary by sensitivity and different oils vary in terms of the toxic components present.<br><br>The lowest toxic threshold for soluble hydrocarbons (~10 ppb) has been derived as a generic trigger value for potential sublethal influence from a large body of laboratory toxicity testing where exposure has been maintained for 48-96 hrs to ensure saturation of body tissues. A value of ~10 ppb is the lowest value reported for the most sensitive marine species using the water solutions generated from the most toxic oil mixtures.<br><br>Exponentially higher concentrations are required to achieve equivalent effects over shorter durations. At least 100 times higher concentrations would remain conservative for durations of <1 hr.<br><br>Instantaneous thresholds treat all areas exposed for a time as short as 15 minutes as if they were exposed constantly for 2 to 4 days (following evidence from toxicity studies).<br><br>This is very conservative, and reliance on the extent of the EMBA alone obscures information that would be available to show those locations that may be more at risk, such as those locations where longer exposures may occur.<br><br>Further clarification can be provided. |
| (iii) Can you comment on how the probability maps/contours generated by the model using instantaneous oil exposure thresholds would be affected, compared to what would occur using time-weighted exposure thresholds? | Comparisons of model calculations for areas that might experience instantaneous exposures (e.g., >10 ppb of entrained oil for 15 minutes) versus time-weighted exposures (e.g., >10 ppb on average over 24, 48 or 96 hours) indicates that the difference depends on the scenario, oil type and component (floating, entrained, dissolved).<br><br>The outer extent of the EMBA may be reduced to as small as 20% of the surface area (i.e., the surface area enclosed by the EMBA may be reduced by up to 80%) when based on time-weighted exposures.<br><br>The shape of the EMBA will also typically change to highlight locations where environmental forcing is more likely to direct higher concentrations of spilled material repeatedly or to retain spilled material for longer during a long duration release (e.g., a blowout) – detail that should be relevant to risk assessment, planning and consultation purposes. |

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| | Allowing for as little as 2 subsequent time steps or for 2 records of exceedance at any time during any spill simulation, will result in marked reduction of the geographic area and alter the shape calculated for the EMBA, showing that large parts of the existing EMBA calculations can be due to single, 15-minute, records.<br><br>Further clarification can be provided. |
| c) 10 g/$m^2$ shoreline contact threshold: | |
| (i) Can you describe how the model calculates oil accumulation volumes on shorelines, in consideration of the modelled shoreline grid-cell/lineal shoreline lengths vs actual/realistic shoreline lengths and the effect this may have on volumes of oil ashore calculated by the model? | Accumulation of oil onto shorelines is calculated as the mass of oil per unit of shoreline area.<br><br>The coastline at mean sea level is subdivided into fixed, rectangular, grid cells of a defined area described by fixed length and width.<br><br>For example:<br>• 1 km long x 10 m wide (10,000 $m^2$ area per cell) for blowouts.<br>• 400 m long x 10 m wide (4,000 $m^2$ area per cell) for diesel spills.<br><br>Owing to the grid scale applied, the coastline shape must be simplified in areas of small-scale complexity.<br><br>Very complex and convoluted shorelines will be represented by a smaller area than reality, adding conservatism by lowering the area used when calculating the mass of oil per unit area.<br><br>The more complex the coastline the larger the degree of conservatism.<br><br>If the model calculates that any part of a patch of floating oil contacts any part of a coastline cell, the total mass of oil in that patch is transferred to the coastline cell as a conservative calculation for oil stranding.<br><br>Any subsequent oil patches that contact that coastline cell will add to the tally in that coastline cell over time.<br><br>The maximum possible load at any time will be capped at the carrying capacity set for shoreline cells (40 $m^3$ over 10,000 $m^2$ for low viscosity oils (condensates and diesel, etc.).<br><br>Any excess oil will be re-floated and may then accumulate on other coastline cells.<br><br>Evaporation and degradation are calculated for stranded oil to reduce the tally of oil in a coastline cell over time. |

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| | When all simulations are complete, the highest mass recorded at any time due to inputs versus losses is found for each coastline cell in each simulation.<br><br>The highest mass from any simulation is divided by the shoreline area of the cell to determine the peak concentration (grams of oil/area in $m^2$) as the most conservative calculation for the amount of oil that might be present, for clean-up and other considerations.<br><br>The peak concentration calculated for each shoreline cell among all replicate simulations is compared to thresholds of relevance.<br><br>Any shoreline cell with peak mass per area > minimum threshold (e.g., 10 $g/m^2$) during any replicate simulation will be included in the EMBA polygon.<br><br>Note that:<br><br>1. The peak concentration that is calculated will be higher if the surface area available for accumulation is under-represented in the model compared to reality.<br>2. The peak concentration that is calculated may be, and typically is, higher than the concentration that would be calculated at the end of the simulation, after further weathering is allowed for.<br>3. No differential is made between oil on the surface and oil that has entered the substrate.<br><br>Further clarification can be provided. |
| (ii) Can you describe if the model includes consideration of tidal movements or wetting and drying of intertidal areas, and how this may affect modelled oil concentration outputs, vs what might occur in reality? | The model does not account for wetting and drying of the intertidal zone.<br><br>Both the coastline position and water level are treated as fixed, and calculations assume a fixed average width of the shoreline interface (10 m wide) is always available for accumulation.<br><br>One outcome at a very local scale is that the model cannot differentiate between the happenstance of oil arriving when the shoreline extends further seaward (at lower tide, exposing a wider zone) or when it might have shrunk back to a narrower zone (at higher tide).<br><br>Although the intertidal width will vary over time, in reality, and oil might be spread over varying area, the area allowance is assumed fixed to an average of 10 m wide when calculating the mass accumulated per area.<br><br>In reality, concentrations of oil would likely vary with the tide in areas with very large tidal ranges and low slope, |

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| | and we have applied a fixed width as an assumed average.<br><br>One conservatism is that shorelines are assumed to be "sticky" – binding the oil to the shorelines with no re-floating due to subsequent tidal flooding.<br><br>This assumes oil accumulations would migrate up and down, occupying the same width of the shoreline as the tide varied.<br><br>The exception is if the carrying capacity of the shoreline is exceeded. For condensates and diesel this would only be allowed in the model if the thickness exceeded 4 mm, allowing for high accumulation capacity (e.g., 32 tons per shoreline cell for a 1 km long x 10 m wide shoreline if the density averaged 800 kg/$m^3$).<br><br>Noting that the model domain must cover areas of hundreds of thousands of $km^2$ for a blowout scenario, the fixed coastline assumptions represent necessary simplifications requiring a conservative approach.<br><br>Further clarification can be provided. |
| (iii) Can you confirm if the model continues to calculate oil weathering of stranded oil on a shoreline, specifically evaporation and melting point? | Yes.<br><br>As stated above (part i), oil weathering continues to apply to oil classed as stranded.<br><br>Loss of oil mass from coastline cells can occur through three processes:<br><br>1. Evaporation.<br>2. Degradation (representing microbial action and photo-oxidation).<br>3. Re-floating (if the carrying capacity of the coastline cell is exceeded).<br><br>The composition of the oil when freshly released at source is represented by the proportion of the whole oil contributed by groups of hydrocarbons, varying by volatility.<br><br>Composition change is calculated over time through evaporation and dissolution when the oil is floating, and the composition of oil patches is known by the model at the time of stranding.<br><br>Calculations for variable rates of evaporation, by sub-components, continues for stranded oil until only the non-evaporating residues (boiling point >380 °C) remain.<br><br>Calculations for evaporation rates are based on wind speed and average ambient temperature (30 °C for the Inpex studies), not elevated temperatures that might occur during daytime on heat-retaining surfaces. |

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| | Calculations for evaporation are, therefore, conservative if evaporating components remain in the stranded oil.<br><br>If only residues strand, no loss of oil through evaporation will be calculated on shorelines.<br><br>Degradation is applied to the total mass (regardless of composition) at a fixed rate.<br><br>A conservative rate of 3% of the mass per day is applied. This rate has been derived from published tests on more complex oil types than diesel or condensate and is considered conservative for condensates in lieu of further research to confirm rates of degradation of both oil types.<br><br>The model does not calculate for melting point to decide whether the oil is on the substrate (e.g., as solid wax) or in the substrate (e.g., as a melted wax). |
| (iv) Can you describe if the model takes into consideration the effect of exposed intertidal shoreline temperature (i.e., sand/rock temperature) and the effect this may have on stranded oil including effect on oil melting point and subsequent behaviour of the stranded oil? | Degradation rates do not account for substrate temperature.<br><br>This will be conservative in settings with high average substrate temperatures because degradation rates do increase at higher temperatures.<br><br>The same ambient temperature and prevailing wind speeds are used for both floating and stranded oil for calculating evaporation rates.<br><br>This will be conservative if the oil arrives with volatile content and the real temperatures are higher than assumed (30°C for the Inpex study locations) on average.<br><br>This would not be conservative if only residues arrive at coastline cells.<br><br>No calculations are made by the model for the physical state (solid/liquid) of hydrocarbons, or of uptake by sediments. Such considerations would need to be made outside of the model calculations.<br><br>Further clarification can be provided. |

1.1 Supplementary Scope

| | |
|---|---|
| (a) Can you confirm if there are any other factors which may affect conservatisms within the model? | See addendum. |
| (b) if Yes, can you please explain these additional factors. | See addendum. |

# Addendum

### 1.0 (a) Describe generally the purpose of oil spill modelling.

Modelling of oil fate and transport is useful, and has been applied to multiple purposes:

- Calculating risks of exposure to facilities, personnel, interests of other parties and environmental resources if a spill scenario were to eventuate.
- Guiding preparations for response, including identifying those resources that may need to be defended and what responses may be practical given factors such as the nature of the place at risk and the evolution through weathering of the oil type(s) that might be spilled.
- Forecasting the drift and behaviour of oil slicks ahead of real time to guide response to real spills.
- Forecasting the efficacy of alternative response measures.
- Guidance of environmental monitoring efforts to sense influence or impact.
- Post-spill assessment to inform and quantify social, environmental, or commercial impacts.

The first general application is the basis of EMBA calculations at present, but with the results simplified to calculating the area enclosing all locations where greater than low threshold concentrations might occur instantaneously at very low probabilities.

Other calculations from modelling are available and may be applied as contextual measures. These include:

- Mapping locations at higher probability of contact > instantaneous thresholds.
- Mapping locations at risk of longer durations of contact > instantaneous thresholds.
- Mapping locations at higher probability of contact at > time-integrated thresholds.
- Mapping locations based on potential concentrations (maximums and statistical distributions such as mean and higher percentiles).

### 1.0 (b) Develop a report which describes the model conservatism, and how the conservatisms affect model outputs and results, as related to the thresholds presented in (c) and (d) below.

#### General background

In general, oil spill models are a collection of interacting formulae and calculations that have been compiled to best represent current knowledge of processes that affect oil when released into the marine environment.

These processes are complex and interacting, requiring organised formulation to avoid errors and bias.

The formulations are numerical tools that allow comparative testing for different outcomes depending upon the scenario and prevailing conditions, subject to errors and uncertainties in both the inputs and the formulae.

Key processes have been studied to varying degrees over several decades through empirical studies, observations, and laboratory experiments. Some processes and their dependencies are well understood, while others have larger uncertainties and are the subject of ongoing testing and development.

The model formulations allow management of uncertainties through sensitivity allowances and/or conservative calculations or inputs (i.e., arrangements that are more likely to overstate and not understate risks).

**Potential sources of conservatism**

As a general principle, the ongoing calculation of concentrations over a large number of sequential time steps (e.g., 7,680 contiguous time-steps in an 80-day blowout simulation), with calculations at each time step dependent upon a previous calculation of state, can be expected to lead to magnification of any model errors at the outer distances and durations.

The current NOPSEMA guidance for calculating the EMBA has changed the focus of modelling assessment efforts from identifying locations that are most at risk (typically closer to the source and at risk of contact over shorter elapsed times) to map out only an outer bound of possibilities. One consequence of this is that the EMBA definition is now highly dependent on model capabilities, uncertainties, and compounding of errors in calculations for defining when concentrations will fall below very low concentrations.

The modelling software that I will detail to address model calculations and conservatism is the Spill Impact Model Application Package (SIMAP) that has been applied to most oil spill risk assessments in Australia, including those carried out for INPEX, but considerations will be common to other oil spill models of similar capability.

SIMAP is three-dimensional and is structured as a series of interacting algorithms that consider all known key processes that may affect the transport and weathering of hydrocarbon mixtures:

- Buoyancy (upward vertical transport from subsea).
- Initial spreading due to gravity and surface tension.
- Horizontal transport due to wind and current.
- Spreading (transport in the vertical and horizontal) due to dispersive forces.
- Wave-induced entrainment into the water column (as oil droplets).
- Dissolution (of soluble hydrocarbons) into the water column.
- Vertical dispersion of dissolved hydrocarbons (vertical spreading due to dispersive forces).
- Evaporation to the atmosphere.
- Emulsification (uptake of water into floating oil films).
- Change in viscosity due to change in composition and emulsification.
- Sedimentation (through binding with suspended sediment).
- Shoreline stranding – shoreline specific.
- Re-floating from shorelines (if capacity exceeded).
- Degradation (to component molecules).

The model uses oil composition and physical properties as input, and calculates changes in the mass distribution of the spilled oil over time among six states in response to the release scenario (e.g., onto the water, from subsea blowouts, etc.) and a sequence of environmental conditions:

1. Floating as a film on the water surface.

2. Entrained (at some depth) as oil droplets suspended in the water column.
3. Dissolved (at some depth) in the water column from films or suspended droplets.
4. Evaporated (to the atmosphere).
5. Stranded on a shoreline.
6. Degraded to simpler chemical components (hydrogen, carbons, etc.).

The NOPSEMA guidelines require that the worst-case (or worst plausible case) spill scenario is modelled for a given oilfield operation. For drilling operations into reservoirs where gas/condensates are targeted, that will involve a long-term (>70-day) release of gas and condensate at the highest rate possible through a fully open reservoir.

This scenario will generate the highest potential initial concentrations, both in reality and in the model, and is a conservative starting point.

Key considerations for conservatisms in the modelling are calculations for initial concentrations, the initial distribution of oil mass among the states, and processes that affect reductions in the concentrations of oil in each state over time.

Calculations for gas-condensate releases, more so than for heavier oil types, are very sensitive to model calculations of entrainment rates because these oil mixtures have both very low viscosity (hence will be susceptible to entrainment) and are mostly composed of volatile hydrocarbons (hence will be susceptible to evaporation, if exposed to the atmosphere). Entrainment and dissolution are competing fate pathway to floating and evaporation.

Over-prediction of entrainment rates will reduce the evaporation rate that is calculated (a general loss term for calculation of oil mass that would otherwise be on or in the water, or on shorelines) and leads to higher concentrations of entrained oil being calculated further from the source.

Entrainment is calculated for two processes by the model:

- As droplets released subsea (for blowouts).
- Generated by waves breaking up slicks into droplets and mixing the droplets into the surface layer, or keeping droplets that were entrained by the process above mixed into that layer.

Considerable care is required to calculate the initial droplet-size distributions accurately for subsea blowout scenarios involving highly volatile condensates (as opposed to less volatile mixtures) due to the large influence of droplet-size calculations upon entrainment rates versus evaporation rates. Calculations for oil droplet sizes have been an active area of model development and the modelling currently incorporates the most recent calculations from authoritative sources (SINTEF, TAMOC, etc.) but understatement of droplet sizes remains a risk for overstatement of entrainment rates because most research has involved heavier oil types.

Calculations for entrainment due to wave action in the SIMAP model were updated ~5 years ago to new formulations following a large volume of research conducted for the Deepwater Horizon blowout. The updated formulations increased the sensitivity to wave action, lowering thresholds for wind speed required to generate or maintain entrainment for low viscosity oils.

Sensitivity testing suggests that the allowances may be overly conservative for entrainment rates when applied to highly volatile condensates. In turn, calculations

would likely be conservative for dissolution rates and dissolved hydrocarbon concentrations for these products because faster dissolution is calculated for entrained oil than for slicks.

The model will calculate reduction of oil concentrations for surface and subsurface oil concentrations (entrained and dissolved) due to dispersion, representing the spreading and thinning of patches and plumes over time due to the mixing forces in the ocean.

Contemporary calculations for dispersion are typically set for moderate sea conditions for the scenario setting and not for more energetic conditions that can occur. On average, it is expected that this approach will result in maintenance of higher concentrations over longer distances than might occur in reality. The level of conservatism would vary depending on the frequency of occurrence of windy conditions that would trigger breaking sea waves.

A further level of conservatism for calculation of entrainment (increasing dissolution) versus floating (increasing evaporation) for surface releases of highly volatile condensates is the model time step. Highly volatile condensates with a low residue content will flash off rapidly, in reality, when spread thinly onto the water surface. However, calculation at 15-minute steps, which is a practical rate for long term blowout modelling, may underestimate the evaporation rate that is calculated for such condensates and overestimate the calculation for maintenance of entrained oil concentrations above low thresholds. Evaporation rates are calculated to occur at a slower rate for soluble hydrocarbons that are dissolved in surface-waters than at the surface, which could lead to overstatement of dissolved hydrocarbon concentrations exceeding low thresholds.

Some loss of mass is calculated for entrained oil over time due to dissolution of the soluble compounds. These compounds will typically represent a small proportion of the mass of an oil initially (typically 6-12% for condensates) so there would be only a relatively small influence on reduction of entrained oil concentrations.

It is also noteworthy that the model can calculate when entrained oil droplets have lost all soluble components. However, the NOPSEMA guidelines are applied equally to entrained oil that has remaining soluble components and those that have migrated long distances over long time periods and would have weathered to lose all soluble components. Because the EMBA line defines the widest boundaries, it will be the concentrations of weathered entrained oil that are tested against the NOPSEMA guideline threshold.

Degradation rates are applied to allow for reduction of oil concentrations over time. These rates are derived from literature accounts, and different rates are applied to floating, entrained, dissolved, and stranded oil. All rates are assumed to be conservative for condensates, in particular, because they tend to be composed of simpler hydrocarbons than those oils used to measure degradation rates, which could lead to concentrations being maintained for longer distances and durations than might occur, in reality, in warm tropical and sub-tropical settings. The rate currently applied to the insoluble components of entrained oil is a constant rate of ~8% of the mass per day.

Collectively for these uncertainties, calculations for entrainment mass concentrations and dissolved hydrocarbons will tend to be increasingly conservative over many sequential calculations.

The extremely low threshold set by the NOPSEMA guidelines for entrained oil is interacting with the conservative allowances for entrained concentrations for gas

condensates to dominate calculations for the EMBA for both blowout and surface release scenarios for this oil type. In other words, the extent of the entrained oil contour applied to the EMBA calculation is always larger than for any other component.

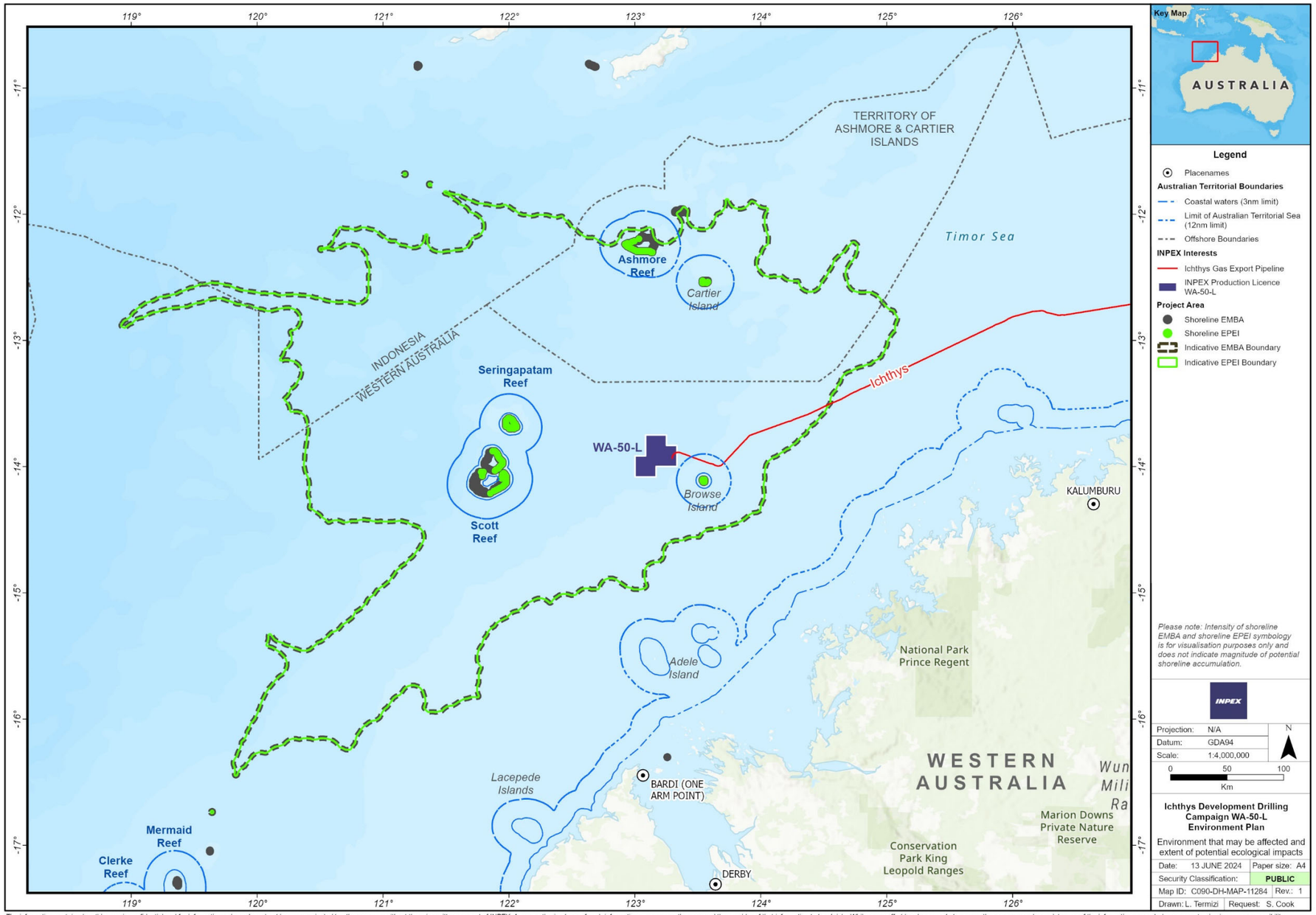
A further, potential, consequence of maintaining entrained concentrations for longer, in combination with the low threshold set by the NOPSEMA guidelines for oil contact with shorelines (as opposed to accumulation), is that model calculations for re-floating of oil from an entrained state become more critical. The model only needs to calculate that re-floating has led to a small patch of oil at the surface that is equal to or marginally higher than the low threshold (10 $g/m^2$ on the surface) from an overstated entrained oil concentration to flag a once-off calculation for shoreline exposure at a location that can be isolated by a long distance from the extent calculated for surface slicks to decrease below threshold concentrations when remaining at surface. One such occurrence among 300 simulations will flag a shoreline location for inclusion in the EMBA at a further distance than is indicated for the persistence of surface slicks above the low threshold. Although entrainment and re-floating are real processes that can occur, it is plausible that model errors are responsible for triggering the flagging of some stranding events judged by the low instantaneous threshold at the outer bounds of the EMBA.

**Scott Langtry**
Principal Scientist
RPS | MetOcean Science & Technology
Level 3, 500 Hay Street
Subiaco, WA 6008, Australia

**T** +61 8 9211 1111 **F** +61 8 9211 1122
**D** +61 8 9211 1149 **M** +61 418 827 754
**E** scott.langtry@rpsgroup.com

## WORKSHOP INPUTS

The following figure represents the geographical area potentially exposed to hydrocarbons for all spill scenarios (i.e. unplanned activities) associated with this EP. The basis for identifying relevant persons that fall within the Environment that May be Affected (EMBA) is in accordance with Appendix C.1 – INPEX Australia relevant persons determination and consultation methodology for offshore environment plans, *Section 3.1.1 workshop inputs*.



| Relevant person | Description |
|---|---|
| 25(1)(a) | each Commonwealth, State or Northern Territory agency or authority to which the activities to be carried out under the environment plan may be relevant |
| 25(1)(b) | if the plan relates to activities in the offshore area of a State—the Department of the responsible State Minister |
| 25(1)(c) | if the plan relates to activities in the Principal Northern Territory offshore area—the Department of the responsible Northern Territory |
| 25(1)(d) | a person or organisation whose functions, interests or activities may be affected by the activities to be carried out under the environment plan |
| 25(1)(e) | any other person or organisation that the titleholder considers relevant. |

**Summary of the categories of relevant persons and consultation strategy**

| Category | Description of category |
|---|---|
| Category 1 | Relevant persons who may be affected by planned activities.<br>Relevant persons who have published / known requirements on how they wish to be consulted with. |
| Category 2 | May be affected directly or indirectly by unplanned activities (within the EMBA). Those that require information regarding unplanned activities (i.e. spills). |
| Category 3 | Other relevant persons who may be indirectly impacted by the activities or have interests.<br>Includes relevant persons who are not known to INPEX but may make themselves known through the extended enquiry. |
| **Consultation strategy level** | |
| Level A | Work with relevant person to ensure targeted and tailored information is provided to enable an effective consultation process. This may include meetings or presentations, scheduled phone calls and specific information. As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches. |
| Level B | Specific information based on known information needs (e.g. published industry guidance notes or proformas outlining what information a relevant person wishes to receive).<br>May require ongoing, iterative consultation over an extended period of time. As appropriate, direct engagement with Aboriginal and Torres Strait Islander relevant persons may be undertaken to co-design consultation approaches. |
| Level C | Broader, higher-level consultation. This may include emailed factsheets or information, with access to EP summary website or similar. |
| Level D | Extended enquiry – advertisements in newspapers throughout Australia, social media/media information directing people to an EP summary website. |

**WORKSHOP OUTPUT**

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Government Agency | Commonwealth | Australian Maritime Safety Authority (AMSA) - Marine Environment Pollution Response | AMSA are an agency under Department of Infrastructure, Transport, Regional Development, Communications and the Arts. Responsible for protection of the marine environment (i.e. pollution response), and maritime aviation search and rescue. Control Agency for marine vessel spills. | Responsible for protection of the marine environment (i.e. pollution response), and maritime aviation search and rescue. | Not relevant to the values described in the EP. AMSA are the Control Agency for response to marine pollution in the Commonwealth Marine Area. | 25(1)(a) | Oil spill preparedness and response. | Category 2 | Level C |
| Government Agency | Commonwealth | Australian Maritime Safety Authority (AMSA) - Nautical Advice | AMSA are an agency under Department of Infrastructure, Transport, Regional Development, Communications and the Arts. Responsible for implementation/ application of marine orders, maritime safety information and provision of shipping data. | Implementation/ application of marine orders and provision of maritime safety information. | Other marine users interface. Prevention of maritime accidents. | 25(1)(a) | Publish radio and navigation warnings for activities in the Commonwealth marine area. AMSA provide specific information to be included in the EP (notifications). | Category 1 | Level C |
| Government Agency | Commonwealth | Australian Communications and Media Authority | ACMA are an agency under Department of Infrastructure, Transport, Regional Development, Communications and the Arts. Assist in identifying subsea cables within vicinity of proposed activities. | Play a role in the protection zones for submarine cables and provide information as to their location. | Other marine users (presence of communications infrastructure in the marine environment) | 25(1)(a) | ACMA can provide advice on any submarine cables that may be present in the area. | Category 1 | Level C |
| Government Agency | Commonwealth | Australian Fisheries Management Authority (AFMA) | AFMA are an agency under the Department of Agriculture, Fisheries and Forestry. Responsible for the management and sustainable use of Commonwealth fish resources on behalf of the Australian community. They manage and monitor commercial Commonwealth fishing to ensure Australian fish stocks and fishing industry are viable now and in the future. AFMA do not directly license or regulate the traditional fishers that may be operating in the MoU Box. | Management and sustainable use of Commonwealth fish resources, including the management of Commonwealth Fisheries. Interest also in commercial fisheries and fish resources. | Commonwealth fisheries and fish habitat. | 25(1)(a) | Commonwealth Fishery boundaries extend from 3nm to the Australian EEZ which overlaps the EMBA and WA-50-L. | Category 1 | Level C |
| Government Department | Commonwealth | Department of Climate Change, Energy, the Environment and Water - Underwater Cultural Heritage | Australian Government department that regulates activity in relation to protected underwater cultural heritage (UCH) within Australian waters including Commonwealth marine area. Covers shipwrecks, aircraft and artefacts that have been in commonwealth waters for over 75 years. The Department is a relevant agency where an offshore activity has the potential to directly or indirectly adversely impact protected underwater cultural heritage (see section 30(2) of the UCH Act), whether located or unlocated. | Regulates activities to provide protection for UCH over 75 years old, including shipwrecks, aircraft and other underwater cultural heritage. | UCH values associated with wrecked vessels and aircraft that have been in Commonwealth waters for longer than 75 years. | 25(1)(a) | Responsible for the protection of underwater cultural heritage in Commonwealth Waters. A number of historic wrecks are located within the EMBA, but not in the licence area. | Category 2 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Government Department | Commonwealth | Australian Hydrographic Office (AHO) | Forms is part of the Department of Defence and is responsible for providing Australia's national charting service under the terms of SOLAS and the Navigation Act 2012 (Cth) and issuing notice to mariners. Gazettal of infrastructure i.e. well heads. | Provision of national charting service under the terms of SOLAS and the *Navigation Act 2012* (Cth) and issuing notice to mariners. Gazettal of infrastructure i.e. well heads. | Other marine users interface. Physical presence and disruption to marine users, prevention of maritime accidents between users. | 25(1)(a) | Need to be kept informed of location of offshore activities so can publish notice to mariners. | Category 1 | Level C |
| Government Department | Commonwealth | Department of Agriculture, Fisheries and Forestry - biosecurity branch (Marine Pests, Vessels, aircraft and personnel) | Responsible for managing the threat of biosecurity risks to Australia including marine pests, terrestrial pests, etc). | Marine pest management in the Commonwealth marine area. | Values relating to the marine habitats (shoals, reefs, etc.) and potential impacts resulting from inappropriate management of biofouling and ballast water management. | 25(1)(a) | Marine biosecurity management in the Commonwealth Marine Area. | Category 1 | Level B |
| Government Department | Commonwealth | Department of Agriculture, Fisheries and Forestry (DAFF) - fisheries branch | Responsible for ensuring management processes are implemented, such as limits on catch or effort levels, and regulations of fishing methods to manage Australia's fisheries in a sustainable way. | Conservation of marine ecosystems and biodiversity that support commercially valuable fisheries resources. | Commercial Fisheries and fish resources. | 25(1)(a) | DAFF have advised they wish to be engaged where there is possible disruption to Commonwealth fisheries. | Category 1 | Level C |
| Government Agency | Commonwealth | Director of National Parks | DNP are an agency under DCCEEW. Responsible for the management of Australian Marine Parks (AMPs), provision of advice on management of activities located in AMPs or in proximity. | Provision of advice on management of activities located in AMPs or in proximity to these. | Australian Marine Parks and ecosystem and habitats found in the EMBA. | 25(1)(a) | Responsible for the management of Australian Marine Parks, provision of advice on management of activities located in AMPs or in proximity. | Category 2 | Level B |
| Government Department | Commonwealth | Department of Foreign Affairs and Trade (DFAT) - Foreign Affairs | DFAT has no direct role in the management of the Commonwealth marine area.<br>DFAT may be consulted under the following circumstances:<br>- where a proposed activity may cross into or impact on waters outside of Australia's maritime jurisdiction<br>- where a proposed activity poses any oil spill or other environmental risks that could result in impacts to other international jurisdictions<br>- where relevant persons that may be impacted by a proposed activity include foreign individuals or governments. | Required to be consulted where a proposed activity poses any oil spill or other environmental risks that could result in impacts to other international jurisdictions. | EMBA extends into Indonesian waters and overlaps (in part) the Perth Treaty area and MOU box. The licence area, WA-50-L is in the MOU box. | 25(1)(a) | Required to be consulted where a proposed activity poses any oil spill or other environmental risks that could result in impacts to other international jurisdictions. | Category 2 | Level C |
| Government Agency | Commonwealth | Department of Foreign Affairs and Trade (DFAT) - Foreign Affairs - Perth Treaty | Agency responsible for the joint management of the Perth Treaty (unratified), an agreement between the Government of the Republic of Indonesia and Government of Australia. | Required to be consulted where a proposed activity poses any oil spill or other environmental risks, or activity is proposed in the treaty area that could result in | EMBA extends into the area of the Perth Treaty. WA-50-L does not overlap | 25(1)(a) | Required to be consulted where a proposed activity poses any oil spill or other environmental risks, or activity is proposed in the treaty area that could result in impacts to other international jurisdictions. | Category 2 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | impacts to other international jurisdictions. | | | | | |
| Government Department | Western Australia | Department of Biodiversity Conservation and Attractions (DBCA) | Responsible for promoting biodiversity and conservation through sustainable management of WA's species, ecosystems, lands and the attractions in WA. Oil wildlife response lead agency in WA. | Manage WA parks (including marine parks) to protect and conserve. Lead agency for oil wildlife response for spills in WA. | Ecological values associated with WA habitats in the EMBA (e.g. Browse Island, WA marine parks, Biologically Important Areas, etc.). | 25(1)(a) | Manage WA habitats within the EMBA (e.g. Browse Island, WA marine parks, BIAs, etc.). | Category 2 | Level C |
| Government Department | Western Australia | Department of Transport (WA DoT) – Marine Safety | Control agency for marine oil pollution in WA waters. Responsible for oil spill preparedness and response. | Management of marine oil pollution in WA. As control agency they will take the lead in communications/ consultation in the event of an oil spill. | Not relevant to the values described in the EP. DoT are the Control Agency for response to marine pollution in WA. | 25(1)(a) | Informs the development of the BROPEP - preparedness and response as they relate to State Control Agency functions. | Category 2 | Level B |
| Government Department | Western Australia | Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) | Responsible to protect workers and consumers; build a sustainable and responsible resources industry; and support economic growth and energy transformation. Department of a responsible Minister who is a member of the Offshore Petrolelum Joint Authority. | Department of a responsible Minister who is a member of the Offshore Petrolelum Joint Authority, who are required to be notified of drilling and seismic activities occurring in offshore WA waters. | N/A | 25(1)(b) | Department of responsible WA Minister who sits on the Offshore Petroleum Joint Authority. Planned activities occur in offshore areas of WA. Notifications are required for drilling activities. | Category 1 | Level C |
| Government Department | Western Australia | Department of Primary Industries and Regional Development (DPIRD) - Fisheries Division - Commercial Fisheries & Biosecurity sections | Responsible for assessing and mitigating the potential impacts of planned industrial and resource projects on regional aquatic biodiversity. Responsible for the management of marine pest risks to Western Australia. Leads aquatic biosecurity surveillance program (state-wide). | Managing fisheries and aquatic ecosystems and managing fish stocks. Management of marine pest risks to WA. Activities include aquatic biosecurity surveillance program (state-wide) at various ports. | Environmental ecological values located in State Waters (WA), and WA fisheries (whose boundaries may extend beyond WA state waters). | 25(1)(a) | A number of WA fisheries overlap with the EMBA, with a few overlapping WA-50-L. Further, the department can provide information on management controls implemented to manage marine pest risks associated with the activity. | Category 1 | Level C |
| Local Government Authority | Western Australia | Shire of Broome | Provision of public services and amenities in Broome and represents the communities in these areas. | Represents community interests in areas that could be affected by emergency conditions. | Socio-economic values located in State Waters (WA) of the EMBA (shoreline contact >10 g/m$^2$ at Rowley Shoals only, no mainland shoreline contact within the Shire). | 25(1)(e) | Modelling indicates potential for shoreline contact at the Rowley Shoals. | Category 2 | Level C |
| Local Government Authority | Western Australia | Shire of Derby - West Kimberley | Provision of public services and amenities in Derby/West Kimberley and represents the communities in these areas. | Represents community interests in areas that could be affected by emergency conditions. | Socio-economic values located in State Waters (WA) of the EMBA (shoreline contact >10 g/m$^2$ within Mayala MP, no mainland shoreline contact within the Shire). | 25(1)(e) | Modelling indicates potential for shoreline contact within the Mayala MP. | Category 2 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| ATSI Representative Body | Western Australia | Bardi and Jawi Niimidiman Aboriginal Corporation RNTBC | BJNAC RNTBC is the Registered native title Prescribed Body Corporate (PBC) for the Bardi and Jawi Traditional Owners, of the northern Dampier Peninsula.<br>The role of BJNAC is to perform functions of a PBC under the Native Title Act including but not limited to: holding and managing the native title rights and interest in trust for the Common Law Holders; maintaining the traditional laws and customs of the native title holders; advancing the cultural, social, political, economic and legal interests of the native title holders. BJNAC must also consult with and obtain the consent of the Common Law Holders in accordance before making a Native Title Decision. | The RNTBC represents Traditional Owners and hold native title trust.<br>Jointly manage the Bardi Jawi Gaarra Marine Park with WA DBCA. | Marine resources and cultural heritage in coastal areas and potential areas of sea country. Have responsibility for sea country within the Kimberley MP and jointly manage the State Bardi Jawi Gaarra MP. Functions, interest or activities in proximity to Mayala MP with potential shoreline contact >10g/$m^2$ (14g/$m^2$) in winter only. No overlap with EMBA (floating/dissolved/entrained/ shoreline contact). | 25(1)(e) | Functions, interest or activities do not overlap with EMBA and no predicted shoreline contact. Closest potential shoreline contact is in the neighbouring Mayala MP. | Category 2 | Level A |
| ATSI Representative Body | Western Australia | Kimberley Land Council (KLC) | The KLC is an independent Commonwealth Statutory Authority established as a Native Title Representative Body under the Native Title Act 1993 (Cth). The KLC is a peak Indigenous body in the Kimberley region working with Aboriginal people to secure native title, conduct conservation and land management activities and develop cultural business enterprises. The KLC manage many of the Aboriginal Ranger programs in the Kimberley and are involved in the support of many socioeconomic and cultural organisations. | The KLC are peak body and a legislative function (Native Title Representative Body) to represent native title for traditional owners within the Kimberley region. | Native title in coastal areas and potential areas of sea country. | 25(1)(e) | Located in an area of long term INPEX operational presence. The KLC represents the interests of traditional owners where a native title decision needs to be made. As the only shoreline contact is at Mayala MP, INPEX is engaging directly with the Mayala Inninalang Aboriginal Corporation RNTBC. | Category 2 | Level A |
| ATSI Representative Body | Western Australia | Mayala Inninalang Aboriginal Corporation RNTBC | The Mayala People hold both exclusive and non-exclusive native title within their determined area. Mayala Inninalang Aboriginal Corporation holds the native title in trust for the common law native title holders and is responsible for managing native title matters, as well as socioeconomic development and cultural heritage protection associated with the determined areas for the Mayala People.<br>The determined area comprises islands that extend from the western boundary Dambimangari, including the McIntyre and Irvine Islands in the east and High Island, Gregory Island, Tide Rip Island and the Salier Islands in the west. | The RNTBC represents TO's and hold native title trust.<br>The Mayala People have a Joint Management Agreement in place for the Mayala Marine Park with the WA DBCA. | Cultural heritage and marine resources in coastal areas and potential areas of sea country. Jointly manages the State Mayala Marine Park. Functions, interest or activities overlap predicted shoreline contact >10g/$m^2$ only in winter months, where concentration is 14g/$m^2$and <1$m^3$ predicted to accumulate. No overlap with floating/dissolved/entrained EMBA. | 25(1)(d) | The Mayala Inninalang Aboriginal Corporation RNTBC represents the interests of traditional owners with country that overlaps areas of potential shoreline contact (>10g/$m^2$). | Category 2 | Level A |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Business | Western Australia | Absolute Ocean Charters | Broome based tourism operator offering fishing charters (Middle Lagoon, Lacepede Islands and Cape Leveque), whale watching and sunset cruises off Broome. | Business activities occurring in the marine environment may be impacted by an oil spill. | Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Actual location of business activities is unknown, and it is possible they may extend to offshore waters. Possible overlap with EMBA which is ~240km from Broome at closest point. To be conservative INPEX has chosen to engage. | Category 2 | Level C |
| Business | Western Australia | Broome Billfish Charters | Broome based fishing charter, operating off the Broome coast. | Business activities occurring in the marine environment may be impacted by an oil spill. | Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Actual location of business activities is unknown, and it is possible they may extend to offshore waters. Possible overlap with EMBA which is ~240km from Broome at closest point. To be conservative INPEX has chosen to engage. | Category 2 | Level C |
| Business | Western Australia | Broome Coast Charters | Broome based fishing charter, operating off the Broome coast. | Business activities occurring in the marine environment may be impacted by an oil spill. | Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Actual location of business activities is unknown, and it is possible they may extend to offshore waters. Possible overlap with EMBA which is ~240km from Broome at closest point. To be conservative INPEX has chosen to engage. | Category 2 | Level C |
| Business | Western Australia | Kimberley Pearl Charters | Tourism operator offering charters based out of Broome to Wyndham and Cygnet Bay. | Business activities occurring in the marine environment may be impacted by an oil spill. | Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Actual location of business activities is unknown, and it is possible they may extend to offshore waters. Possible overlap with EMBA which is ~240km from Broome at closest point. To be conservative INPEX has chosen to engage. | Category 2 | Level C |
| Business | Western Australia | Phat Time Fishing | Broome based fishing charter, including the Kimberley coast. | Business activities occurring in the marine environment may be impacted by an oil spill. | Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Actual location of business activities is unknown, and it is possible they may extend to offshore waters. Possible overlap with EMBA which is ~240km from Broome at closest point. To be conservative INPEX has chosen to engage. | Category 2 | Level C |
| Business | Western Australia | Reel Teaser Fishing Adventures | Fishing charter, Broome based. Areas include the Kimberley, Rowley Shoals, Scott Reef, Broome and Exmouth. | Business activities occurring in the marine environment may be impacted by an oil spill. | Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Actual location of business activities is unknown, and it is possible they may extend to offshore waters. Possible overlap with EMBA which is ~240km from Broome at closest point. To be conservative INPEX has chosen to engage. | Category 2 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Business | Western Australia | Vocus Communications | Own and manage the national subsea fibre network between Darwin and Port Hedland. | Vocus cables/ infrastructure is present within the WA-50-L licence area. | Potential economic impacts (loss of revenue) if infrastructure is damaged by planned activities. | 25(1)(d) | Vocus cables are known to traverse the licence area where planned activities will occur. | Category 1 | Level C |
| Fishing - Commercial | Commonwealth | Australian Southern Bluefin Tuna Industry Association | The Australian Southern Bluefin Tuna Industry Association (ASBTIA) represents the Australian SBT industry. | Fishing industry association who represent their members who may actively fish in the EMBA or have fish resources (stocks & spawning habitat) within the EMBA. | Fishery association representing licence holders. Southern bluefin tuna spawn in Indonesian waters and migrate south through the EMBA. Potential economic impacts (loss of revenue) if damage to tuna or spawning grounds. | 25(1)(d) | Represents commercial fishers whose fishery management areas overlap the EMBA. | Category 1 | Level C |
| Fishing - Commercial | Commonwealth | Commonwealth Fisheries Association (CFA) | The peak body representing the collective rights, responsibilities and interests of a diverse commercial fishing industry in Commonwealth regulated fisheries. | Fishing industry association who represent their members who may actively fish in the EMBA. | Represent commercial fishers that overlap the EMBA. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | Represents commercial fishers whose fishery management areas overlap the EMBA. This stakeholder has previously advised that they are not resourced to provide feedback on proposed activities and requested INPEX to direct enquiries to the associations that represent the directly affected fisheries/fishers. Given this INPEX has conservatively identified this stakeholder as category (e). | Category 1 | Level C |
| Fishing - Commercial | Commonwealth | North West Slope Trawl Fishery - Licence holders (4 licence holders) | The North West Slope Trawl Fishery targets scampi and deepwater prawn. The fishery is located in deep water from the coast of the Prince Regent National Park to Exmouth between the 200 m depth contour to the outer limit of the Australian Fishing Zone. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. It is one of the few active fisheries in the vicinity of WA-50-L, with reportedly low negligible trawl-fishing in the Ichthys field. | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. Fishing effort may occur over the WA-50-L. | Category 1 | Level C |
| Fishing - Commercial | Commonwealth | Southern Bluefin Tuna Fishery - Licence holders (83 licence holders) | The Southern Bluefin Tuna Fishery covers all Australian waters out to 200 nm from the coast including those around Christmas Island and the Cocos Keeling Islands. Known spawning grounds in Indonesia. | Licence holders may be actively fishing within their fishing management areas. | Although no fishing effort reported in the EMBA, SBT spawn in Indonesian waters and migrate south through the EMBA. Potential economic impacts (loss of revenue) if damage to tuna or spawning grounds. Fishing effort based around Port Lincoln in South Australia. No fishing effort overlapping WA-50-L. Spawning grounds slightly overlap WA-50-L. | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. Fishing effort may occur over the WA-50-L. | Category 1 | Level C |
| Fishing - Commercial | Commonwealth | Western Skipjack Fishery - Licence holders (2 licence holders) | The Western Skipjack Tuna Fishery covers the waters surrounding WA and NT out to 200 nm from the coast. The fishery targets the skipjack tuna. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and planned activities; however, no fishing effort in the area of planned activities. The fishery has not been active since 2008/2009 (advice from AFMA). | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. Fishing effort may occur over the WA-50-L. | Category 1 | Level C |
| Fishing - Commercial | Commonwealth | Western Tuna and Billfish Fishery - Licence holders | The fishery covers the sea area west from the tip of Cape York in Queensland, around WA, to the border between Victoria and South | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Fishing effort is concentrated off south-west WA (Butler | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. Fishing effort may occur over the WA-50-L. | Category 1 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| | | (59 licence holders) | Australia. Fishing occurs in both the Australian Fishing Zone and adjacent high seas.<br>The fishery also includes the waters surrounding Christmas Island and the Cocos (Keeling) Islands operating outside 12 nm of the Christmas Island and Cocos (Keeling) Islands. Fishery is managed by WA DPIRD under the Western Tuna and Billfish Fishery Management arrangements. | | et al. 2023) with no fishing occurring near WA-50-L. | | | | |
| Fishing - Commercial | Commonwealth | Tuna Australia (Industry association) | Industry association representing members of the Eastern and Western Tuna and Billfish and Western Skipjack fisheries of Australia. | Represents Western Tuna and Billfish Fishery and Western Skipjack Industry, whose fishing management areas may overlap with the licence area or EMBA. | Represents Western Tuna and Billfish Fishery and Western Skipjack Industry, whose fishing management areas may overlap with the licence area or EMBA. | 25(1)(d) | Represents Western Tuna and Billfish Fishery and Western Skipjack Industry, whose fishing management areas may overlap with the licence area or EMBA. | Category 1 | Level B |
| Fishing - Traditional | Commonwealth | Traditional Indonesian fishers - MOU Box | Indonesian traditional fishers, using traditional fishing methods only, are permitted to operate in an area of about 50,000km$^2$ of Australian waters in the Timor Sea, known as the MoU Box.<br>The MoU Box is managed in accordance with a bilateral agreement between the Australian and Indonesian Governments, promoting fisheries and marine cooperation between Australia and Indonesia. | Traditional fishing activities within areas of the MoU box. Traditional Indonesian fishers within the MoU box are restricted to traditional boats and fishing methods which do not use motors or engines. Traditional fishing methods include line fishing or free-diving for hand collection of sedentary species without the use of compressed air breathing equipment or any other fishing equipment with motors or engines. | Most traditional fishing occurs in areas of Scott and Seringapatam reefs, Browse Island and Ashmore and Cartier islands, which overlap the EMBA. Target species includes trepang, trochus, abalone, sponges and reef fish. | 25(1)(d) | Traditional fishers may operate in the EMBA which overlaps the MoU box. Shoreline contact concentrations >100 g/m$^2$ may occur at Browse Island, Ashmore Island/reef, Cartier Island/reef and Sandy Islet. The obligation to identify relevant persons for the purpose of consultation must be reasonably capable of discharge within a reasonable time and there is an evident need for all relevant persons to be ascertainable. Based on the opacity as to the identity of any traditional fishers operating within the MoU Box, INPEX has not been able to identify or make contact with them in a manner which is considered to be both reasonable and workable. | N/A | N/A |
| Fishing - Commercial | Western Australia | Northern Demersal Scalefish Fishery - Area 1 & 2 (Kimberley) Licence holders (8 licence holders via WAFIC) | Primarily a trap-based fishery which targets red emperor and gold band snapper. The fishery operates off the north-west coast of WA in the waters east of longitude 120°E. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. Fishing effort may occur over WA-50-L. Between 2016 and 2020, no fishing activity occurred in the fishery directly over the licence area. | During preliminary consultation with WAFIC, and consistent with WAFIC's consultation approach (https://www.wafic.org.au/what-we-do/access-sustainability/oil-gas/consultation-approach-for-unplanned-events/), licence holders in the Northern Demersal Scalefish | |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Fishery were consulted on the proposed drilling activities in WA-50-L via WAFIC. | |
| Fishing - Commercial | Western Australia | Abalone Managed Fishery (Zone 8) - Licence holders (multiple licence holders) | Targets the West Coast Roe's Abalone resource and the South Coast Greenlip /Brownlip) Abalone resource. Roe's abalone is found in commercial quantities from the South Australian/ WA border to Shark Bay. The commercial fishery harvest method is a single diver working off a 'hookah'. The fishery operates in shallow coastal waters coinciding with abalone distributions. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L; however, no fishing effort occurs over the area of planned activities due to the depth of water (>250m) water temperature and lack of suitable habitat. Areas of collection are located closer to the coast. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Broome Prawn Managed Fishery - Licence Holders (multiple licence holders) | Broome Prawn Managed Fishery operates off Broome and targets Western King prawns and Coral prawns. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. No effort overlapping WA-50-L. In 2021, extremely low fishing effort occurred in the Broome Prawn Managed Fishery as three boats undertook trial fishing to investigate whether catch rates were sufficient for commercial fishing. | 25(1)(d) | Fishing management area overlaps the EMBA and licence area. Fishing effort may occur over the licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Hermit Crab Fishery - Licence holders (multiple licence holders) | The Hermit Crab Fishery targets the Australian land hermit crab for the domestic and international live pet trade. The fishery operates throughout the year and is currently permitted to fish in waters north of Exmouth Gulf. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. The fishery is land based and no effort occurs in the deep waters of WA-50-L. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA. | *See table footnote | |
| Fishing - Commercial | Western Australia | Joint Authority Northern Shark Fishery - Licence Holders (multiple licence holders) | This fishery is managed by the WA Fisheries Joint Authority. For reporting and assessment purposes, the Joint Authority Northern Shark Fishery (JANSF) is combined with the adjacent (state-managed) Western Australia North Coast Shark Fishery (WANCSF) and reported as part of the northern shark fishery. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Fishery has not been active since 2008/2009 to enable recovery of shark species (AFMA 2022). | 25(1)(d) | Although the fishery is not currently active, the fishery management area overlaps the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Kimberley Gillnet and Barramundi Fishery - Licence holders (multiple licence holders) | The Kimberley Gillnet and Barramundi Fishery extends from the WA/NT border to the northern end of Eighty Mile Beach, covering the river systems and tidal creek systems of the Cambridge Gulf, the Ria coast of the northern Kimberley, King Sound, The fishery targets barramundi. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps areas of potential shoreline contact ($10g/m^2$), does not overlap WA-50-L. No overlap with entrained, dissolved or surface EMBA. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(d) | Fishing licence holders whose management areas overlap the shoreline contact areas of the EMBA. | *See table footnote | |
| Fishing - Commercial | Western Australia | Kimberley Managed Prawn Fishery - Licence Holders (multiple licence holders) | The fishery operates from the northeastern boundary of the Exmouth Gulf Prawn Fishery to Cape Londonderry. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA not WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA only. | *See table footnote | |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Fishing - Commercial | Western Australia | Mackerel Managed Fishery - Area 1 (Kimberley) (multiple licence holders) | The Mackerel Managed Fishery uses near-surface trolling gear from vessels in coastal areas around reefs, shoals and headlands. Area 1 - Kimbereley covers from approximately Eighty Mile Beach north to the WA/NT border. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Fishery uses near-surface trolling gear from vessels in coastal areas around reefs, shoals and headlands in the EMBA. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Marine Aquarium Fish Fishery - Licence holders (multiple licence holders) | The Marine Aquarium Fish Fishery is typically more active in coastal waters south of Broome with higher levels of effort around the Capes region, Perth, Geraldton, Exmouth, Dampier and Broome. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. No fishing effort overlapping WA-50-L. Waters south of Broome targeted with higher levels of effort around the Capes region, Perth, Geraldton, Exmouth, Dampier and Broome. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Maxima Pearls | Commercial pearling lease holder based in Cone Bay. | Pearling farming activities in proximity to shoreline contact (10g/m$^2$). | Pearl farming lease is in proximity to potential shoreline contact. EMBA including shoreline contact does not overlap lease area. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(e) | The pearl farm lease does not overlap with the EMBA, and no predicted shoreline contact within lease areas. Closest potential shoreline contact is ~25km away in Mayala MP. | Category 3 | Level C |
| Fishing - Commercial | Western Australia | North Coast Shark Fishery - Licence holders (multiple licence holders) | Commercial fishing licence holders whose fishing management areas may overlap planned or unplanned areas of activity. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Fishery has not been active since 2008/2009 to enable recovery of shark species. | 25(1)(d) | Although the fishery is not currently active, the fishery management area overlaps the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | North-coast Crab Fishery (includes Kimberley and Pilbara Crab Fisheries) - Licence holders (multiple licence holders) | The North Coast Crab Fishery is a trap-based fishery which targets blue swimmer crabs in the Pilbara (the Pilbara Crab Managed Fishery) and mud crab in the Kimberley (the Kimberley Crab Managed Fishery) operations permitted from King Sound to the WA/NT border. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps areas of potential shoreline contact (10g/m$^2$), does not overlap WA-50-L. No overlap with entrained, dissolved or surface EMBA. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(d) | Fishing licence holders whose management areas overlap the shoreline contact areas of the EMBA. | *See table footnote | |
| Fishing - Commercial | Western Australia | Pearl Oyster Managed Fishery - Zone 3 - Licence holders (multiple licence holders) | The WA Pearl Oyster Managed Fishery is the only remaining significant wild-stock fishery for pearl oysters in the world. Zone 3 covers area from Port Hedland to Sandy Point. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Dive fishery operating in the shallow coastal waters of the EMBA with no effort in deep waters of WA-50-L. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Pearl Producers Association | The peak representative organisation representing the Australian South Sea Pearling Industry in WA and the NT. | Peak body representing their members who may actively fish in the EMBA. | Represents pearling industry that operate in the EMBA. | 25(1)(e) | Previously INPEX has been unsuccessful in obtaining responses from PPA and as such has chosen to contact PPA members directly in addition to contacting PPA. | Category 3 | Level C |
| Fishing - Recreational | Western Australia | Recfishwest | Peak body representing recreational fishers (via membership) in WA, who may be interested in planned activities if these are located in areas fished. | Peak body representing their members who may actively fish in the EMBA. | Represents recreational fishers that may fish in the EMBA who may be excluded from area due to oil spill. | 25(1)(e) | Represent recreational fishers who may operate in the EMBA. | Category 2 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Fishing - Commercial | Western Australia | South-west Coast Salmon Managed Fishery- Licence holders (multiple licence holders) | South-west Coast Salmon Managed Fishery targets WA salmon. Fishery effort is south of Exmouth, WA. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Fishing effort is south of Exmouth and does not overlap with WA-50-L. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Specimen Shell Managed Fishery - Licence holders (multiple licence holders) | The Specimen Shell Managed Fishery is based on the collection of individual shells for the purposes of display, collection, cataloguing, classification and sale. The fishery covers the entire WA coastline. There is some concentration of effort in areas adjacent to population centres such as Broome. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L. Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Fishery effort concentrated in areas adjacent to population centres in the EMBA such as Broome and not the deep waters of WA-50-L. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Trochus fishery - Licence Holders (multiple licence holders) | The Trochus Fishery is a small fishery based on a single target species harvested by hand from King Sound and the Buccaneer Archipelago. The fishery is operated by the Bardi Jawi and Mayala Aboriginal communities | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA (shoreline contact 10g/$m^2$ only). Potential economic impacts (loss of revenue) if excluded from area due to oil spill. Trochus harvested by hand from King Sound and the Buccaneer Archipelago. | 25(1)(d) | Fishing licence holders whose management areas overlap the shoreline contact areas of the EMBA. | *See table footnote | |
| Fishing - Commercial | Western Australia | West Coast Deep Sea Crustacean Fishery - Licence holders (multiple licence holders) | The West Coast Deep Sea Crustacean Fishery operates using baited pots in a long-line formation in the shelf edge waters. Extends from Onslow north along the Kimberley coast in water > 150 m depth to the Australian Fishing Zone. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA and WA-50-L; however, no fishing effort occurs over the area of planned activities. Fishery uses baited pots in a long-line formation in the shelf edge waters > 150 m depth. | 25(1)(d) | Fishing licence holders whose management areas overlap the EMBA and licence area. | *See table footnote | |
| Fishing - Commercial | Western Australia | Western Australian Fishing Industry Council (WAFIC) | The peak industry body representing professional fishing, pearling and aquaculture enterprises, processors and exporters in Western Australia.<br><br>WAFIC's offers a fee-for-service to titleholders utilising WAFIC networks to share/disseminate information with its members and support consultation activities. | Fishing industry association who represent their members who may actively fish in the EMBA. | Represent WA fisheries operating in the EMBA and WA-50-L. | 25(1)(d) | Represent commercial fisheries operating in the EMBA.<br><br>Note: WAFIC is both a service provider to INPEX for contact with WA fisheries and a relevant person in their own right. | Category 2 | Level B |
| Fishing - Recreational | Western Australia | Western Australian Game Fishing Association | Coordinates game fishing activities within WA. | Game fishing association representing members who may actively fish in the EMBA. | Represents recreational fishers that may fish in the EMBA who may be excluded from area due to oil spill. | 25(1)(e) | Represent recreational fishers that may operate in the EMBA. | Category 2 | Level C |
| Fishing - Commercial | Western Australia | Sea Cucumber Fishery (out to 3nm) - Licence Holders (multiple licence holders) | Two key species targeted by the Sea Cucumber Fishery are sandfish and redfish collected by hand predominantly through diving, and to a lesser extent by wading, in shallow waters from Exmouth Gulf to the NT border. | Licence holders may be actively fishing within their fishing management areas. | Fishery management area overlaps the EMBA (shoreline contact 10g/$m^2$ only). Potential economic impacts (loss of revenue) if excluded from area due to oil spill. | 25(1)(d) | Fishing licence holders whose management areas overlap the shoreline contact areas of the EMBA. | *See table footnote | |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| Oil & Gas - Titleholder | Western Australia | Santos Browse P/L | Titleholder of Wa-74-R, WA-81-R, WA-84-R, WA-79-R | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | Santos Offshore P/L | Titleholder of permit WA-281-P, WA-86-R, WA-80-R, WA-85-R | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | INPEX Browse E&P P/L | Titleholder of permit WA-285-P, WA-532-P, WA-56-R,WA-343-P | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | IPB WA 424P P/L | Titleholder of permit WA-424-P | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | INPEX Ichthys P/L | Titleholder of WA-51-L | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | Shell Australia P/L | Titleholder of WA-44-L, WA-534-P, AC/P65, AC/P41 | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | Santos NA Browse Basin P/L | Titleholder of WA90-R, WA-92-R, TR/8 | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| Oil & Gas - Titleholder | Western Australia | Woodside Browse P/L | Titleholder of permit WA-30-R, TR/5 | May have petroleum or GHG activities or interests occurring within 100 km of WA-50-L. | Displacement of other marine users | 25(1)(d) | Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit where activities may be occurring within proximity (100km from WA-50-L). | Category 2 | Level C |
| eNGO | Western Australia | Conservation Council of WA (CCWA) | Four broad policy and campaign areas: Nature and Wildlife; Waste and Recycling; Climate Change, Energy and Fossil Fuels and Environmental Regulations and Pollution Control. Represent more than 100 environmental organisations across WA. | Represents more than 100 environmental organisations across WA with an advocacy function for environmental issues that include aspects relevant to | Marine habitats and species found in the EMBA. GHG emissions generated from EP activities. | 25(1)(d) | Represent WA-based environmental organisations with local branches within proximity to the EMBA. | Category 3 | Level C |

| Category | Jurisdiction / location or activities | Relevant person | General description | Functions, activities or interests | Are there any environmental values in relation to the EP/EMBA that intersect a persons, organisations, departments or agency's functions, activities or interests? | Categorisation of relevant person under OPGGS (Environment) Regulation 25 (1) | Basis of selection for relevant persons engagement during development of EP. | Category (1 to 3) | Consultation strategy level (A to D) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | the offshore activity covered by the EP. | | | | | |
| eNGO | Western Australia | Environs Kimberley | Peak environmental NGO for the Kimberley region in far north-west Australia.<br>(Member of Conservation Council of WA). | Plays an advocacy function to protect both indigenous heritage and the natural environment of global significance in the Kimberley region. Includes aspects relevant to the offshore activity covered by the EP. | Marine habitats and species, and cultural values found in the EMBA. | 25(1)(d) | Kimberley based environmental NGO based within proximity to the EMBA. | Category 3 | Level C |
| eNGO | Western Australia | The Kimberley - Like Nowhere Else | Environmental NGO for Kimberley region. | Plays an advocacy function to protect both indigenous heritage and the natural environment of global significance in the Kimberley region. Includes aspects relevant to the offshore activity covered by the EP. | Marine habitats and species, and cultural values found in the EMBA. | 25(1)(d) | Kimberley based environmental NGO based within proximity to the EMBA. | Category 3 | Level C |
| eNGO | Western Australia | Save the Kimberley | Environmental NGO for Kimberley region. | Plays an advocacy function to protect both indigenous heritage and the natural environment of global significance in the Kimberley region. Includes aspects relevant to the offshore activity covered by the EP. | Marine habitats and species, and cultural values found in the EMBA. | 25(1)(d) | Kimberley based environmental NGO based within proximity to the EMBA. | Category 3 | Level C |
| eNGO | Western Australia | The Wilderness Society (WA) | Part of national environmental NGO with several key focus areas including stopping new fossil fuel projects and promoting regulatory change.<br>(Focus on Kimberley Region and Great Australian Bight). | Plays an advocacy function for environmental issues that include aspects relevant to the offshore activity covered by the EP. | Marine habitats and species, and cultural values found in the EMBA. | 25(1)(d) | Kimberley based environmental NGO based within proximity to the EMBA. | Category 3 | Level C |

*While INPEX initially identified this group of licence holders as relevant persons, during preliminary consultation with WAFIC, and consistent with WAFIC's consultation approach (refer to https://www.wafic.org.au/what-we-do/access-sustainability/oil-gas/consultation-approach-for-unplanned-events/), it was confirmed that this group should not be engaged for this EP. WAFICs preferred approach, to avoid consultation fatigue of their members, is to undertake consultation with licence holders that would only be affected by a significant unplanned event. To this end, INPEX has engaged WAFIC using their fee-for-service to support EP consultation with those WA commercial licence holders appropriate for the proposed Ichthys Phase 2 development drilling activity in WA-50-L.

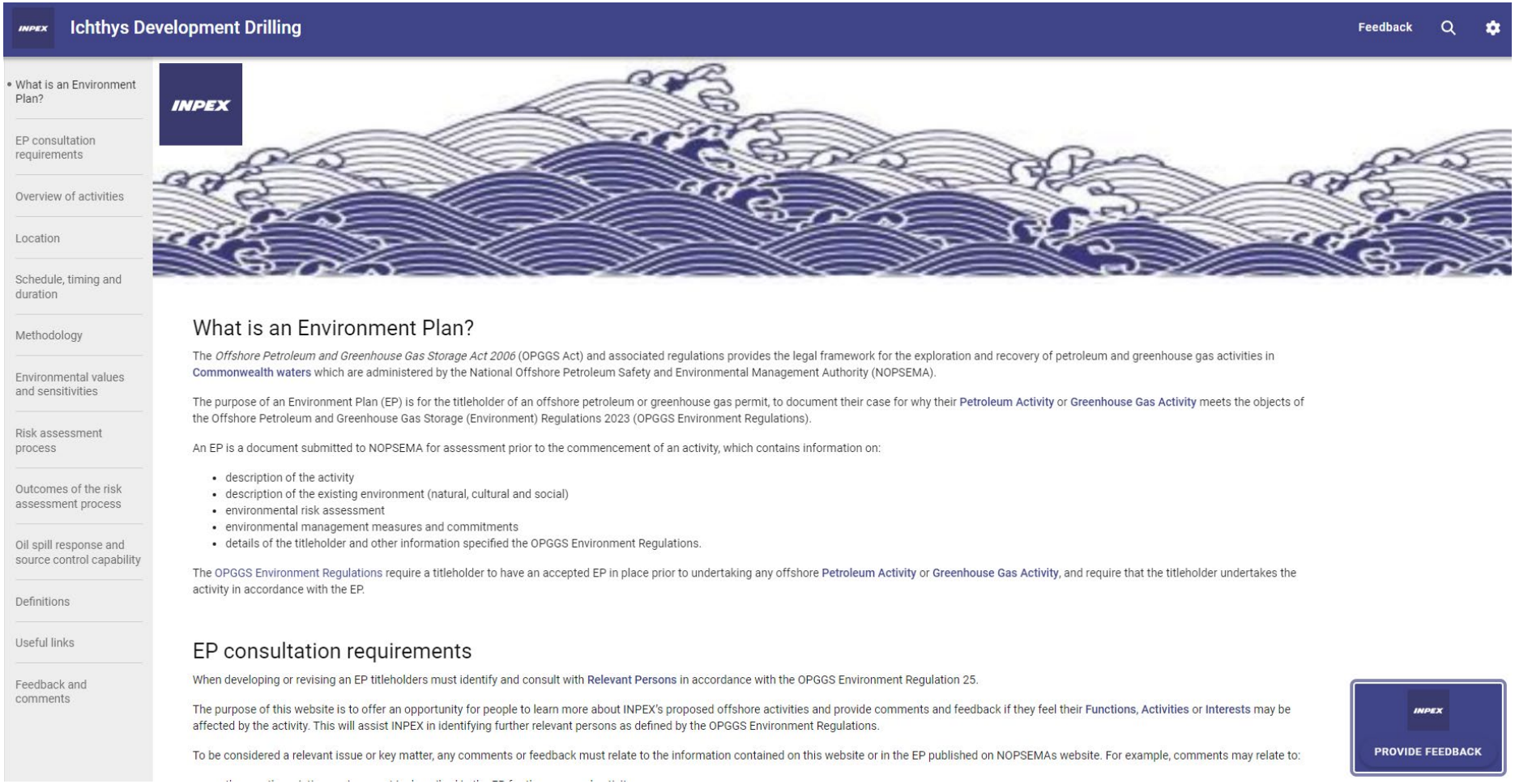
## Appendix C.3 – Consultation materials

**Table of contents**

| Publication / platform (link to subsection) | Method | Dates |
|---|---|---|
| EP summary website | Dedicated website | 25 March 2024 |
| INPEX Australia Website | Online post/advertisement | 25 March 2024 |
| The West Australian | Newspaper advertisement | 15 April 2024<br>29 April 2024 |
| Sunday Times | Newspaper advertisement | 21 April 2024<br>12 May 2024 |
| Broome Advertiser | Newspaper advertisement | 18 April 2024<br>2 May 2024 |
| Kimberley Echo | Newspaper advertisement | 18 April 2024<br>2 May 2024 |
| INPEX Australia LinkedIn | Social media advertisement/post | 3 April 2024 |
| INPEX Australia Facebook | Social media advertisement/post | 4 April – 14 April 2024<br>25 April – 20 May 2024 |
| INPEX Australia Instagram | Social media advertisement/post | 4 April – 14 April 2024<br>25 April – 20 May 2024 |

INPEX Proposed Development Drilling Information Sheet

**EP summary website**
https://anz.planengage.com/ichthysdrilling/page/Home



**INPEX Australia Website**
https://www.inpex.com.au/sustainability/environment/


*We take pride in the delivery of onshore and offshore marine monitoring programs, developing innovative research partnerships and robust management plans to reduce our environmental footprint.*

Working alongside reputable research scientists, we invest in programs to build a wealth of data, which supports better understanding and protection of the environments where we operate.

Our programs are focused on developing responsible management approaches to protect the environment, while supporting development and meeting the expectations of the communities where work and of which we are proud to be a part.

**We are committed to:**

- ensuring our people are competent with the appropriate training, environmental knowledge and adequate resources to support sound environmental management
- empowering our people to identify risks and intervene to prevent environmental harm
- investing in development and implementation of onshore and offshore marine monitoring programs
- compliance with environmental obligations and commitments through risk reduction and implementation of effective control measures
- driving ongoing improvement in environmental performance through monitoring, auditing and review
- building greater knowledge and skills to support protection of the environment

## Environment Plans

***Currently open for feedback:***

INPEX Australia has worked sustainably and responsibly under an approved Ichthys development drilling environment plan for more than a decade in the Browse Basin, around 220 kilometres offshore from Western Australia. This environment plan is undergoing a routine five-year revision.

We wish to hear from relevant persons whose functions, interests and activities may be affected by the work that we are doing.

Please visit the link for more detail on this Environment Plan.

1. Ichthys Development Drilling WA-50-L (five year revision)

**The West Australian**

INPEX

# Environment plan consultation:

## Opportunity for relevant persons to provide feedback

INPEX is a global energy company committed to sustainable and responsible resource development. The existing Ichthys development drilling environment plan is undergoing a routine five-year revision.

We wish to hear from relevant persons whose functions, interests and activities may be affected by the work that we are doing. These may include cultural and spiritual connections, commercial or recreational activities offshore, tourism or local community interests.

Your feedback assists with continuing to understand the environment, identifying any new potential environmental impacts and risks, and enables INPEX to refine its management measures if needed to reduce potential impacts.

- All planned activities are within the boundaries of an area referred to as WA-50-L located in the Browse Basin in Commonwealth waters.
- Approximately 230 km north west of the Kimberley coastline, at closest point.
- Closest major town is Derby, located approximately 390 km south of the southern boundary of WA-50-L


**Contact us**

Your views on these activities are important to us and we welcome your comments. If you have any questions, please contact the consultation team on 1800 705 010 or by visiting the above QR code. For more information on INPEX visit inpex.com.au

**Sunday Times**

INPEX

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**Broome Advertiser**

INPEX

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**Kimberley Echo**

INPEX

# Environment plan consultation:
## Opportunity for relevant persons to provide feedback

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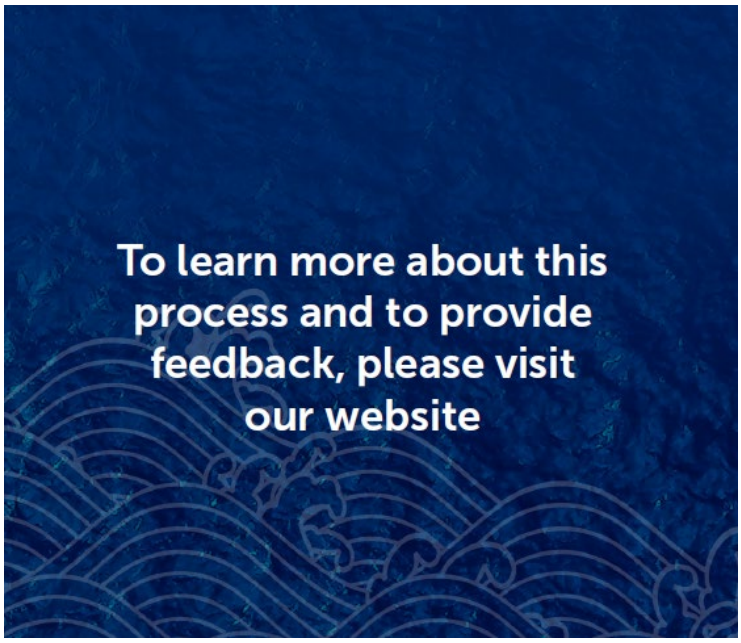
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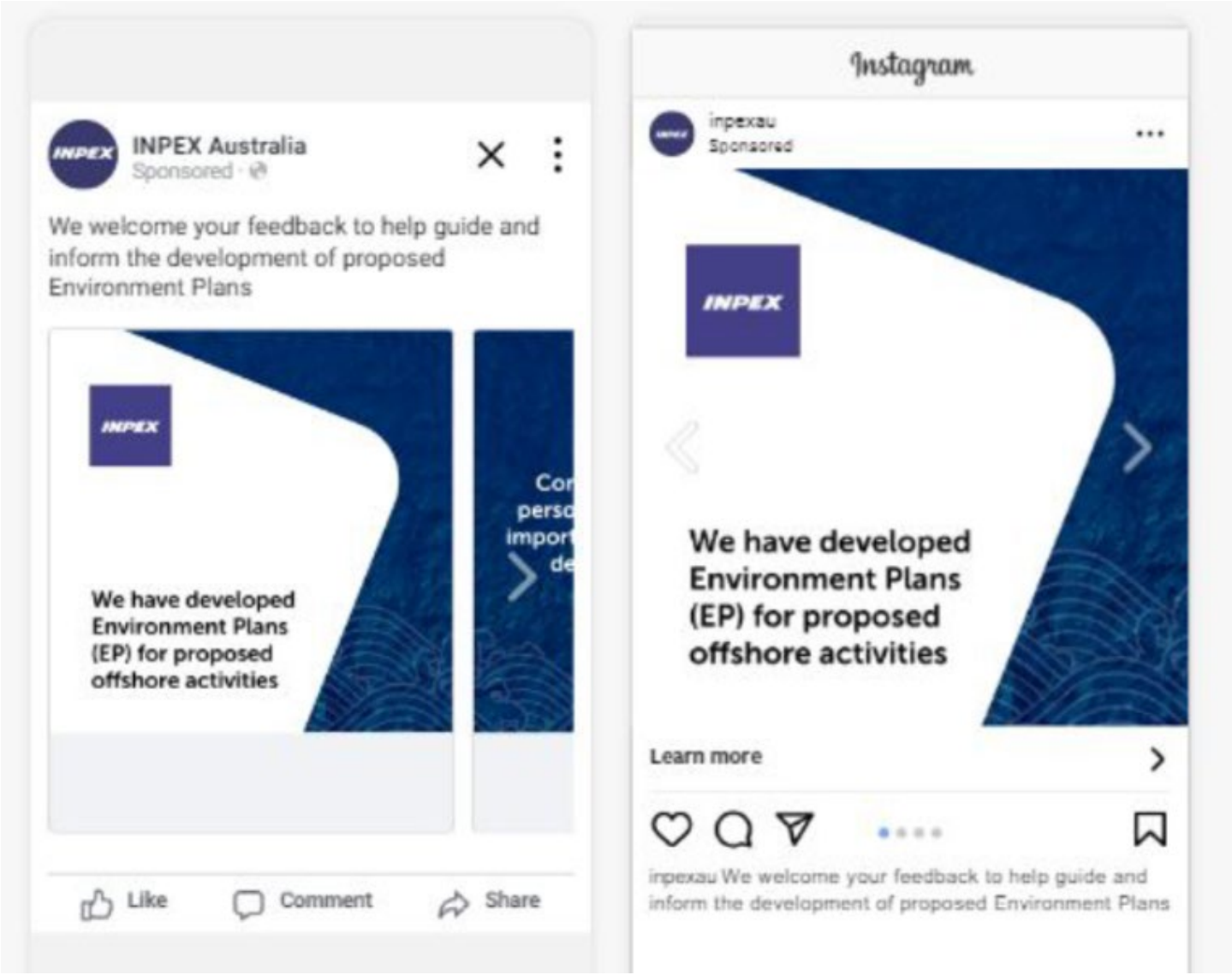
INPEX
Delivering energy, sustainably and responsibly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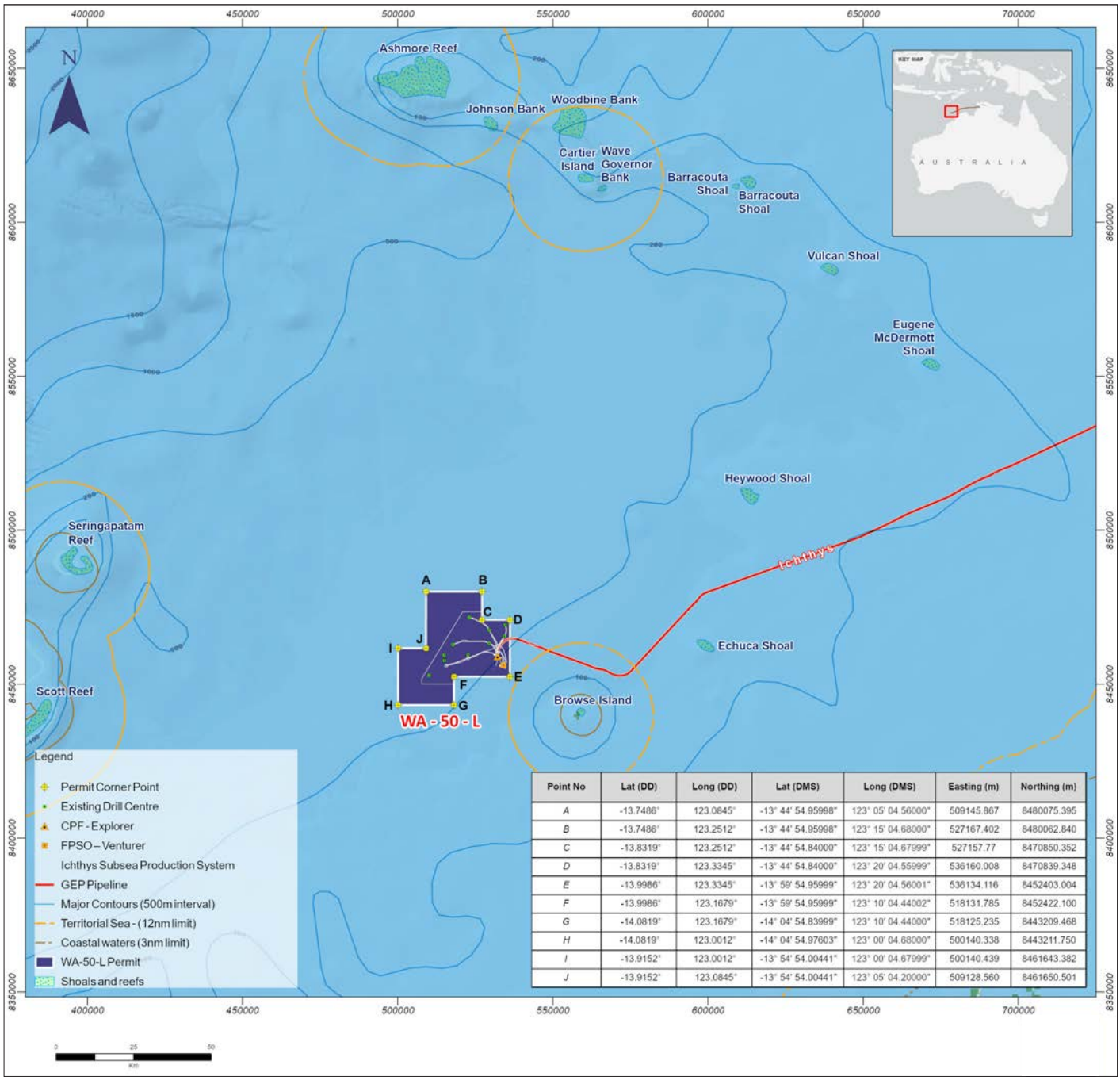
# Proposed Ichthys Development Drilling Environment Plan revision




| Point No | Lat (DD) | Long (DD) | Lat (DMS) | Long (DMS) | Easting (m) | Northing (m) |
|---|---|---|---|---|---|---|
| A | -13.7486° | 123.0845° | -13° 44' 54.95998" | 123° 05' 04.56000" | 509145.867 | 8480075.395 |
| B | -13.7486° | 123.2512° | -13° 44' 54.95998" | 123° 15' 04.68000" | 527167.402 | 8480062.840 |
| C | -13.8319° | 123.2512° | -13° 44' 54.84000" | 123° 15' 04.67999" | 527157.77 | 8470850.352 |
| D | -13.8319° | 123.3345° | -13° 44' 54.84000" | 123° 20' 04.55999" | 536160.008 | 8470839.348 |
| E | -13.9986° | 123.3345° | -13° 59' 54.95999" | 123° 20' 04.56001" | 536134.116 | 8452403.004 |
| F | -13.9986° | 123.1679° | -13° 59' 54.95999" | 123° 10' 04.44002" | 518131.785 | 8452422.100 |
| G | -14.0819° | 123.1679° | -14° 04' 54.83999" | 123° 10' 04.44000" | 518125.235 | 8443209.468 |
| H | -14.0819° | 123.0012° | -14° 04' 54.97603" | 123° 00' 04.68000" | 500140.338 | 8443211.750 |
| I | -13.9152° | 123.0012° | -13° 54' 54.00441" | 123° 00' 04.67999" | 500140.439 | 8461643.382 |
| J | -13.9152° | 123.0845° | -13° 54' 54.00441" | 123° 05' 04.20000" | 509128.560 | 8461650.501 |

***Figure 1:*** *Location and coordinates of production licence, WA-50-L in the Browse Basin*

## Introduction

INPEX Ichthys Pty Ltd (INPEX), on behalf of the Ichthys Upstream Unincorporated Joint Venture Participants, is developing the Ichthys Field in the Browse Basin off the north-west coast of Western Australia. Condensate produced offshore is exported predominantly to Japan, and export gas is sent via subsea pipeline for further processing at the Ichthys liquefied natural gas (LNG) plant near Darwin.

INPEX is preparing to further develop the Ichthys Field, as approved under the Ichthys LNG Project Commonwealth approval decision EPBC 4208/2008. Initial development wells were drilled and the Ichthys offshore facilities were installed and commissioned between 2014 and 2018 with the assets commencing production in July 2018. Between 2019 and 2024, nine additional development wells have been drilled.

## Introduction (cont.)

The scope of this Environment Plan (EP) revision includes the next stage of the drilling campaign which will consist of the drilling, completion and flow back testing of additional development wells within WA-50-L over the next five years.

The scope also includes the continued capacity to undertake well workovers and/or interventions of the existing and planned development wells in WA-50-L.

The drilling activity is subject to regulation by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) – the national regulatory body for health and safety, well integrity and environmental management for all offshore petroleum facilities and activities.

The EP and an Oil Pollution Emergency Plan (OPEP) describe all the potential environmental impacts and risks associated with the drilling activity, and how they will be mitigated and managed to meet the requirements of the Commonwealth *Offshore Petroleum and Greenhouse Gas Storage Act 2006.*

## Location

Production licence WA-50-L is located in the Browse Basin in Commonwealth waters within Western Australia. It is approximately 230 km north-west of the Kimberley coastline, at its closest point. Water depths in the licence area range between 235 m and 275 m at lowest astronomical tide. The closest major town is Derby, located approximately 390 km south of the southern boundary of the licence area.

## Schedule

The EP revision covers continuous operations 24 hours per day, for a period of up to five years from acceptance of this EP revision. Drilling, completion and well flow back activities are expected to take 90 to 120 days per well, noting that drilling activities only occur for a portion of this time.

In some cases, development wells may be suspended and later, re-entered for remaining work/stages completed. This will be determined subject to operational, construction and production requirements.

## Overview of activity description

| **Summary of activity** | |
|---|---|
| Petroleum production licence area | WA-50-L |
| Basin | Browse |
| Gas field | Ichthys Field |
| Reservoirs | Brewster<br>Plover |
| Activity location | Wholly located within Commonwealth waters approximately 390 km north of Derby, Western Australia in the Northwest Marine Region of the Timor Sea. |
| Well type | Development (i.e. subsea production wells) |
| Hydrocarbon type | Gas and condensate |
| Water depth | Ranges from 235–275 meters |
| MODU and vessels | Mobile Offshore Drilling Unit (MODU) that will be either semi-submersible, moored or dynamically positioned.<br><br>Vessels used to support the activity may include anchor handling support vessels, petroleum support vessels and light well interven-tion vessels. |
| Activities | Continuation of the Ichthys Project drilling campaign through the drilling and completion of at least seven new development wells (up to a maximum of 13) targeting the Brewster and Plover reservoirs in the WA-50-L production licence area.<br><br>Well intervention and well work over activities may also be conducted on existing and planned development wells in WA-50-L.<br><br>During the activity a 500 m petroleum safety zone will be in place surrounding the MODU. |
| Duration of the activity | This EP revision will cover continuous operations 24 hours per day, for a period of up to five years from acceptance of this EP revision. |

## Environment

Environmentally sensitive areas within the environment that may be affected (EMBA) are listed below including distances to production licence area WA-50-L where applicable:

### Key Ecological Features

- Continental slope demersal fish communities (overlaps WA-50-L)
- Ancient coastline at 125 m depth contour
- Ashmore Reef and Cartier Island and surrounding Commonwealth waters
- Canyons linking the Argo Abyssal Plain with Scott Plateau
- Carbonate bank and terrace system of the Sahul Shelf
- Mermaid Reef and Commonwealth waters surrounding the Rowley Shoals
- Seringapatam Reef and Commonwealth waters in the Scott Reef complex.

## Environment (cont.)

### Australian Marine Parks

- Kimberley Marine Park (100 km south-east of WA-50-L)
- Cartier Island Marine Park (130 km north of WA-50-L)
- Ashmore Reef Marine Park (155 km north of WA-50-L)
- Argo-Rowley Terrace Marine Park (280 km east of WA-50-L).

### Coral reefs

- Ashmore Reef (155 km from WA-50-L)
- Cartier Island (130 km from WA-50-L)
- Seringapatam Reef (110 km from WA-50-L)
- Scott Reef (125 km from WA-50-L)
- Hibernia Reef (195 km from WA-50-L)
- Rowley Shoals (500 km from WA-50-L).

### Banks and shoals

- Vulcan Shoals (173 km from WA-50-L)
- Eugene McDermott Shoals (175 km from WA-50-L)
- Barracouta Shoals (179 km from WA-50-L)
- Woodbine Bank (180 km from WA-50-L).

Environmental values that may be impacted by the proposed drilling activity include:

- Benthic and shoreline habitats
- Marine fauna including listed and migratory species identified under the EPBC Act and biologically important areas associated with those species
- Cultural heritage including underwater cultural heritage and Aboriginal heritage
- Socio-economic receptors such as commercial fisheries, aquaculture, tourism and other offshore industries.

## Environmental management of key aspects

| Summary of activity | Potential impacts | Proposed controls |
|---|---|---|
| Light emissions - Sources of artificial light include MODU and vessel navigational lighting, deck lighting and flaring. | Light emissions generated from flaring, MODU and vessel navigational and deck lighting are not expected to cause any discernible effect on adult turtles' or hatchlings' abilities to orientate to water at Browse Island (the closest turtle nesting habitat located over 38 km away).<br><br>Adult turtles undertaking internesting, migration, mating or foraging activities are reported to not use light cues to guide these behaviours with no evidence to suggest adult turtles (internesting) are attracted to artificial light from offshore MODU/vessels. Any impacts are expected to be insignificant.<br><br>WA-50-L does not overlap any important bird habitats and the closest breeding/resting areas are over 50 km away from the proposed activity. | MODU/vessel personnel will receive an induction/ training to inform them of the requirements to minimise external artificial lighting.<br><br>Premobilisation review and planning of MODU/vessel lighting to be undertaken prior to commencing activities.<br><br>Lighting is directed to working areas (rather than overboard) to minimise light spill to the ocean.<br>Reduce light spill from internal light sources by using blinds on windows. |

## Environmental management of key aspects (cont.)

| Summary of activity | Potential impacts | Proposed controls |
|---|---|---|
| Air and greenhouse gas (GHG) emissions | Atmospheric emissions will be generated through well flow back testing operations, the use of combustion engines, compressors, steam generators and ozone depleting substances (ODS) containing equipment on board the MODU and vessels.<br><br>In addition to these sources, emissions associated with venting of gas from the reservoir may occur during drilling operations and may also occur to avoid emergency conditions e.g. in the event of a well-kick.<br><br>Atmospheric emissions from the petroleum activity will contribute to overall GHG concentrations and have the potential to result in localised changes in air quality and subsequent exposure of marine avifauna to air pollutants.<br><br>Exposure to air pollutants may cause respiratory distress in birds. Individuals may develop some short-term symptoms if they remain in the immediate vicinity of an emissions source where the pollutants are most concentrated. Rapid recovery is expected after individuals move away from the source.<br><br>Chronic exposures are not considered plausible given that marine avifauna would move away (i.e. continue migration or undertake foraging activities elsewhere).<br><br>WA-50-L does not overlap any important bird habitats and the closest breeding/resting areas are over 50 km away from the proposed activity. | MODU/vessels will:<br>• comply with the air emission requirements of Marine Order 97 (as applicable to vessel and engine size, type and class) including sulfur content of fuel oil<br>• comply with ODS and energy efficiency requirements of Marine Order 97.<br><br>Measurement and monitoring of emissions data to enable legislative reporting requirements under the National Greenhouse and Energy Reporting Act 2007 to be met for the petroleum activity.<br><br>MODU/vessel contractors have a preventative maintenance system to ensure diesel powered, power generation equipment is maintained.<br><br>Well flow back operations procedure implemented including:<br>• continuous (24/7) flare watch during flaring operations<br>• function testing of continuous ignition system and pilot system. |
| Drilling discharges including drilling fluids, cement and subsea discharges | The main impact pathways from the discharge of drill fluids and drill cuttings are associated with smothering of benthic communities and an increase in turbidity within the water column potentially impacting on water quality. Drill cuttings in suspension may also affect organisms such as sponges, corals and other fauna within the discharge plume. Studies indicate impacts from drilling (fluids/cuttings) discharges are typically localised to within 1 km of the well.<br><br>The discharge of cement, cementing fluids and additives has the potential to reduce water quality through increasing turbidity or toxicity which may affect organisms within the water column. Seabed cement discharges may result in smothering of benthic communities on the seabed in the vicinity of the well. | All chemicals discharged during the drilling campaign are selected to meet both technical and environmental criteria.<br><br>Volumes of drill fluids discharged will be minimised through the use of solids control equipment, which includes recirculation of the mud where possible.<br><br>Treatment of synthetic based mud (SBM) drill cuttings to ≤7% oil on cuttings.<br><br>Drilling fluids will have concentrations of mercury and cadmium less than 1 mg/kg and 3 mg/kg respectively in stock barite.<br><br>Return SBM to vendor at end of each well no discharge to sea.<br><br>Volumes of excess cement will be through operational cement discharges.<br><br>Use of a dye during cementing operations to indicate cement overflow, therefore minimising the volume discharged at the seabed. |
| Waste – inappropriate waste handling and disposal | MODU and vessels associated with the activity will generate a variety of non-hazardous and hazardous wastes, which will not be intentionally discharged to the marine environment.<br><br>Unsecured or incorrectly stored waste may be windblown or displaced into the ocean where it has the potential to negatively affect marine ecosystems. Wastes can cause contamination of the ocean resulting in changes to water quality e.g. through the leaching of chemicals from wastes, which can cause changes to ecosystem productivity and diversity. | Spill kits will be available on board the MODUs and vessels.<br><br>Loss of equipment or materials lost to sea will be reported.<br><br>Premobilisation HSE inspection of MODU/vessel and waste contractors confirm capability for the correct storage, labelling and handling of wastes.<br><br>Garbage management plans will be maintained and implemented on MODU/vessels in accordance with Marine Order 95. |

## Environmental management of key aspects (cont.)

| Summary of activity | Potential impacts | Proposed controls |
|---|---|---|
| Waste –inappropriate waste handling and disposal (cont.) | Certain types of waste can cause injury to marine fauna through entanglement or may affect the health of marine species that ingest waste materials. | Onshore transfer/disposal of MODU/vessel waste will be completed using a licensed waste facility or contractor. |
| Biosecurity | Benthic communities the closest of which is Browse Island, and fisheries all have the potential to be impacted by invasive marine species (IMS). To pose a biosecurity risk viable IMS propagules/individuals must be able to transfer from the colonised area (e.g. a vessel hull), survive in the surrounding environment, find a suitable habitat, and establish a self-sustaining population.<br><br>The introduction/transfer of IMS propagules to sensitive benthic habitats in the wider region may result in local to medium scale impacts. It may also result in community disruption with potential impacts to fisheries. | MODU/vessels will:<br>• comply with the Australian Ballast Water Requirements<br>• have an approved ballast water management plan and valid ballast water management certificate, unless an exemption applies or is obtained.<br>• have a biofouling management plan and retain records within a biofouling record book in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements. |
| Displacement of other marine users | Other marine users in the vicinity of WA-50-L may be impacted by the presence of the MODU/vessels through the loss of navigable space available to conduct their activities. The implications of such disruptions include changes to sailing routes and journey times, or reduced ability to fish in an area.<br><br>The worst-case consequence from a loss of access to an area could result in economic losses and/or potential reduction in employment levels. | Consultation with relevant persons<br><br>MODU and vessels fitted with lights, signals and navigation equipment as required by the Navigation Act 2012. |
| Loss of well containment | Potential for exposure to floating oil at the sea surface and within the water column.<br><br>Potential accumulation on shorelines at concentrations that may result in ecological impact.<br><br>Marine mammals, marine reptiles and marine avifauna could also be impacted through direct hydrocarbon exposure or indirectly primarily through ingestion during foraging activities.<br><br>Shoreline habitats exposed are vulnerable to smothering. Marine flora and fauna present on such shoreline habitats may be exposed to accumulated oils resulting in toxicity impacts.<br><br>Fisheries may be impacted by the presence of exclusion zones and the oiling of nets and lines. Fish communities may be impacted by exposure to oil within the water column.<br><br>Floating oil on the sea surface or on shorelines may prevent access to undertake Aboriginal traditional activities such as ceremonies and the collection of food during certain seasons or at specific times of the year. | Drilling activities conducted in accordance with the Offshore Petroleum and Greenhouse Gas Storage (Resource Management and Administration) Regulations 2011 and OPGGS (Safety) Regulations 2009 requirements, including a NOPSEMA accepted Well Operations Management Plan and MODU safety case.<br><br>Implementation of primary and secondary well control for floating drilling operations, including:<br>• Well design and planning<br>• BOP pressure and function testing prior to installation and at regular intervals<br>• Continual mud logging (24 hours) during all live, open hole well operation, with appropriate checks and calibration checks on key components to detect any changes in well<br>• Well abandonment in accordance with WOMP.<br><br>INPEX Browse regional oil pollution emergency plan. |
| Vessel collision | | Marine vessels > 400 tonnes will carry shipboard oil pollution emergency plan.<br><br>MODU and vessels fitted with lights, signals and navigation equipment as required by the Navigation Act 2012.<br><br>A 500 m Petroleum Safety Zone, issued by NOPSEMA, will be maintained around the MODU.<br><br>All vessels will use only marine diesel fuel and the maximum volume of fuel contained in any tank will not exceed 250 $m^3$.<br><br>Drilling support vessels used will have dynamic positioning (DP) equipment and have a backup DP system as a failsafe.<br><br>INPEX Browse regional oil pollution emergency plan. |

## Further information

Further information can be found online:

### Via QR Code

Instructions for accessing QR code:

1. Open your camera app on your Apple or Android device.
2. Point your camera at the QR code as if you are about to take a picture of it.
3. If your device recognises the code, a link will appear on your screen. Tap on the link when it appears.

### Via website

https://anz.planengage.com/ichthysdrilling

Alternatively, you can request further information by calling 1800 705 010.

## Comments and enquiries

INPEX welcomes your feedback on the proposed Ichthys development drilling activity.

You can provide your feedback and comments in the following ways:

**Via email**

Contact: Jodie Wesley – General Manager Corporate Affairs
Subject: Proposed Ichthys Development Drilling
Email: epconsult@inpex.com.au

**Via website**

Visit https://anz.planengage.com/ichthysdrilling and select 'Provide Feedback'

**Via phone**

Call 1800 705 010 regarding proposed Ichthys Development Drilling EP revision.

### How is your feedback used?

Your feedback will assist INPEX with understanding the environment, identifying potential environmental impacts and risks, and enables INPEX to refine its management measures if needed to reduce potential impacts.

All communications will be logged, assessed, and acknowledged with a response.

In accordance with regulatory requirements, INPEX provides NOPSEMA with full copies of all feedback received within the EP submission, together with INPEX's initial correspondence and responses to any such feedback.

Petroleum titleholders are required to publish full copies of new EPs on the NOPSEMA website. Accordingly, those who provide feedback should advise INPEX if any part of their feedback is not suitable for public disclosure (i.e. is 'sensitive information'). Sensitive information will be removed or redacted from the published EP and provided to NOPSEMA in a separate, private document.

Any stakeholder feedback received after acceptance of an EP will be managed through INPEX's community feedback management process.

INPEX Australia
Level 22, 100 St Georges Terrace
Perth, Western Australia 6000

**T** +61 8 6213 6000
**F** +61 8 6213 6455

**W** INPEX.com.au

## Appendix C.4 – Consultation summary report

| | Jurisdiction | Relevant Person | Outgoing Date | Incoming Date | Type of Correspondence | Attachments provided (additional info such as map, fact sheet etc) | Summary of Correspondence (Identifying any objection, claim, relevant matter) / Summary statement of INPEX response | Assessment of Merit | Summary of changes to the EP as a result of relevant person feedback |
|---|---|---|---|---|---|---|---|---|---|
| Department, Agency, Minister | | | | | | | | | |
| | Commonwealth | Australian Maritime Safety Authority (AMSA) - Marine Environment Pollution Response | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 29/04/2024 | Email | NA | Automatic reply - out of office with alternative contact detail provided for enquiries. | N/A | |
| | | | 30/04/2024 | NA | Email | Factsheet and link to EP Summary website | INPEX forwards previous consultation information provided to the alternative contact detail as per advice ni the out of office received on 28/03/2024. | N/A - correspondence sent by INPEX | |
| | | | 23/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Commonwealth | Australian Maritime Safety Authority (AMSA) - Nautical Advice | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 28/03/2024 | Email | NA | Automated reply - confirmation of receipt. | N/A | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 1/05/2024 | Email | NA | AMSA emailed INPEX to confirm the proposed activity being consulted is not relevant to AMSA. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | 2/05/2024 | NA | Email | NA | INPEX emails AMSA to confirm receipt of their email and thanks them for responding to the consultation. INPEX notes that based on the response received from AMSA - Nautical Advice stating they are not relevant for this consultation, INPEX will close consultation for them on this occasion. INPEX notes that should AMSA Nautical Advice wish to receive further information or provide additional comments, they can do so by contacting INPEX at the contact details provided. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Commonwealth | Australian Communications and Media Authority | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 4/04/2024 | Email | NA | ACMA thanked INPEX for the opportunity to provide comment on the five-year EP revision for Ichthys development drilling. ACMA provided background to the scope of its regulatory powers, noting that under Schedule 3A of the Telecommunications Act 1997, it may declare 'protection zones' in relation to submarine cables of national significance. ACMA notes that, from the information INPEX has provided, and based on the location of the planned activities, there are no ACMA declared protection zones in the vincinity of the planned activity areas. ACMA notes that there is an existing submarine cable in the vincinity of the planned activities, and directs INPEX to consult with Vocus as the owners of this submarine cable infrastructure. ACMA notes that given the general nature of thier comments, they do not require further consultation on the activity. | Not a relevant matter | As recommended by AMCA, INPEX has consulted with Vocus in relation to submarine cables. No changes were made to the EP as a result of this feedback. |
| | | | 10/04/2024 | NA | Email | NA | INPEX responds to ACMA, thanking them for their response to the consultation. INPEX notes the advice provided by ACMA to consult directly with Vocus, informing ACMA that this direct consultation was currently underway. INPEX confirms that as stated by ACMA, no further consultation is required on the proposed activities, and the consultation for ACMA is now considered closed for the purposes of this environment plan revision. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | | | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 5/04/2024 | Email | NA | AFMA emails INPEX, thanking them for the information provided. AFMA states that they have no specific comments on the proposed activities. AFMA encourages INPEX to peak directly with Commonwealth fishing operators in the area if they have not already done so. AFMA provides contact details for relevant industry organisations. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |

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| | Commonwealth | Australian Fisheries Management Authority (AFMA) | 23/04/2024 | NA | Email | NA | INPEX responds to AFMA, thanking them for their response in relation to the WA-50-L Environment Plan 5-year revision. INPEX confirms the receipt of the email, and notes that AFMA has advised that they do not have any specific comments to provide on the proposed activity. INPEX thanks AFMA for their advice to engage with relevant fishing associations and license holders. INPEX informs AFMA that they directly consult both CFA and WAFIC, as well as relevant Commonwealth Fishing license holders. INPEX notes that based on AFMA's response, INPEX notes the consultation for AFMA to be closed. INPEX advises that they remain open for further engagement and comments. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Commonwealth | Department of Climate Change, Energy, the Environment and Water - Underwater Cultural Heritage | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 23/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Commonwealth | Australian Hydrographic Office (AHO) | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 2/04/2024 | Email | NA | AHO emails INPEX to confirm receipt of email. AHO informs INPEX that the data supplied will be registered, assessed, prioritised and validated in preparation for updating their Navigational Charting Prodcuts. | Not a relevant matter | Although not assessed as a claim/objection or relevant matter, INPEX will make the notifications for notice to mariners as described in Section 9.8.3 if the EP as part of ongoing stakeholder consultation. |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 23/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Commonwealth | Department of Agriculture, Fisheries and Forestry - biosecurity branch (Marine Pests, Vessels, aircraft and personnel) | 3/04/2024 | NA | Email | Information requested by the Department including a summary of the proposed activity, description of the environment, evaluation of impacts and risks in relation to planned activities, an understanding of applicable regulations and details on control measures in place that represent industry good practice. | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 29 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 2/05/2024 | NA | Email | Information requested by the Department including a summary of the proposed activity, description of the environment, evaluation of impacts and risks in relation to planned activities, an understanding of applicable regulations and details on control measures in place that represent industry good practice. | Follow up email on the information provided by INPEX on 03/04/2024 as per the Departments request. INPEX requests feedback from the Department by 28 May. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | NA | Further follow up email, in which INPEX confirms the information it has previously provided the Department with as per their request available online. INPEX requests feedback from the Department by 31 May. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | NA | INPEX emails the previosuly provided consultation information to an alternative email address within the Department, requesting the Department to confirm receipt of the information and process appropriately. | N/A - correspondence sent by INPEX | |
| | | | 12/06/2024 | NA | Phone Call | NA | INPEX calls the Department's enquiry line, requesting for contact details of the Biosecurity branch, stating that they wish to check in on the progress of the Environment Plan consultation in relation to it's planned activites in WA-50-L. The Department provides INPEX with an email address, and requests INPEX email the details of their request over so that the Department may further escalate it internally. | N/A - correspondence sent by INPEX | |
| | | | 12/06/2024 | NA | Email | Information requested by the Department including a summary of the proposed activity, description of the environment, evaluation of impacts and risks in relation to planned activities, an understanding of applicable regulations and details on control measures in place that represent industry good practice.. | INPEX emails the address provided by DAFF operator over the phone, and provides an over-view of the consultation sent to the Department in April and May. INPEX requests for support in ensuring the consultation information is forwarded to the relevant team within the biosecurity branch for consideration. | N/A - correspondence sent by INPEX | |
| | | | NA | 12/06/2024 | Email | NA | DAFF operator responds to INPEX's email, confirming they have forwarded the query to the relevant teams for assesment as discussed over the phone. | General correspondence | |
| | | | 25/07/2024 | NA | Email | Information requested by the Department including a summary of the proposed activity, description of the environment, evaluation of impacts and risks in relation to planned activities, an understanding of applicable regulations and details on control measures in place that represent industry good practice.. | INPEX Emails DAFF, noting that it has made multiple attempts to contact the Department since early April, to seek consultation for the Ichthsy Development Drilling 5-year revision EP. INPEX has provided DAFF with the information requested by the Department, and provides this again as an attachment. INPEX informs the Department that as it has given the Department a reasonable period of time to respond to these consultation requests, it considers consultation for the purposes of the OPPGS (E) to be completed for the Department. INPEX advises that The Department can provide feedback to INPEX during the implementation of the EP with any new relevant matters assesed in accordance with the EP (Section 9.8.3). | N/A - correspondence sent by INPEX | |
| | | | NA | 25/07/2024 | Email | NA | Automated response from the Department. | N/A | |
| | | | NA | 25/07/2024 | Email | NA | Automated response from the Department. | N/A | |
| | | | NA | 25/07/2024 | Email | NA | Automated response from the Department. | N/A | |
| | | | NA | 25/07/2024 | Email | NA | Automated response from the Department. | N/A | |

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| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Commonwealth | Department of Agriculture, Fisheries and Forestry (DAFF) - fisheries branch | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 23/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Commonwealth | Director of National Parks | 3/04/2024 | NA | Email | Information requested by the Department including a summary of the proposed activity, description of the environment in relation to Australian Marine Parks (AMP), location map and shapefile, marine park values that could be affected by the activity including cultural heritage, an understanding of applicable BIAs and conservation management documentation, methods for determining impacts to AMPs and managing to acceptable levels including impact pathways and mitigation measures consistent with AMP management plans. | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 29 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 3/05/2024 | NA | Email | NA | Follow up email to Director of National Parks seeking comment and feedback on the information provided in relation to the proposed offshore activities in permit area WA-50-L in Browse Basin. INPEX requests feedback by 28 May 2024, and thanks the DNP for their time. | N/A - correspondence sent by INPEX | |
| | | | NA | 29/05/2024 | Email | NA | The DNP responds to INPEX, noting that based on the information INPEX has provided, the planned activities do not overlap any Australian Marine Parks. The DNP confirms that there are no authorisation requirements from them in relation to these planned activities. The DNP confirms that they do not require any further notification of progress made in relation to this activity, unless details regarding the activity change and result in an overlap with or new impact to a marine park, or for emergency responses. | Not a relevant matter | No changes were made to the EP as a result of this feedback.<br>Notifications will be made to the DNP as described in INPEX's BROPEP in the event of an oil spill. |
| | | | 10/07/2024 | NA | Email | NA | INPEX responds to the DNP, confirming the receipt of their email and noting the information provided. INPEX confirms that the DNP does not require any further information on this activity. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Commonwealth | Department of Foreign Affairs and Trade (DFAT) - Foreign Affairs | 22/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 23/05/2024 | Email | NA | DFAT contact informs INPEX that they are no longer the most appropriate contact within the Department. DFAT states that INPEX can expect to receive feedback from other branches within the Department. | General correspondence | |
| | | | 27/05/2024 | NA | Email | NA | INPEX responds to the DFAT contact, thanking them for their response. INEPX confirms that as requested, they have been removed as the contact for DFAT for future Environment Plan consultation. INPEX notes that they will look forward to receiving feedback from other branches within the Department in relation to the WA-50-L planned acitivites. | N/A - correspondence sent by INPEX | |
| | | | NA | 24/05/2024 | Email | NA | DFAT's Timor-Leste branch emails INPEX, offering comments in relation to the review of the 5-year environment plan for WA-50-L. DFAT Timor-Leste branch recommends that INPEX consult the Government of Timor Leste in the environment plan, given the proximity of the operations to the territory of the Timor-leste. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | NA | 28/05/2024 | Email | NA | An alternative contact at DFAT emails INPEX, noting that they would like to be excluded from future communication in relation to the environment plan consultations, as their team does not have a role in relation to considering environment plans. | N/A | |
| | | | 5/06/2024 | NA | Email | NA | INPEX responds to DFAT Timor-Leste branches email freom 24/05/2024. INPEX informs the DFAT that it has undertaken an assesment and not identified any relevant persons within the Maritime boundary treaty area between Timor-Leste and Australia, with planned operations located approximately 450km frmo the Treaty Area and the closest point of the EMBA over 217km with no shore line contact predicted in Timor coast or within the Treaty Area. INPEX informs DFAT that based on this, it will not pursue consultation with the Timor-Leste government in relation to the planned activities in WA-50-L. INPEX detailed controls adopted within its environment plans in relation to well controls and international notification requirements, as well as the Perth Treaty Area consideration it has made, for which it has consulted separately with the relevant branch of the Department. INPEX requests DFAT contact them should they require any further information on the information provided. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |

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| | Commonwealth | Department of Foreign Affairs and Trade (DFAT) - Foreign Affairs - Perth Treaty | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 28/03/2024 | Email | NA | Automated reply - out of office. | N/A | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 29/04/2024 | Email | NA | Automated reply - out of office. | N/A | |
| | | | NA | 7/05/2024 | Email | NA | DFAT Perth Treaty responds to INPEX, confirming their branch has no input for the Envionment Plan revision. DFAT Perth Treaty states that would like to remain on contact list for the activity. | General correspondence | |
| | | | 27/05/2024 | NA | Email | NA | INPEX responds to DFAT Perth Treaty, thanking them for their response and confirming receipt of their email. INPEX notes that DFAT Pert hTreaty has stated that they have no inputs for this Environment Plan revision, and that based on this response, INPEX will consider consultation closed for DFAT Perth Treaty for the purposes of the OPPGS (E) Regulations. INPEX notes the DFAT Perth Treaty's request to remain on the contact list for any future updates. | N/A - correspondence sent by INPEX | |
| | | | NA | 27/05/2024 | Email | NA | Automated reply - out of office. | N/A | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Western Australia | Department of Biodiversity Conservation and Attractions (DBCA) | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 4/04/2024 | Email | NA | DBCA emails INPEX, thanking them for the information provided in relation to the proposed activities for WA-50-L. DBCA informs INPEX that it has undertaken a review of the documentation provided, noting that they have previously provided comments to INPEX in relation to petroleum production activities in proximity to ecologically sensitive receptors. DBCA notes they have receved response from INPEX on these comments previously, but that they would like to reiterate its comments in this instance in relation to the Browse Island Nature Reserve and Scott Reef Nature Reserve. DBCA advises INPEX that should INPEX have any additional information requirements in addition to their previously provided comments, this would be welcome. DBCA provides INPEX with contact details for future consultation and notifications. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | Previous comments from DBCA have been incorporated into the EP with respect to DBCA feedback on Browse Island and Scott Reef Nature Reserves. |
| | | | 15/04/2024 | NA | Email | NA | INPEX responds to DBCA, thanking them for their feedback in relation to the proposed continued drilling in WA-50-L. INPEX cnofirms and acknowledges the controls of the previous comments provided by DBCA, summarising these for both baseline and oil spill related commentary. INPEX confirms that it retains the DBCA Kimberley details in their contact lists for emergebct response. INPEX requests DBCA to respond if additional information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Western Australia | Department of Transport (WA DoT) – Marine Safety | 28/06/2024 | NA | Email | BROPEP WA/NT Control Agencies Consultation Report | INPEX emails the Department with a Letter and Consultation report prepared in alignment with the Departments Offshore Petroleum Industry Guidance Note - Marine Oil Pollution: Response and Consultation Arrangements, for consideration in relation to consultation for Ichthys Development Drilling 5-year revision EP. | N/A - correspondence sent by INPEX | |
| | | | 17/07/2024 | NA | Teams Meeting | NA | INPEX representative meets with the WA DoT to discuss upcoming consultation for the WA-50-L Ichthys Development Drilling EP 5-year revision. INPEX seeks to confirm the information required by the Department for efficient assesment of of Consultation materials. The Department requests consultation information in a single letter format, for effective assesment of proposed activities. | General correspondence | |
| | | | 17/07/2024 | NA | Email | Letter C075-IPX-DNS-LE-70003 | INPEX email the Department with a consultation report prepared in alignment with the Departments Offshore Petroleum Industry Guidance Note - Marine Oil Pollution: Response and Consultation Arrangements, (the guidance note) Rev5, Section 10, for consideration in relation to the proposed activites under the Ichthys Development Drilling EP 5-year revision. | N/A - correspondence sent by INPEX | |
| | | | NA | 25/07/2024 | Email | NA | The Department emails INPEX, confirming they have received and reviewed the consultation information provided by INPEX. The Department notes alongside their review and the advice by INPEX that this activity falls under the scope of the INPEX Browse Regional Oil Pollution Emergency Plan, they have no comments to make at this stage. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | 26/07/20240 | NA | Email | NA | INPEX responds to the Department, thanking them for the prompt response to their consultation. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Western Australia | Department of Energy, Mines, Industry Regulation and Safety (DMIRS) | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 28/03/2024 | Email | NA | Automated message - confirmation of receipt. | N/A | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 29/04/2024 | Email | NA | Automated message - confirmation of receipt. | N/A | |
| | | | 23/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |

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| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Department of Primary Industries and Regional Development (DPIRD) - Fisheries Division - Commercial Fisheries & Biosecurity sections | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 23/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| **Local Government Areas** | | | | | | | | | |
| | Western Australia | Shire of Broome | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Shire of Derby - West Kimberley | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 27/03/2024 | Email | NA | Automated reply - out of office. | N/A | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| **Aboriginal and Torres Strait Island Community** | | | | | | | | | |
| | | | 20/08/2024 | NA | Email | Factsheet and link to EP Summary website | INPEX email to relevant person requesting for an opportunity to undertake consultation in relation to the proposed Environment Plan. INPEX requests for an opportunity to provide a biefing to the BJNAC board in September. | N/A - correspondence sent by INPEX | |
| | | | NA | 02/0/9/2024 | Phone Call | NA | Board meeting details confirmed by phone. | N/A | |
| | | | 4/09/2024 | NA | Email | NA | INPEX emails relevant person to thank them for confirming the time and date for INPEX to present at the next BJNAC board meeting in late September. INPEX requests relevant person confirm the location of the meeting, so that they may make logistical arrangements. | N/A - correspondence sent by INPEX | |

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| | Western Australia | Bardi and Jawi Niimidiman Aboriginal Corporation RNTBC | 25/09/2024 | NA | In person meeting | BJNAC - 20240925 - EP Presentation (slide pack) | INPEX representatives attend the BJNAC September board meeting. INPEX provided an overview of its operations, as well as providing context into the offshore approvals process and INPEX acitvities in the region. INPEX describes its approach to identifying saltwater people it seeks to consult with. INPEX explain the process INPEX undertook to assess the offshore environment in relation to the Ichthys project and shares information on how INPEX manage both planned and unplanned risks from existing operations and the proposed revision to the production drilling EP.<br>The cultural significance of the marine area and unique tidal range is highlighted to INPEX.<br>INPEX notes that it will consider including a process for addressing cultural values within its scientific monitoring programs and would be happy to discuss this approach further at a subsequent meeting. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | Section 4.4.3 of the EP acknowledges the tidal range in the wider King Sound area and therefore addresses the feedback from BJNAC.<br><br>In addition, INPEX has incorporated a process for the evaluation of any potential or actual impacts on the cultural values in the unlikely event of an unplanned offshore spill. This is presented in the BROPEP Section 4.8 Cultural Values Evaluation which details notifications, communication of data and if required co-designing of event specific cultural values impact management plans with relevant traditional owners through consultation in a culturally appropriate manner. |
| | | | 1/10/2024 | NA | Email | NA | INPEX emails relevant person to thank them for the opportunity to brief the board. INPEX requests details on the subsequent meeting it has been invited to attend in October. | N/A - correspondence sent by INPEX | |
| | | | 15/10/2024 | NA | Phone Call | NA | Subsequent meeting with Senior representatives of Bardi Jawi Traditional Owners (Law Bosses) confirmed by phone. | N/A | |
| | | | 24/10/2024 | NA | In person meeting | BJNAC - 20241024 - Law Boss Presentation (slide pack) | INPEX representatives met with Senior representives of Bardi Jawi Traditional Owners (Law Bosses) to learn about Bardi Jawi cultural values.<br>INPEX described the context of the proposal to amend its response program to incorporate a process for cultural impacts to be considered during the impact assessment of an unlikely spill event.<br>INPEX confirmed that the new process it was including in the EP would result in the BJNAC board being notified in the event of loss of well containment and potential subsequent response plans being developed in consultation with the appropriate Law men. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | NA | 11/11/2024 | Email | | Confirmation of accurate recording of engagement during consultation process received from BJNAC. | General correspondence | N/A |
| | | | NA | NA | NA | | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | NA | NA |
| | Western Australia | Kimberley Land Council (KLC) | 26/07/2024 | NA | Email | Letter C050-IPX-LE-70048<br>Link to EP Summary website | INPEX email the KLC to formally request for an opportunity to meet in person to discuss consultation for the WA-50-L Ichthys Development Drilling Environment Plan 5-year revision. | N/A - correspondence sent by INPEX | |
| | | | 26/07/2024 | NA | Email | Letter C050-IPX-LE-70048<br>Link to EP Summary website | INPEX resends the previous email to KLC, due to an incorrect email address and requests that KLC pass the letter on to the relevant person within the organisation. | N/A - correspondence sent by INPEX | |
| | | | 26/07/2024 | NA | Email | Letter C050-IPX-LE-70048<br>Link to EP Summary website | INPEX obtains correct email address, and resends the previous email to KLC. | N/A - correspondence sent by INPEX | |
| | | | NA | 26/07/2024 | Email | NA | KLC responds to INPEX, thanking them for the email and acknowledging receipt of email. KLC advises that they will process the letter and respond in the coming weeks. | General correspondence | |
| | | | 26/07/2024 | NA | Email | NA | INPEX responds to KLC, thanking them for the acknowledgment of receipt and looks forward to hearing back from them. | N/A - correspondence sent by INPEX | |
| | | | 13/08/2024 | NA | Email | Letter C050-IPX-LE-70048 and EP Factsheet | INPEX emails KLC, informing them that they will be in Broome in mid-September, and offered to meet and discuss the proposed EP. INPEX provides previous letter as an attachment, which included links to the EP summary website, as well as a copy of the EP factsheet. | N/A - correspondence sent by INPEX | |
| | | | NA | 13/08/2024 | Email | NA | KLC emails INPEX, thanking them for the advance notice. KLC informs INPEX they will respond to the request at a later date. | General correspondence | |
| | | | 22/10/2024 | NA | Email | NA | INPEX emails KLC, advising them of its intention to submit the EP revision. INPEX notes that it has provided information in relation to this EP in the past months. INPEX offers a direct contact line should KLC wish to provide any feedback, or should they have any further questions. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to consult with this Relevant Person during a reasonable period. No further response was received from this Relevant Person, however feedback can be provided to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Mayala Inninalang Aboriginal Corporation RNTBC | 20/06/2024 | NA | Email | 240620 INPEX letter to Mayala AC.pdf | INPEX emails MIAC to request a meeting to discuss their proposed consultation program, to share information and to seek advice on the best way to consult with the Mayala people. | N/A - correspondence sent by INPEX | |
| | | | 24/06/2024 | NA | Phone Call | NA | INPEX representative calls a representative of MIAC to discuss an opportunity for an in-person meeting in the coming weeks. | N/A | |
| | | | 24/06/2024 | NA | Email | NA | INPEX emails MIAC to thank them for their time over the phone earlier the same day, confirming that the time discussed for a meeting in person suits them. INPEX requests for confirmation on the location of the meeting and whether any additional attendees from Mayala would like to dial in to the meeting. | N/A - correspondence sent by INPEX | |
| | | | 26/06/2024 | NA | In person meeting | N/A | INPEX meets with MIAC to discuss the possibility of presenting to the MIAC board in relation to the proposed EP. | N/A | |
| | | | NA | 3/07/2024 | Email | Teams Meeting Link | MIAC emails INPEX with confirmation of a board meeting time for the same week. | General correspondence | |
| | | | 3/07/2024 | NA | Email | NA | INPEX representative responds to Mayala, confirming the meeting time and attendees. | N/A - correspondence sent by INPEX | |
| | | | 4/07/2024 | NA | Email | NA | INPEX representative emails Mayala on the day of the Teams meeting, to confirm logistics. | N/A - correspondence sent by INPEX | |
| | | | 4/07/2024 | NA | Teams Meeting | MAYALA - 20240704 - EP Presentation (slide pack)<br>Factsheet | INPEX provides an overview of previous engagement for offshore activities and status of accepted EPs.<br>INPEX describe the EP currently open for consultation. INPEX provides information in relation to oil spill modeling and risk assessment.<br>MIAC highlights importance of the tidal movements in the King Sound and and Mayala Marine Park area, and that the Mayala people have strong interests and cultural significance in the region. INPEX advises that there is a procedure in place for the region to manage the unlikely occurance of any spill scenarios (BROPEP).<br>MIAC notes that there might need to be Community meetings, however that they would seek advice on this from their elders. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | During preparation of the EP revision, INPEX has acknowledged the Mayala Country Plan 2019-2029 in Section 4.9.5 incorporating information with regard to the timing of activities that may occur such as fishing and turtle nesting in accordance with the Aboriginal seasonal calendar of the Mayala people. Section 4.4.3 of the EP acknowledges the tidal range in the Mayala Marine Park with reference to the Mayala Country Plan 2019-2029.<br><br>In addition to this INPEX has also incorporated a process for the evaluation of any potential or actual impacts on the cultural values in the unlikely event of an unplanned offshore spill. This is presented in the BROPEP Section 4.8 *Cultural Values Evaluation* which details notifications, communication of data and if required co-designing of event specific cultural values impact management plans with relevant traditional owners through consultation in a culturally appropriate manner. |
| | | | NA | 4/07/2024 | Email | | MIAC representative emails INPEX, requesting a copy of the presentation. | General correspondence | |
| | | | 4/07/2024 | NA | Email | MAYALA - 20240704 - EP Presentation (slide pack)<br>Factsheet | INPEX provides a copy of the presentation slides, as well as the previously proivded factsheet. | N/A - correspondence sent by INPEX | |

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| | | | 6/08/2024 | NA | Email | Factsheet | INPEX emails MIAC, thanking them for the opportunity to brief the board in July. INPEX informs MIAC that since their meeting, it has continued to consider how it can better acknowledge the existing Mayala Country Plan 2019-2029 in this EP revision, and how it can incorporate a process for the evaluation of any potential or actual impacts on the cultural values of the Mayala people, in the unlikely event of an unplanned offshore spill. INPEX informs Mayala that it has updated relevant sections of the EP to acknowledge the values described in the Country Plan. INPEX shares the proposed new inclusion of cultural values impact evaluation, as well as proposed updates to the Browse Regional Oil Pollution Emergency Plan (BROPEP), which also forms part of the EP. INPEX provides the proposed final draft wording of this new section and requests for further opportunity to continue discussion on this topic. INPEX also provides the factsheet and link to the EP summary website. | N/A - correspondence sent by INPEX | |
| | | | 22/10/2024 | NA | Email | | INPEX emails MIAC, advising them of its intention to submit the 5-year revision EP. INPEX notes that it has provided information in relation to this EP in the past months, and whilst it will be submitting the EP for assesment, the opportunity to engage and provide feedback will remain open. INPEX offers a direct contact line should MIAC wish to provide any feedback, or should they have any further questions. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | No further correspondence has been received from the Relevant Person. Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| **Businesses** | | | | | | | | | |
| | Western Australia | Absolute Ocean Charters | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Broome Billfish Charters | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | 22/05/2024 | Email | NA | Relevant persons responds to INPEX, requesting they cease emailing them any further. | Objection or claim does not have merit | No changes were made to the EP as a result of this feedback. |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Western Australia | Broome Coast Charters | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |

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| | Western Australia | Kimberley Pearl Charters | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Phat Time Fishing | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Reel Teaser Fishing Adventures | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 29/04/2024 | Email | NA | Automated response. | N/A | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | 22/05/2024 | Email | NA | Automated response. | N/A | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Vocus Communications | 8/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 29 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 15/04/2024 | Email | NA | Vocus confirmed to INPEX that they have fibre assets NWCS (North West Cable System) in the area that feed the current Ichthys platform. Vocus stated that it is imperative that this cable is not damaged or moved in anyway to ensure uninterrupted reliable communications to the platform.<br>Vocus offered to provide the RPL (route positioning list) for this cable in the area to help ensure there is no drilling or anchoring over the Vocus assets. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | Section 4.10.1 *Telecommunications* and Section 7.5 *Seabed disturbance*, of the EP has been updated to acknowledge the presence of a submarine telecomuncations cable that intersects the south eastern corner of WA-50-L and the feedback from Vocus Communications. |
| | | | 2/05/2024 | NA | Email | Map confirming location of Vocus cables in WA-50-L in relation to the proposed drilling activities. | INPEX responds to Vocus, thanking them for their patience and noting theier comments in relation to the location of the North West Cable System (NWCS). INPEX confirmed to Vocus that the location of the drill centres were not in proximity to the submarine cables and therefore there would be no interaction or disturbance to the Vocus assets from the proposed activities. INPEX provided a map to illustrate these findings, providing detailed location to confirm no potential interferference or damage to the fibre optic cable. INPEX states that they welcome further feedback or comments regarding the attached, and requests that should Vocus believe sufficient information has been provided, they confirm consultation closed on this occasion. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| **Oil and Gas Titleholders** | | | | | | | | | |
| | | | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |

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| | Western Australia | Santos Browse P/L | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Santos Offshore P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
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| | Western Australia | INPEX Browse E&P P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | IPB WA 424P P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | INPEX Ichthys P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |

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| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Shell Australia P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Santos NA Browse Basin P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Woodside Browse P/L | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| **eNGOs** | | | | | | | | | |
| | Western Australia | Conservation Council of WA (CCWA) | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | | | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |

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| | Western Australia | Environs Kimberley | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | The Kimberley - Like Nowhere Else | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Save the Kimberley | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 22/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | The Wilderness Society (WA) | 27/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | NA | 10/05/2024 | Email | NA | The Wilderness Society responds to INPEX, thanking them for contacting them in relation to the WA-50-L Environment Plan revision consultation. The Wilderness Society advises that whilst they are a relevant person for the purposes of the Offshore Petroleum and Greenhouse Storage Act 2006, they will not provide feedback on this activity at this time. The Wilderness Society provides INPEX with contact details for future updates on the activity. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | 20/05/2024 | NA | Email | NA | INPEX responds to the Wilderness Society, thanking them for their response. INPEX confirms the receipt of the email, and notes that based on the response received, INPEX will consider consultation closed for them for the purposes of this Environment Plan. INPEX notes the advice regarding future consultation. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| **Fishing Industry Associations** | | | | | | | | | |
| | | | 27/03/2024 | NA | Email | Table of State Managed commercial fisheries (WA DPIRD-managed) | INPEX emails WAFIC to inform them of the upcoming consultation and submission of the 5-year revision of the Ichthys Development Drilling EP. INPEX outlines in the email some chnages since the last time they consulted with WAFIC around INPEXs new process to identify relevant persons, WAFIC'S new consultation framework and the past process of consulting with WA fisheries.<br>INPEX states that, in reviewing the current WAFIC guidance, it has identified 11 fishery management areas that overlap the planned activity area of the EP. Using INPEXs new process results in a much higher number of relevant persons and INPEX is seeking feedback from WAFIC on whether using the Fisheries management area is in conflict withWAFICs guidance on consultation for Unplanned activities.<br>In the past (i.e. from 2016-2024) INPEX have not identified anyone fishing in the permit area (WA-50-L) but have provided Fact sheets to the two fisheries who fish adjacent to the planned activity to be conservative (Note these are the Northern Demersal Scalefish Fishery (WA) and the North West Slope Trawl Fishery (Cwlth). INPEX is happy to arrange for the info to be sent to a larger number of fisheries but is conscious it might create additional fatigue. | N/A - correspondence sent by INPEX | |

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|---|---|---|---|---|---|---|---|---|---|
| | Western Australia | Western Australian Fishing Industry Council (WAFIC) | NA | 16/04/2024 | Email | NA | WAFIC responds to INPEX, suggesting that INPEX consider the spatial boundaries of fisheries in the first instance to identify which of them might be impacted. WAFIC agrees with INPEX's assesment and that the Northern Demersal Scalefish Fishery (NDSF) is a relevant person for the purposes of this consultation, noting that WAFIC does not represent the North West Slope Trawl Fishery.<br>WAFIC informs INPEX that it has developed an approach to undertaking consultation with commercial license holders that would only be affected by a significnat unplanned event and requests titleholders develope a separate startegy whereby consultation on unplanned events resulting in an emergency scenario should only be undertaken if incident occurs. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | No changes were made to the EP as a result of this feedback. |
| | | | 18/04/2024 | NA | Email | NA | INPEX responds to WAFIC, thanking them for the information provided. INPEX outlines the 8 license holders it has identified for NDSF, and requests WAFIC's fee-for-service support in distibuting consultation materials to these license holders. | N/A - correspondence sent by INPEX | |
| | | | NA | 19/04/2024 | Email | WAFIC fee-for-service contract | WAFIC confirms that it can faciliate consultation with the NDSF license holders and provides INPEX with the fee-for-service contract. WAFIC requests INPEX to prepare the consultation materials for the license holders and an accompanying email, which WAFIC will distribute to license holders. WAFIC advises to allow 30-days minimum for license holders to provide feedback. | General correspondence | |
| | | | 9/05/2024 | NA | Email | Factsheet | INPEX thanks WAFIC and advises it has signed the contract. INPEX provides WAFIC with the consultation materials (factsheet and links to PlanEngage EP Summary website), as well as the accompanying email body to be sent by WAFIC to the license holders. | N/A - correspondence sent by INPEX | |
| | | | NA | 9/05/2024 | Email | NA | WAFIC confirms that the consultation information provided by INPEX will be issued out to the license holders the following day. WAFIC notes that their preference is for license holders to provide feedback directly to WAFIC, rather than the titleholder. WAFIC will then collate any feedback received and provide it back to INPEX. | General correspondence | |
| | | | 9/05/2024 | NA | Email | NA | INPEX confirms WAFICs proposed changes to consultation email are fine. | N/A - correspondence sent by INPEX | |
| | | | | 9/05/2024 | Email | NA | WAFIC confirms that information to license holdesr will be sent out the following day. | General correspondence | |
| | | | 10/05/2024 | NA | Email | NA | WAFIC Issues out Consultation information on behalf of INPEX to NDSF License holders. | N/A | |
| | | | NA | 14/06/2024 | Email | NA | WAFIC emails INPEX to inform that they did not receive any feedback from NDSF license holders in relation to the WA-50-L EP. WAFIC outlines its understanding in INPEX's approach to ensuring how to consult and communicate with them in the event of an oil spill, retainment of lists of WA commercial fisheries and having a suitable OSMP in place. WAFIC thanks INPEX for the opportunity to provide comments and confirms that it has no further commetns to provide at this stage. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | Western Australia | Western Australian Game Fishing Association | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Recfishwest | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 10/04/2024 | Email | NA | Recfishwest emails INPEX, noting the information received regarding the Ichthys Development Drilling 5-year revision EP. Recifshwest notes the information provided regarding the completion of new development wells in the production license area, as well as the well intervention and work activities that may be conducted in the area. Recfishwet states that based on the location of the activities, it is unlikely that recreational fishing activities will be impacted. Recfishwest states that they have no concerns based on the information provided, and thanks INPEX for the engagement. | Not a relevant matter | No changes were made to the EP as a result of this feedback. |
| | | | 15/04/2024 | NA | Email | NA | INPEX responds to Recfishwest, confirming the receipt of their email and thanking them for the response. INPEX notes that based on the response received from Recfishwest, consultation for the purposes of this EP revision will be closed for their organisation on this occasion. INPEX states that it will continue to welcome further feedback and is happy to provide further information in the future if required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | | | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |

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| | Western Australia | Pearl Producers Association | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Maxima Pearls | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Western Australia | Cygnet Bay Pearls | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024 INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 29/04/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024 Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Commonwealth | Tuna Australia | 28/03/2024 | NA | Email | Factsheet and link to EP Summary website | INPEX emails Tuna Australia, seeking comment and feeback on the proposed offshore activities in permit area WA-50-L. INPEX notes that they consulted with Tuna Australia last year on activities in permit areas WA-285-P and WA-343-P, and reviewed all matters raised during the course of that consultation by Tuna Australia, incorporating them into the relevant EP at the time where applicable. INPEX writes that WA-50-L is a neighboring permit to the areas consulted on last year, for which Tuna Australia privded feedback on. INPEX notes that Tuna Australia has been idenfitied as a relevant person, and INPEX wants to understand if there have been any changes to the matteres raised during the previous consultation that may be considered relevant to the development of the Ichthys Drilling revision EP. INPEX states that if there have been no changes, INPEX would review relevant matters raised last year and assess there they might be applicable to permit area WA-50-L. | N/A - correspondence sent by INPEX | |
| | | | 3/05/2024 | NA | Email | Factsheet and link to EP Summary website | INPEX follows up on previous communication sent to Tuna Australia on 28 March, kindly requesting for any feedback. | N/A - correspondence sent by INPEX | |
| | | | NA | 7/05/2024 | Email | NA | Tuna Australia responds to INPEX, confirming they have reviewed the information provided in relation to the proposed activities in permit area WA-50-L. Tuna Australia confirms that the impacts they expressed concerns around during the consultation for permit areas WA-385-P and WA-343-P last year would apply to this development given its proximity to the previous proposal. Tuna Australia states that they are comfortable for INPEX to consider previously the feedback previously provided during the development of the WA-50-L EP Revision, and that they have no new matters to raise. Tuna Australia requests that they be briefed on the development of the EP revision, especially if the proposed area or type of activity changes in any significant way. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | INPEX has incorporated relevant feedback from Tuna Australia into this EP (Section 4, 7 and 8), noting that the feedback was provided in 2023 for the neighbouring permit areas (WA-285-P & WA-343-P) but is still applicable to the proposed WA-50-L activities. |
| | | | 9/05/2024 | NA | Email | NA | INPEX responds to Tuna Australia, thanking them their review of the information provided in relation to the proposed activities in permit area WA-50-L. INPEX confirms that the information provided by Tuna Australia in 2023 for consultation for activities in permit areas WA-285-P and WA-343-P apply to the activities proposed under this EP. INPEX confirms that it has updated the EP revision currently under development to reflect Tuna Australia's feedback in Section 4.10.1 of the EP. INPEX confirms that based on the response received and changes made to the EP, INPEX will now consider consultation for the purposes of this EP revision closed for Tuna Australia. INPEX notes their request on updates and development to the EP, paritculary if significant changes occur, and welcomes any further feedback Tuna Australia may wish to make at this time. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |

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| | Commonwealth | Commonwealth Fisheries Association (CFA) | 28/03/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 3/05/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 27/05/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. | N/A | |
| | Commonwealth | Australian Southern Bluefin Tuna Industry Association | 8/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 8/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin - sent to an alternative email address. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 24 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | 13/05/2024 | NA | Email | Factsheet and link to EP Summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin . Provided link to EP website, factsheet and phone number, with feedback requested by 23 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | 4/06/2024 | NA | Email | Factsheet and link to EP Summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | NA | 4/06/2024 | Email | NA | Automated reply - out of office | N/A | |
| | | | 4/06/2024 | NA | Email | Factsheet and link to EP Summary website | Outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin - sent to the delegate email address provided in the automatic response INPEX received from ASBTIA. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet , email address and phone number. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | NA | 6/06/2024 | Email | NA | ASBTIA emails INPEX, thanking INPEX for following up on the consultation with them and for making an effort towards open consultation and consideration regarding future developmnets. ASBTIA acknowledges that the proposed development does not include seismic surveys, which are an area of concern to them. ASBTIA advises INPEX that their concerns therefore turn to ensuring that should there be any unexpected impacts, adequate compensation protocols are in place for the users of the development area and surrounding waters. ASBTIA points out existing examples of Protocols that have been used in Victoria, WA and Northern Territory. ASBTIA notes that they believe such procotols should be a minimum requirements for oprations, and will be essential to ongoing engagement with the industry. ASBTIA states that they expect there to be a strong engagement methodology in place to notify commercial marine operators ahead of any operational commencement, such that implications for fishing operations are minimised as much as possible. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | No changes were made to the EP as a result of this feedback. Section 7.6.1 of the EP includes the consideration of an additional control to implement a compensation process for commercial fisheries. |
| | | | 12/0/6/2024 | NA | Email | NA | INPEX responds to ASBTIA, thanking them for their feedback, noting that based on the response, INPEX understands their concerns to be limited to unexpected/unplanned impacts in the event of an oil spill. INPEX acknowledges ASBTIA's request for compensation protocol to be applied in order to address this concerns, and notes the referencing of protocol examples INPEX has actively agreed to in other region in relation to planned impacts from previous seismic surveys. INPEX states that given ASBTIA's request for protocol to be established in relation to an unknown event, it is impossible to predict the duration and area of impact, making the claim process therefore not fit for purpose in addressing their concerns due to the case by case nature of assesing actual impacts that had been realised. INPEX ensures it maintains financial assurance to ensure the costs of implementing a spill response, and undertakes pre and post spill monitoring. INPEX includes an operational and scientific monitor plan as part of the submission of the EP for assesment by NOPSEMA. INPEX notesr that in relation to displacement or loss of equipment, a 500m exlucsion zone will exist around the drill rig and notice to mariners is issued for the purpose of informing all seagoing vessels of the activity and its location. Based on the relatively small size of the exlusion zone in the context of the available fishing grounds, the physical presence of the drill rig and vessels will have an insignificant impact on commerical fisheries. Based on this, INPEX notes that the potential for economic losses is considered to be highly unlikely. | N/A - correspondence sent by INPEX | |
| | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |

| | Jurisdiction | Relevant Person | Unique Identifying Number of Licence Holder | Status during development of EP (open / complete) | Outgoing Date | Incoming Date | Type of Correspondence | Attachments provided (additional info such as map, fact sheet etc) | Summary of Correspondence (Identifying any objection, claim, relevant matter)/Summary statement of INPEX response | Assessment of Merit | Summary of changes to the EP as a result of relevant person feedback |
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| **Fishing - Aquaculture** | | | | | | | | | | | |
| | Western Australia | Northern Demersal Scalefish Fishery - Area 1 & 2 (Kimberley) Licence holders | NA | Complete | NA | NA | NA | NA | Consultation via WAFIC as representative industry council. Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. Refer to WAFIC section of this consultation log. | N/A | N/A |
| | Commonwealth | North West Slope Trawl Fishery - License Holders | NWST Fishery License Holder 1 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | NWST Fishery License Holder 2 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | NWST Fishery License Holder 3 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |

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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | NWST Fishery License Holder 4 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | Commonwealth | Western Skipjack Fishery - License Holders | WS Fishery License Holder 1 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WS Fishery License Holder 2 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | NA | 2/04/2024 | Email | NA | Automated response from relevant person, advising that the person contacted for consultation is no longer in the role. Automated response states that the email has been redirected for action where appropriate. | General correspondance | No changes were made to the EP |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |

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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 1 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 2 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 3 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |

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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 4 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 5 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 6 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 7 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 8 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 9 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 10 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 11 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 12 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 14 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 15 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 16 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | NA | 2/04/2024 | Email | NA | Relevant person responds to INPEX, thanking them fo reaching out. Relevant person advises INPEX to contact Tuna Australia as their Peak Industry Body for consultation, and provides contact details to Tuna Australia. | General correspondance | No changes were made to the EP; INPEX have consulted directly with Tuna Australia. |
| | | | | | 9/04/2024 | NA | Email | NA | INPEX responds to relevant person, thanking them for their advice to consult with Tuna Australia. INPEX notes that the relevant person is a representative with two separate licenses, and their response has been incorporated for both. INPEX informs relevant person that they are currently in the process of consulting with Tuna Australia as the relevant peak industry body. INPEX thanks relevant person for their time. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | | | WTB Fishery License Holder 17 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 18 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | WTB Fishery License Holder 19 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 20 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 21 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | WTB Fishery License Holder 22 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 23 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 24 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 25 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 26 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 27 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | Commonwealth | Western Tuna and Billfish Fishery - License Holders | WTB Fishery License Holder 28 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 29 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 30 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | WTB Fishery License Holder 31 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 32 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 33 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 34 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 35 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 36 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 37 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 38 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 39 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 40 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 41 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 42 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 43 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 44 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 45 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 46 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 47 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 48 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 49 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 50 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 51 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 52 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 53 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 54 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | WTB Fishery License Holder 55 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 56 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 57 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | WTB Fishery License Holder 58 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | WTB Fishery License Holder 59 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 1 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 2 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 3 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 4 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 5 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 6 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 7 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 8 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 9 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 10 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 11 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 12 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 13 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 14 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 15 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 16 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 17 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 18 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 19 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 20 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | NA | 2/05/2024 | Email | NA | Relevant person responds to INPEX, stating that they are no longer a professional fisher and requesting INPEX to remove their email from the consultation list as they no longer need to be contacted. | General correspondance | No changes were made to the EP |
| | | | | | 2/05/2024 | NA | Email | NA | INPEX responds to relevant person, thanking them for their email and confirming their response has been received. INPEX confirms that as requested by the relevant person, they will no longer contact them for consultation and that consultation for the purposes of this environment plan will be noted closed for them. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | | | SBT Fishery License Holder 21 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 22 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | | | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |

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| | | | SBT Fishery License Holder 23 | Complete | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 24 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 25 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | 3/06/2024 | Email | NA | Relevant person emails INPEX, advising they hold two licenses in the relevant fishery. Relevant person requests specific detail around the Southern Bluefin Tuna license, and how the planned activity may impact, in order to make a comment. | Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities. | Section 4 (Exsiting Environment) and Section 7 & 8 (Impact and Risk Assessment) includes the consideration of potential impacts to commercial fisheries and fish stocks including tuna species. This information has been provided to this relevant person. |
| | | | | | 5/06/2024 | NA | **Attachment 1**: Summary of Controls and aspects from the EP **Attachment 2**: Extract from the EP | NA | INPEX responds to relevant person, thanking them for their response to the consultation. INPEX informs the relevant person that the SBT license holders have been contacted due to the EMBA overlapping the Commonwealth SBT fishing management area. INPEX notes that limited/no fishing efforts occur within the EMBA. INPEX provides relevant person with two attachments to illustrate this area and the summary of controls for managing impacts. INPEX welcomes further quetsions or concerns over email, should the relevant person have any. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |

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| | | | SBT Fishery License Holder 26 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 27 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 28 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 29 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 30 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 31 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 32 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 34 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 35 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 36 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 37 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 38 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 39 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 40 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | Commonwealth | Southern Bluefin Tuna Fishery - License Holders | SBT Fishery License Holder 41 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 42 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 43 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 44 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 45 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 46 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 47 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 48 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 49 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 50 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 51 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 52 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 53 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 54 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 55 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 56 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 57 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 58 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

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| | | | SBT Fishery License Holder 59 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | NA | 1/05/2024 | Email | NA | Relevant person responds to INPEX, directing INPEX to contact their representative body. Relevant person requests INPEX to discontinue sending consultation emails to their address. | General correspondance | No changes were made to the EP |
| | | | | | 2/05/2024 | NA | Email | NA | INPEX responds to relevant person, noting that they are consulting with the representative body as directed and requested. INPEX confirms that they have noted the relevant persons request for no further consultation emails, and that they will close consultation directly for them in this instance. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A | |
| | | | SBT Fishery License Holder 60 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 61 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 63 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 65 | Complete | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 68 | Complete | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 69 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 70 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 71 | Complete | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 72 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 73 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | | | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |

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| | | | SBT Fishery License Holder 74 | Complete | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 75 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | NA | 2/05/2024 | Email | NA | Relevant person responds to INPEX, stating they are not relevant. | General correspondance | No changes were made to the EP |
| | | | | | 2/05/2024 | NA | Email | NA | INPEX responds to relevant person, thanking them for their response. INPEX seeks to confirm if their statement of 'not relevant' applies to the other fishing license, for which they are also marked as the representative body for. INPEX notes consultation closed for this particular environment plan for them in this instance. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). | N/A - correspondence sent by INPEX | |
| | | | SBT Fishery License Holder 76 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | | | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |

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| | | | SBT Fishery License Holder 77 | Complete | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 78 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 79 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | | | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 80 | Complete | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | SBT Fishery License Holder 81 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
| | | | | | 1/05/2024 | NA | Email | Factsheet and link to EP summary website | Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Provided link to EP website, factsheet and phone number, with feedback requested by 28 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX may make further attempts to contact again. | N/A - correspondence sent by INPEX | |
| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
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| | | | SBT Fishery License Holder 82 | Complete | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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| | | | | | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |
| | | | | | 2/04/2024 | NA | Email | Factsheet and link to EP summary website | Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L in Browse Basin. Advised that they have been identified as a relevant person whose functions, activities or interests may be affected by proposed activities. INPEX included brief description of activities and provided link to EP specific website, factsheet, email address and phone number with feedback requested by 28 May 2024. INPEX advised that all correspondence received must be provided to NOSPEMA, but that correspondence can be treated confidentially (not published publicly) if requested. | N/A - correspondence sent by INPEX | |
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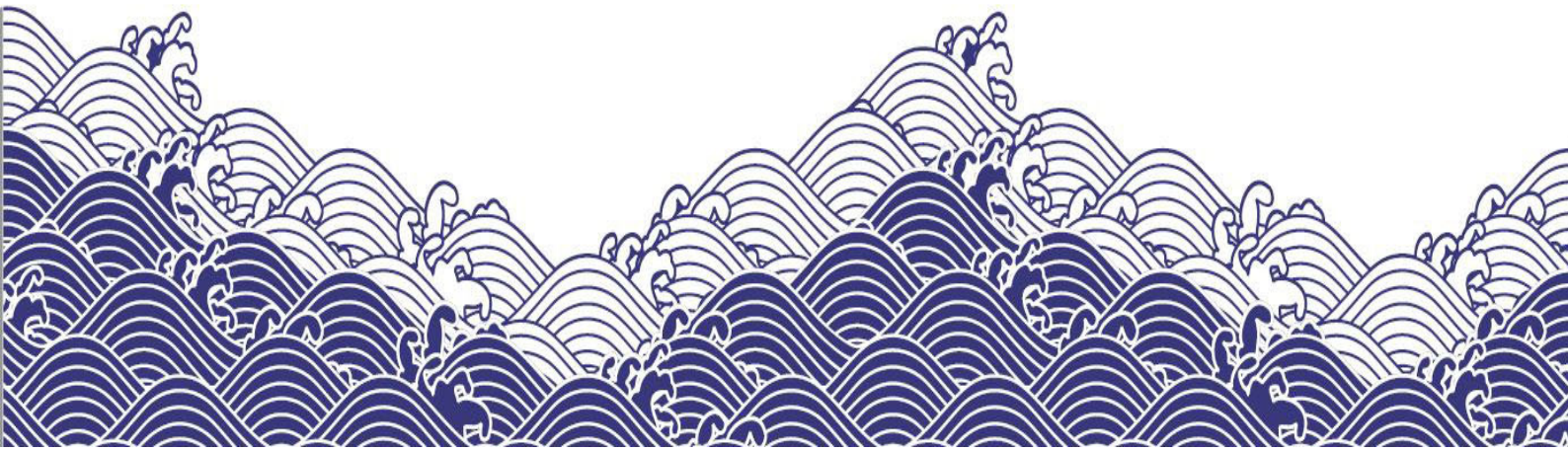
| | | | SBT Fishery License Holder 83 | Complete | 27/05/2024 | NA | Email | Factsheet and link to EP summary website | Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 31 May 2024. Requested relevant person to advise INPEX if they have no further comments on the activity, enabling consultation to be closed. If no receipt of acknowledgement is received, INPEX will note that no further information is required. | N/A - correspondence sent by INPEX | |
| | | | | | NA | NA | NA | NA | In accordance with INPEX methodology, multiple attempts have been made to contact this Relevant Person during a reasonable period with no response received to date. In addition, other mechanisms have been used to comply with INPEX's requirement to consult with Relevant Persons on the proposed activity. Further, Relevant Persons can provide feedback to INPEX via the EP webpage during the implementation of the EP with any new relevant matters assessed in accordance with the EP (Section 9.8.3). Accordingly, consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations.<br>Note: INPEX has consulted with the relevant industry body. | N/A | |

# Appendix D–
# Technical Guidance Note
# Oil Spill Modelling



# Response to Inpex questions on Oil Spill Modelling

The following technical guidance has been prepared by me, Scott Langtry, as a subject matter expert in oil spill modelling as applied to environmental management of oil field operations within the offshore waters of Australia. The details provided constitute my opinions based on specialised knowledge developed through my education, training, study, and experience, including working experience carrying out oil spill modelling for risk assessment and response to real spill incidents over 26 years.

This report has been compiled in response to a request by Inpex Australia to provide answers to the following questions:

## 1.0 Base Scope

| Question | Answer |
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| a) Describe generally the purpose of oil spill modelling. | See addendum, Section 1.0. |
| b) Develop a report which describes the model conservatism, and how the conservatisms affect model outputs and results, as related to the thresholds presented in (c) and (d) below. | See addendum, Section 2.0 and details below. |
| c) 10 ppb entrained oil threshold: | |
| (i) Can you confirm that the 10 ppb entrained threshold, when evaluated through the model, is based on 'instantaneous exposure", when the 10 ppb threshold is actually derived from dissolved oil exposure over a time-weighted average? | Yes.<br>The model calculations are analysed for distributions of oil mass in different states (floating, entrained, dissolved, stranded, evaporated) at each model time step.<br>Typically, 15-minute time steps (or less) are used to maximise accuracy of the weathering and transport calculations.<br>Consequently, entrained oil >10 ppb (parts per billion) calculated for durations as short as 15 minutes during any replicate simulation would flag a location as 'affected'.<br>This flag would only need to occur during 1 of 300 simulations (=0.3% probability of occurrence) for that location to be enclosed by a polygon defining the |

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| | Environment that May Be Affected (EMBA) as defined in the NOPSEMA guideline (2019).<br><br>A 10 ppb entrained threshold is not based on evidence that 10 ppb of entrained oil droplets (alone) is harmful for either short term (e.g., 15 minutes or for any longer duration (e.g., 48-96 hrs).<br><br>The NOPSEMA guideline has applied the same threshold for both dissolved and entrained hydrocarbon concentrations as instantaneous exposures. The dissolved threshold concentration was calculated by toxicity studies applying long-term exposures (48-96 hrs of exposure) to the components of oil that can dissolve into water from oil mixtures and no correction for shorter exposure durations has been applied in the NOPSEMA guidelines (see below; part ii).<br><br>At the outer bounds of the EMBA calculated for a blowout simulation spanning 70 or more days, entrained oil would be present as widely dispersed and insoluble droplets with small diameter (10-50 µm). No insoluble compounds will remain to dissolve into the water to trigger the toxic effects demonstrated by toxicity testing on marine organisms.<br><br>Direct contact with droplets or consumption of droplets may have influence but risks of influence would depend upon encounter rates, which would depend on the concentration of droplets and the duration that they are present.<br><br>As an indication of the meaning of the 10 ppb concentration threshold that the NOPSEMA guidelines recommend for entrained oil, this would represent one insoluble droplet suspended in 40,000 L of water for a droplet of 25 µm diameter. It would be necessary to have one million droplets of this size to form a standard drop of oil from an oil dropper (0.05 ml).<br><br>Consequently, the potential for direct contact by marine biota with a droplet at this threshold concentration when triggered by durations as short as 15 minutes is highly conservative for any consequence through direct contact with droplets. |
| (ii) Can you describe how the use of instantaneous thresholds in the model may affect the model outputs/geographical areas exposed above threshold? | Instantaneous thresholds have a very large influence upon the geographic extent that is mapped as the EMBA, an influence larger than all other conservative measures applied.<br><br>Hydrocarbons impose a narcotic effect on organisms through absorption of soluble hydrocarbons from water into their tissue, and it takes longer than 15 minutes for |

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| | harmful soluble compounds to accumulate to levels that impose effect when the concentration of harmful, soluble, hydrocarbons in the water is higher than 10 ppb.<br><br>Species vary by sensitivity and different oils vary in terms of the toxic components present.<br><br>The lowest toxic threshold for soluble hydrocarbons (~10 ppb) has been derived as a generic trigger value for potential sublethal influence from a large body of laboratory toxicity testing where exposure has been maintained for 48-96 hrs to ensure saturation of body tissues. A value of ~10 ppb is the lowest value reported for the most sensitive marine species using the water solutions generated from the most toxic oil mixtures.<br><br>Exponentially higher concentrations are required to achieve equivalent effects over shorter durations. At least 100 times higher concentrations would remain conservative for durations of <1 hr.<br><br>Instantaneous thresholds treat all areas exposed for a time as short as 15 minutes as if they were exposed constantly for 2 to 4 days (following evidence from toxicity studies).<br><br>This is very conservative, and reliance on the extent of the EMBA alone obscures information that would be available to show those locations that may be more at risk, such as those locations where longer exposures may occur.<br><br>Further clarification can be provided. |
| (iii) Can you comment on how the probability maps/contours generated by the model using instantaneous oil exposure thresholds would be affected, compared to what would occur using time-weighted exposure thresholds? | Comparisons of model calculations for areas that might experience instantaneous exposures (e.g., >10 ppb of entrained oil for 15 minutes) versus time-weighted exposures (e.g., >10 ppb on average over 24, 48 or 96 hours) indicates that the difference depends on the scenario, oil type and component (floating, entrained, dissolved).<br><br>The outer extent of the EMBA may be reduced to as small as 20% of the surface area (i.e., the surface area enclosed by the EMBA may be reduced by up to 80%) when based on time-weighted exposures.<br><br>The shape of the EMBA will also typically change to highlight locations where environmental forcing is more likely to direct higher concentrations of spilled material repeatedly or to retain spilled material for longer during a long duration release (e.g., a blowout) – detail that should be relevant to risk assessment, planning and consultation purposes. |

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| | Allowing for as little as 2 subsequent time steps or for 2 records of exceedance at any time during any spill simulation, will result in marked reduction of the geographic area and alter the shape calculated for the EMBA, showing that large parts of the existing EMBA calculations can be due to single, 15-minute, records.<br><br>Further clarification can be provided. |
| c) 10 g/$m^2$ shoreline contact threshold: | |
| (i) Can you describe how the model calculates oil accumulation volumes on shorelines, in consideration of the modelled shoreline grid-cell/lineal shoreline lengths vs actual/realistic shoreline lengths and the effect this may have on volumes of oil ashore calculated by the model? | Accumulation of oil onto shorelines is calculated as the mass of oil per unit of shoreline area.<br><br>The coastline at mean sea level is subdivided into fixed, rectangular, grid cells of a defined area described by fixed length and width.<br><br>For example:<br>• 1 km long x 10 m wide (10,000 $m^2$ area per cell) for blowouts.<br>• 400 m long x 10 m wide (4,000 $m^2$ area per cell) for diesel spills.<br><br>Owing to the grid scale applied, the coastline shape must be simplified in areas of small-scale complexity.<br><br>Very complex and convoluted shorelines will be represented by a smaller area than reality, adding conservatism by lowering the area used when calculating the mass of oil per unit area.<br><br>The more complex the coastline the larger the degree of conservatism.<br><br>If the model calculates that any part of a patch of floating oil contacts any part of a coastline cell, the total mass of oil in that patch is transferred to the coastline cell as a conservative calculation for oil stranding.<br><br>Any subsequent oil patches that contact that coastline cell will add to the tally in that coastline cell over time.<br><br>The maximum possible load at any time will be capped at the carrying capacity set for shoreline cells (40 $m^3$ over 10,000 $m^2$ for low viscosity oils (condensates and diesel, etc.).<br><br>Any excess oil will be re-floated and may then accumulate on other coastline cells.<br><br>Evaporation and degradation are calculated for stranded oil to reduce the tally of oil in a coastline cell over time. |

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| | When all simulations are complete, the highest mass recorded at any time due to inputs versus losses is found for each coastline cell in each simulation.<br><br>The highest mass from any simulation is divided by the shoreline area of the cell to determine the peak concentration (grams of oil/area in $m^2$) as the most conservative calculation for the amount of oil that might be present, for clean-up and other considerations.<br><br>The peak concentration calculated for each shoreline cell among all replicate simulations is compared to thresholds of relevance.<br><br>Any shoreline cell with peak mass per area > minimum threshold (e.g., 10 $g/m^2$) during any replicate simulation will be included in the EMBA polygon.<br><br>Note that:<br><br>1. The peak concentration that is calculated will be higher if the surface area available for accumulation is under-represented in the model compared to reality.<br>2. The peak concentration that is calculated may be, and typically is, higher than the concentration that would be calculated at the end of the simulation, after further weathering is allowed for.<br>3. No differential is made between oil on the surface and oil that has entered the substrate.<br><br>Further clarification can be provided. |
| (ii) Can you describe if the model includes consideration of tidal movements or wetting and drying of intertidal areas, and how this may affect modelled oil concentration outputs, vs what might occur in reality? | The model does not account for wetting and drying of the intertidal zone.<br><br>Both the coastline position and water level are treated as fixed, and calculations assume a fixed average width of the shoreline interface (10 m wide) is always available for accumulation.<br><br>One outcome at a very local scale is that the model cannot differentiate between the happenstance of oil arriving when the shoreline extends further seaward (at lower tide, exposing a wider zone) or when it might have shrunk back to a narrower zone (at higher tide).<br><br>Although the intertidal width will vary over time, in reality, and oil might be spread over varying area, the area allowance is assumed fixed to an average of 10 m wide when calculating the mass accumulated per area.<br><br>In reality, concentrations of oil would likely vary with the tide in areas with very large tidal ranges and low slope, |

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| | and we have applied a fixed width as an assumed average.<br><br>One conservatism is that shorelines are assumed to be "sticky" – binding the oil to the shorelines with no re-floating due to subsequent tidal flooding.<br><br>This assumes oil accumulations would migrate up and down, occupying the same width of the shoreline as the tide varied.<br><br>The exception is if the carrying capacity of the shoreline is exceeded. For condensates and diesel this would only be allowed in the model if the thickness exceeded 4 mm, allowing for high accumulation capacity (e.g., 32 tons per shoreline cell for a 1 km long x 10 m wide shoreline if the density averaged 800 kg/$m^3$).<br><br>Noting that the model domain must cover areas of hundreds of thousands of $km^2$ for a blowout scenario, the fixed coastline assumptions represent necessary simplifications requiring a conservative approach.<br><br>Further clarification can be provided. |
| (iii) Can you confirm if the model continues to calculate oil weathering of stranded oil on a shoreline, specifically evaporation and melting point? | Yes.<br><br>As stated above (part i), oil weathering continues to apply to oil classed as stranded.<br><br>Loss of oil mass from coastline cells can occur through three processes:<br><br>1. Evaporation.<br>2. Degradation (representing microbial action and photo-oxidation).<br>3. Re-floating (if the carrying capacity of the coastline cell is exceeded).<br><br>The composition of the oil when freshly released at source is represented by the proportion of the whole oil contributed by groups of hydrocarbons, varying by volatility.<br><br>Composition change is calculated over time through evaporation and dissolution when the oil is floating, and the composition of oil patches is known by the model at the time of stranding.<br><br>Calculations for variable rates of evaporation, by sub-components, continues for stranded oil until only the non-evaporating residues (boiling point >380 °C) remain.<br><br>Calculations for evaporation rates are based on wind speed and average ambient temperature (30 °C for the Inpex studies), not elevated temperatures that might occur during daytime on heat-retaining surfaces. |

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| | Calculations for evaporation are, therefore, conservative if evaporating components remain in the stranded oil.<br><br>If only residues strand, no loss of oil through evaporation will be calculated on shorelines.<br><br>Degradation is applied to the total mass (regardless of composition) at a fixed rate.<br><br>A conservative rate of 3% of the mass per day is applied. This rate has been derived from published tests on more complex oil types than diesel or condensate and is considered conservative for condensates in lieu of further research to confirm rates of degradation of both oil types.<br><br>The model does not calculate for melting point to decide whether the oil is on the substrate (e.g., as solid wax) or in the substrate (e.g., as a melted wax). |
| (iv) Can you describe if the model takes into consideration the effect of exposed intertidal shoreline temperature (i.e., sand/rock temperature) and the effect this may have on stranded oil including effect on oil melting point and subsequent behaviour of the stranded oil? | Degradation rates do not account for substrate temperature.<br><br>This will be conservative in settings with high average substrate temperatures because degradation rates do increase at higher temperatures.<br><br>The same ambient temperature and prevailing wind speeds are used for both floating and stranded oil for calculating evaporation rates.<br><br>This will be conservative if the oil arrives with volatile content and the real temperatures are higher than assumed (30°C for the Inpex study locations) on average.<br><br>This would not be conservative if only residues arrive at coastline cells.<br><br>No calculations are made by the model for the physical state (solid/liquid) of hydrocarbons, or of uptake by sediments. Such considerations would need to be made outside of the model calculations.<br><br>Further clarification can be provided. |

1.1 Supplementary Scope

| | |
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| (a) Can you confirm if there are any other factors which may affect conservatisms within the model? | See addendum. |
| (b) if Yes, can you please explain these additional factors. | See addendum. |

# Addendum

### 1.0 (a) Describe generally the purpose of oil spill modelling.

Modelling of oil fate and transport is useful, and has been applied to multiple purposes:

- Calculating risks of exposure to facilities, personnel, interests of other parties and environmental resources if a spill scenario were to eventuate.
- Guiding preparations for response, including identifying those resources that may need to be defended and what responses may be practical given factors such as the nature of the place at risk and the evolution through weathering of the oil type(s) that might be spilled.
- Forecasting the drift and behaviour of oil slicks ahead of real time to guide response to real spills.
- Forecasting the efficacy of alternative response measures.
- Guidance of environmental monitoring efforts to sense influence or impact.
- Post-spill assessment to inform and quantify social, environmental, or commercial impacts.

The first general application is the basis of EMBA calculations at present, but with the results simplified to calculating the area enclosing all locations where greater than low threshold concentrations might occur instantaneously at very low probabilities.

Other calculations from modelling are available and may be applied as contextual measures. These include:

- Mapping locations at higher probability of contact > instantaneous thresholds.
- Mapping locations at risk of longer durations of contact > instantaneous thresholds.
- Mapping locations at higher probability of contact at > time-integrated thresholds.
- Mapping locations based on potential concentrations (maximums and statistical distributions such as mean and higher percentiles).

### 1.0 (b) Develop a report which describes the model conservatism, and how the conservatisms affect model outputs and results, as related to the thresholds presented in (c) and (d) below.

#### General background

In general, oil spill models are a collection of interacting formulae and calculations that have been compiled to best represent current knowledge of processes that affect oil when released into the marine environment.

These processes are complex and interacting, requiring organised formulation to avoid errors and bias.

The formulations are numerical tools that allow comparative testing for different outcomes depending upon the scenario and prevailing conditions, subject to errors and uncertainties in both the inputs and the formulae.

Key processes have been studied to varying degrees over several decades through empirical studies, observations, and laboratory experiments. Some processes and their dependencies are well understood, while others have larger uncertainties and are the subject of ongoing testing and development.

The model formulations allow management of uncertainties through sensitivity allowances and/or conservative calculations or inputs (i.e., arrangements that are more likely to overstate and not understate risks).

**Potential sources of conservatism**

As a general principle, the ongoing calculation of concentrations over a large number of sequential time steps (e.g., 7,680 contiguous time-steps in an 80-day blowout simulation), with calculations at each time step dependent upon a previous calculation of state, can be expected to lead to magnification of any model errors at the outer distances and durations.

The current NOPSEMA guidance for calculating the EMBA has changed the focus of modelling assessment efforts from identifying locations that are most at risk (typically closer to the source and at risk of contact over shorter elapsed times) to map out only an outer bound of possibilities. One consequence of this is that the EMBA definition is now highly dependent on model capabilities, uncertainties, and compounding of errors in calculations for defining when concentrations will fall below very low concentrations.

The modelling software that I will detail to address model calculations and conservatism is the Spill Impact Model Application Package (SIMAP) that has been applied to most oil spill risk assessments in Australia, including those carried out for INPEX, but considerations will be common to other oil spill models of similar capability.

SIMAP is three-dimensional and is structured as a series of interacting algorithms that consider all known key processes that may affect the transport and weathering of hydrocarbon mixtures:

- Buoyancy (upward vertical transport from subsea).
- Initial spreading due to gravity and surface tension.
- Horizontal transport due to wind and current.
- Spreading (transport in the vertical and horizontal) due to dispersive forces.
- Wave-induced entrainment into the water column (as oil droplets).
- Dissolution (of soluble hydrocarbons) into the water column.
- Vertical dispersion of dissolved hydrocarbons (vertical spreading due to dispersive forces).
- Evaporation to the atmosphere.
- Emulsification (uptake of water into floating oil films).
- Change in viscosity due to change in composition and emulsification.
- Sedimentation (through binding with suspended sediment).
- Shoreline stranding – shoreline specific.
- Re-floating from shorelines (if capacity exceeded).
- Degradation (to component molecules).

The model uses oil composition and physical properties as input, and calculates changes in the mass distribution of the spilled oil over time among six states in response to the release scenario (e.g., onto the water, from subsea blowouts, etc.) and a sequence of environmental conditions:

1. Floating as a film on the water surface.

2. Entrained (at some depth) as oil droplets suspended in the water column.
3. Dissolved (at some depth) in the water column from films or suspended droplets.
4. Evaporated (to the atmosphere).
5. Stranded on a shoreline.
6. Degraded to simpler chemical components (hydrogen, carbons, etc.).

The NOPSEMA guidelines require that the worst-case (or worst plausible case) spill scenario is modelled for a given oilfield operation. For drilling operations into reservoirs where gas/condensates are targeted, that will involve a long-term (>70-day) release of gas and condensate at the highest rate possible through a fully open reservoir.

This scenario will generate the highest potential initial concentrations, both in reality and in the model, and is a conservative starting point.

Key considerations for conservatisms in the modelling are calculations for initial concentrations, the initial distribution of oil mass among the states, and processes that affect reductions in the concentrations of oil in each state over time.

Calculations for gas-condensate releases, more so than for heavier oil types, are very sensitive to model calculations of entrainment rates because these oil mixtures have both very low viscosity (hence will be susceptible to entrainment) and are mostly composed of volatile hydrocarbons (hence will be susceptible to evaporation, if exposed to the atmosphere). Entrainment and dissolution are competing fate pathway to floating and evaporation.

Over-prediction of entrainment rates will reduce the evaporation rate that is calculated (a general loss term for calculation of oil mass that would otherwise be on or in the water, or on shorelines) and leads to higher concentrations of entrained oil being calculated further from the source.

Entrainment is calculated for two processes by the model:

- As droplets released subsea (for blowouts).
- Generated by waves breaking up slicks into droplets and mixing the droplets into the surface layer, or keeping droplets that were entrained by the process above mixed into that layer.

Considerable care is required to calculate the initial droplet-size distributions accurately for subsea blowout scenarios involving highly volatile condensates (as opposed to less volatile mixtures) due to the large influence of droplet-size calculations upon entrainment rates versus evaporation rates. Calculations for oil droplet sizes have been an active area of model development and the modelling currently incorporates the most recent calculations from authoritative sources (SINTEF, TAMOC, etc.) but understatement of droplet sizes remains a risk for overstatement of entrainment rates because most research has involved heavier oil types.

Calculations for entrainment due to wave action in the SIMAP model were updated ~5 years ago to new formulations following a large volume of research conducted for the Deepwater Horizon blowout. The updated formulations increased the sensitivity to wave action, lowering thresholds for wind speed required to generate or maintain entrainment for low viscosity oils.

Sensitivity testing suggests that the allowances may be overly conservative for entrainment rates when applied to highly volatile condensates. In turn, calculations

would likely be conservative for dissolution rates and dissolved hydrocarbon concentrations for these products because faster dissolution is calculated for entrained oil than for slicks.

The model will calculate reduction of oil concentrations for surface and subsurface oil concentrations (entrained and dissolved) due to dispersion, representing the spreading and thinning of patches and plumes over time due to the mixing forces in the ocean.

Contemporary calculations for dispersion are typically set for moderate sea conditions for the scenario setting and not for more energetic conditions that can occur. On average, it is expected that this approach will result in maintenance of higher concentrations over longer distances than might occur in reality. The level of conservatism would vary depending on the frequency of occurrence of windy conditions that would trigger breaking sea waves.

A further level of conservatism for calculation of entrainment (increasing dissolution) versus floating (increasing evaporation) for surface releases of highly volatile condensates is the model time step. Highly volatile condensates with a low residue content will flash off rapidly, in reality, when spread thinly onto the water surface. However, calculation at 15-minute steps, which is a practical rate for long term blowout modelling, may underestimate the evaporation rate that is calculated for such condensates and overestimate the calculation for maintenance of entrained oil concentrations above low thresholds. Evaporation rates are calculated to occur at a slower rate for soluble hydrocarbons that are dissolved in surface-waters than at the surface, which could lead to overstatement of dissolved hydrocarbon concentrations exceeding low thresholds.

Some loss of mass is calculated for entrained oil over time due to dissolution of the soluble compounds. These compounds will typically represent a small proportion of the mass of an oil initially (typically 6-12% for condensates) so there would be only a relatively small influence on reduction of entrained oil concentrations.

It is also noteworthy that the model can calculate when entrained oil droplets have lost all soluble components. However, the NOPSEMA guidelines are applied equally to entrained oil that has remaining soluble components and those that have migrated long distances over long time periods and would have weathered to lose all soluble components. Because the EMBA line defines the widest boundaries, it will be the concentrations of weathered entrained oil that are tested against the NOPSEMA guideline threshold.

Degradation rates are applied to allow for reduction of oil concentrations over time. These rates are derived from literature accounts, and different rates are applied to floating, entrained, dissolved, and stranded oil. All rates are assumed to be conservative for condensates, in particular, because they tend to be composed of simpler hydrocarbons than those oils used to measure degradation rates, which could lead to concentrations being maintained for longer distances and durations than might occur, in reality, in warm tropical and sub-tropical settings. The rate currently applied to the insoluble components of entrained oil is a constant rate of ~8% of the mass per day.

Collectively for these uncertainties, calculations for entrainment mass concentrations and dissolved hydrocarbons will tend to be increasingly conservative over many sequential calculations.

The extremely low threshold set by the NOPSEMA guidelines for entrained oil is interacting with the conservative allowances for entrained concentrations for gas

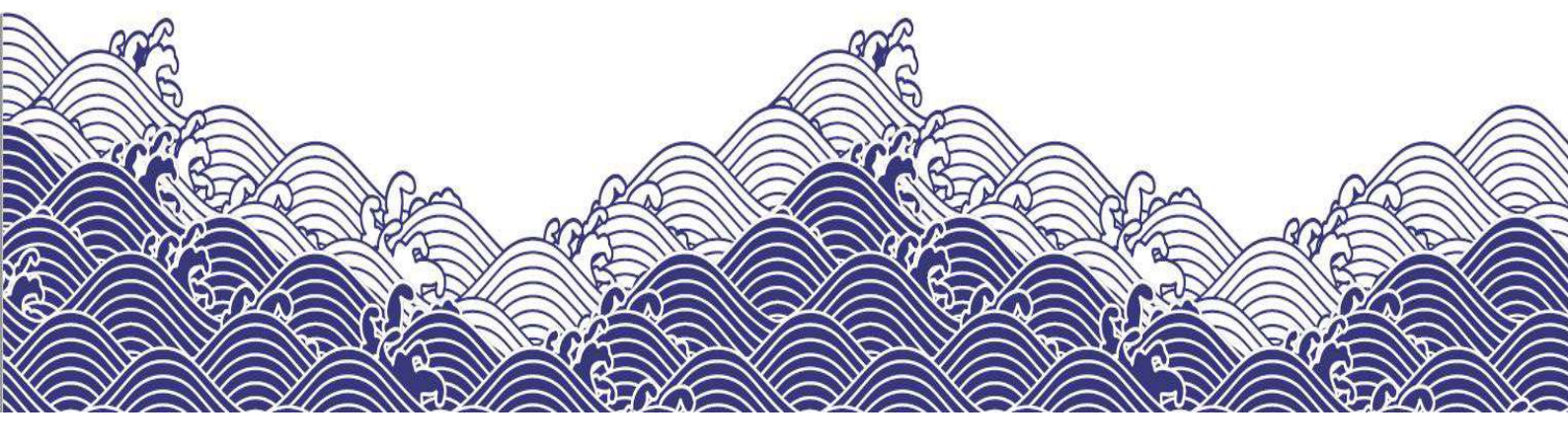
condensates to dominate calculations for the EMBA for both blowout and surface release scenarios for this oil type. In other words, the extent of the entrained oil contour applied to the EMBA calculation is always larger than for any other component.

A further, potential, consequence of maintaining entrained concentrations for longer, in combination with the low threshold set by the NOPSEMA guidelines for oil contact with shorelines (as opposed to accumulation), is that model calculations for re-floating of oil from an entrained state become more critical. The model only needs to calculate that re-floating has led to a small patch of oil at the surface that is equal to or marginally higher than the low threshold (10 $g/m^2$ on the surface) from an overstated entrained oil concentration to flag a once-off calculation for shoreline exposure at a location that can be isolated by a long distance from the extent calculated for surface slicks to decrease below threshold concentrations when remaining at surface. One such occurrence among 300 simulations will flag a shoreline location for inclusion in the EMBA at a further distance than is indicated for the persistence of surface slicks above the low threshold. Although entrainment and re-floating are real processes that can occur, it is plausible that model errors are responsible for triggering the flagging of some stranding events judged by the low instantaneous threshold at the outer bounds of the EMBA.

**Scott Langtry**
Principal Scientist
RPS | MetOcean Science & Technology
Level 3, 500 Hay Street
Subiaco, WA 6008, Australia

**T** +61 8 9211 1111 **F** +61 8 9211 1122
**D** +61 8 9211 1149 **M** +61 418 827 754
**E** scott.langtry@rpsgroup.com

# Appendix E-
## Source Control Capability & Arrangements



**RECORD OF AMENDMENT**

| Revision | Section | Amendment |
|---|---|---|
| 1 | 4.6 (Table 4-5) | Environmental performance standards defining timelines for the capping stack mobilisation to the well location and deployment plan and relief well response model activities have been included as a result of the NOPSEMA assessment of the Offshore Facility (Operation) EP |
| 2 | Table 1-1; Table 3-1;<br>4.2 (Table 4-1);<br>4.6 (Table 4-4) | Tables revised to include Holonema (WA-285-P) and Bassett Deep (WA-343-P) wells.<br>References provided for Exploration Drilling WA-285-P and WA-343-P EP and Browse Basin Common Relief Well Design and Response Time Models Technical Note |
| | 4.5 (Table 4-2) | Capping stack mobilisation times revised to align with the INPEX Capping Stack Logistics Plan (D020-AD-PRC-10039) |
| 3 | 4.2 | Details of source control MODU and vessel availability monitoring and associated adaptive management implementation included |
| | Table 4-5 | Include pre-spud risk review in EPS regarding the maintenance of MODU and vessel availability registers |
| | 5.2; Table 5-2 | Include a description of pre-spud risk reviews and adaptive management, to ensure adequate source control MODU and vessel availability.<br>Include new EPS's for the verification of suitable source control MODU's and vessels prior to spudding well.<br>Amend current EPS for MoC'ing changes made as a result of quarterly risk review. |
| 4 | 1.2 | Remove Ichthys Development Drilling EP from Out of scope/limitations section. The contents of this Source Control Report now apply to all current and future INPEX Drilling EPs (refer Ichthys Drilling EP MoC #005 [D021-AD-STA-70004]). |
| | Table 1-1 | Include reference to new INPEX Browse Basin SCERP (D020-AD-PLN-10040) which replaces the superseded BOCP document. |
| | Table 4-4 | Remove costs from the evaluation table, considered superfluous to the evaluation summary. |
| 5 | Table 1-1 | Table revised to include P2C document references. |

| Revision | Section | Amendment |
|---|---|---|
| | Table 3-1 | Table updated with revised well blowout modelling data, including P2C wells and removing Holonema/BD exploration well references. |
| | 4.3 (Table 4-1) | Update relief well analysis text and response time model for Plover P2C relief wells (80 days). |
| | Section 5 | Update reference to new OPGGS (Env) Regulations 2023 |

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**NOTICE**

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# 1 INTRODUCTION

## 1.1 Purpose

The purpose of this document is to:

- Present a summary of INPEX Australia's exploration and production (E&P) drilling; and operations activities in the Browse Basin.
- Present a summary of the worst credible well blowout scenarios (WCWBS) which could occur from exploration/production drilling activities and from the operation of production wells.
- Provide a detailed source control capability analysis, for the selected WCWBS.
- Define environmental performance outcomes (EPO) and environmental performance standards (EPS) for the source control capabilities and arrangements (preparedness), and the risk assessment of the implementation of the source control capability.
- Provide an implementation strategy for this source control arrangements and risk assessment report, including management of change processes and compliance reporting requirements.
- Ensure INPEX's description of source control capability and arrangements as related to Environment Plans (EP) is appropriately described, in accordance with the requirements of Section 3.1 of the NOPSEMA *Source control planning and procedures* Information Paper (N-04750-IP1979).

## 1.2 Limitations/out of scope

This document does not include evaluation and response capability/arrangements associated with the following:

- Environmental risk assessment and spill prevention/control
  - The following elements are contained within each activity specific EP:
    - Detailed activity description
    - Activity specific oil spill hazard identification, including potential release rates, volumes, locations, hydrocarbon types etc.
    - Activity specific oil spill modelling, used to inform environmental risk assessment
    - Description and risk assessment of oil spills on environmental values and sensitivities
    - Evaluation of controls to prevent oil pollution from the described activity.
- Oil spill response
  - Oil spill response for all INPEX Australia EPs are managed under the Browse Regional Oil Pollution Emergency Plan (BROPEP) suite of documents
- Operational and scientific monitoring programs (OSMP)
  - The full OSMP capability requirement is addressed within the INPEX Australia Browse Regional Oil Pollution Emergency Plan (BROPEP) (X060-AH-PLN-70009 – Appendix A).

The inter-relationship of this document to other drilling and environmental documentation is presented in Table 1-1.

**Table 1-1: Source Control Documentation Overview**

| Document title | Document number | Purpose |
|---|---|---|
| INPEX Australia Environment Plans - Source Control Capability and Arrangements Report (This document) | D021-AH-REP-70000 | The Source Control Capability and Arrangements Report (this Report) provides an evaluation of INPEX's source control capability and arrangements required to conduct a successful well-kill for exploration and production wells in the Browse Basin. This document also provides the environmental ALARP and acceptability statements and implementation strategy, to ensure the ongoing demonstration of source control capability and arrangements. |
| Loss of Well Integrity Response Plan (WIRP) | D021-AD-PLN-70023 | The WIRP's objective is to prevent the escalation of any loss of well integrity and reinstate well integrity as soon as practicable. It:<br>• provides an action plan to be taken in the case of a loss of well integrity from a production well; and<br>• identifies and records the required readiness level for the preparation, equipment and services. It describes:<br>- the requirements documented as checklists; and<br>- checklists suitable for both planning and audit. |
| INPEX Well Operations Management Plans (WOMP):<br>• INPEX Phase 2a WOMP<br>• INPEX Phase 2c WOMP | 0000-AD-PLN-60004<br>TBA | The WOMP describes the well activities and associated management systems for drilling and completion; suspension; intervention; and inspection maintenance and repair of INPEX production and exploration wells within their respective permit and licence areas. |
| INPEX Browse Basin Source Control Emergency Response Plan (SCERP) | D020-AD-PLN-10040 | The purpose of the SCERP is to provide a plan for regaining control of a blowout, not blowout prevention. The SCERP specifies how INPEX will respond to a well control event where primary well control has been lost with potential, or real, complications with secondary well control, extending to the worst case scenario of an uncontrolled blowout with significant hydrocarbon release to the environment and loss of assets. |

| Document title | Document number | Purpose |
|---|---|---|
| Wild Well Control International (WWCI) Source Control Emergency Response Plan (SCERP) | D020-AD-PRC-10036 | The WWCI SCERP is designed as a subset of the INPEX Browse Basin SCERP, to support response preparations to well control emergencies and establish a process for responding to safely managing them using a standard uniform approach. It includes the equipment and procedures to address a range of well control scenarios necessitating immediate mobilisation of intervention equipment and personnel. |
| INPEX Capping Stack Logistics Plan | D020-AD-PRC-10039 | The INPEX Logistics plan describes the mobilisation of the WWCI capping, debris clearance and dispersant equipment (Source Control Equipment) into Australia from point of origin (Singapore) through end delivery point in Australian waters. |
| INPEX Environment Plans<br>• Offshore Facility Operations EP<br>• Ichthys Development Drilling Campaign WA-50-L<br>• Ichthys Phase 2 Development Drilling Campaign EP (5yr Rev) | X060-AH-REP-70007<br>0000-AD-PLN-60003<br>D021-AD-PLN-70057 | All INPEX EPs contain a detailed activity description and activity-specific oil spill scenarios. Specifically, INPEX EPs include the following:<br>• a description of the activity-specific spill scenarios (including the potential well blowout release rates, volumes, locations, hydrocarbon types, etc.)<br>• activity-specific oil spill modelling (used to inform environmental risk assessments)<br>• an assessment of oil spills risks/impacts on environmental values and sensitivities<br>• evaluations of controls to prevent well blowouts. |
| INPEX Australia - Browse Regional Oil Pollution Emergency Plan (BROPEP) suite of documents, including;<br>• Basis of Design and Field Capability Assessment Report (BROPEP BOD & FCA)<br>• Browse Regional Oil Pollution Emergency Plan – Incident Management Team Capability Assessment Report (BROPEP IMTCA) | X060-AH-REP-70016<br>X060-AH-REP-70015<br>X060-AH-PLN-70009 | The BROPEP BOD & FCA report evaluates the oil spill field response capability required for all INPEX Australia's offshore petroleum exploration and production activities and associated oil spill risks.<br>The BROPEP IMTCA report defines the required IMT capability needed to implement the field oil spill response.<br>The BROPEP is the response document, used by the IMT, to activate and implement oil spill response capabilities during a spill scenario. |

| Document title | Document number | Purpose |
|---|---|---|
| • Browse Regional Oil Pollution Emergency Plan. | | |
| Browse Basin Common Relief Well Design and Response Time Models Technical Note | 0021-AD-TCN-70000 | The purpose of the technical note is to document common relief well design including the supporting simulation work as well as the response time models for various INPEX drilling projects. |

# 2 INPEX AUSTRALIA EXPLORATION AND PRODUCTION ACTIVITIES OVERVIEW

INPEX Ichthys Pty Ltd, on behalf of the Ichthys Upstream Unincorporated Joint Venture Participants, is developing the Ichthys Field in the Browse Basin off the north west coast of Western Australia to produce condensate offshore for export to markets in Japan and elsewhere, and export gas for further processing at the Ichthys liquefied natural gas (LNG) plant in Darwin.

Initial development wells were drilled and the Ichthys LNG offshore facilities were installed and commissioned from 2014 through to 2018. The assets commenced production in July 2018 and now routinely ship cargoes of condensate from the FPSO to international customers and send gas to the Darwin plant via the Gas Export Pipeline.

The existing facilities consist of a subsea production system (SPS) (e.g. xmas trees (XT), manifolds, subsea control systems and umbilicals, risers and flowlines (URF), and the gas export riser base (GERB), which connect the wells to the Central Processing Platform (CPF) Ichthys Explorer and Floating Production Storage Offtake – (FPSO) Ichthys Venturer

The CPF/FPSO, GEP and onshore Ichthys LNG plant are collectively referred to as the Ichthys Project.

INPEX Australia's offshore exploration activities are focused on identification of additional petroleum reserves to tie-back into the Ichthys Project, either at the CPF/FPSO, or onto any of the five hot-tap-tees along the length of the GEP, within the Canning, Browse and Bonaparte basins. Therefore, exploration activities, including exploration/appraisal drilling, are generally located within the same geographic area as the Ichthys Project in Commonwealth waters between Broome and Darwin.

# 3 WORST CREDIBLE WELL BLOWOUT SCENARIOS

To determine source control capability requirements, an evaluation of current INPEX production, and planned exploration wells has been undertaken, as described in the INPEX Browse Basin Common Relief Well Design and Response Time Models Technical Note (0021-AD-TCN-70000). A summary of the key well data is provided in Table 3-1.

As detailed in Table 3-1, the Plover reservoir has a higher gas flowrate potential than the Brewster reservoir and is therefore the worst-case scenario from a well kill perspective (Wild Well Control 2019).

**Table 3-1: Comparison of well-blowout modelling data**

| Model | Brewster Production Phase 2a | Plover Production Phase 2a | Brewster Production Phase 2c | Plover Production Phase 2c |
|---|---|---|---|---|
| Release location (coordinates) | 13° 52′ 46.2″ S<br>123° 19′ 3.0″ E<br>Approximately 35 km north west of Browse Island. | 13° 54' 17.14" S<br>123° 09' 53.93" E<br>Approximately 47 km north west of Browse Island. | 13° 54' 18.7605" S<br>123° 09 50.0" E<br>Approximately 35 km north west of Browse Island. | 13° 54′ 18.7605″ S<br>123° 09 50.0″ E<br>Approximately 47 km north west of Browse Island. |
| Oil type | Brewster condensate | Plover condensate | Brewster condensate | Plover condensate |
| Reservoir pressure (psia) | 6020 | 6683 | 6009 | 6683 |
| Gas flowrate (MMscf/day) | 583 | 735 | 551 | 718 |
| Oil flowrate ($m^3$/day) | 3193 | 1082 | 3014 | 1057 |
| Release duration (days) | 80 | 80 | 80 | 80 |
| Total release volume ($m^3$) | 255,475 | 86,560 | 241,088 | 84,560 |
| Well bore size - internal diameter (inches) | 8.5″ | 8.5″ | 11″<br>(encountered whilst drilling Plover reservoir) | 8.5″ |

| | | | | |
|---|---|---|---|---|
| Well blow-out modelling report | X080-AD-TCN-10079 | X080-AD-TCN-10084 | X080-AD-70242 | X080-AD-REP-70242 |

*indicative

# 4 SOURCE CONTROL CAPABILITY AND ARRANGEMENTS EVALUATION

As described in INPEXs EPs, should a loss of well containment event occur during a drilling activity or from a producing well, a number of source control activities may be implemented depending on the specific circumstances of the loss of well containment.

For a production well, a range of loss of well integrity events are considered within the Loss of Well Integrity Response Plan (WIRP). Tier 1, Tier 2 and Tier 3 category events as described in API RP 754 / IOGP Report 456 are covered by the WIRP. The well intervention based response options covered by the WIRP include:

- relief well and / or capping stack.
- ROV intervention (light and heavy)
- well intervention – light well intervention (LWI) (DP vessel)
- well intervention – emergency disconnect package (EDP) /lower riser package (LRP) (MODU)

Source control activities for Tier 1 and 2 category events are presented in the following section.

## 4.1 Relief well and capping stack response options

A relief well plan for the INPEX Brewster and Plover wells has been finalised, utilising specific well kill modelling results to complete the relief well design. The modelling considers a number of factors including well geometry, reservoir pressure, temperature, permeability and reservoir fluid properties (as described in Table 3-1).

Depending on the loss of well containment scenario other source control activities may be required to assist in regaining control such as ROV based systems for seabed debris clearance, BOP intervention and/or well capping.

## 4.2 Source control MODU and vessel availability

INPEX monitors the availability of source control MODUs and vessels, maintaining monthly registers and shipbrokers reports, which are developed using defined criteria to ensure the most suitable MODUs and vessels are identified for respective source control activities.

### 4.2.1 Relief well MODU

INPEX maintains two registers for relief well MODUs, one which includes a global list of available MODUs and another, filtered to identify those relief well MODUs meeting minimum requirements, defined by the respective dynamic well kill study reports. Each report defines the minimum MODU and equipment criteria required for relief well planning purposes.

In addition, MODU safety case status is monitored in the register to ensure response time models described within Table 4-1 can be met.

Pre-spud and quarterly risk reviews, as described in Section 5.2 will be conducted. These reviews interrogate current MODU market reports and availability registers to verify the availability of capable relief well MODUs in advance of and during the activity.

In the event identified relief well MODUs are not available or are further afield than required for the respective response time model, adaptive management measures will be implemented which will assess alternative MODUs and arrangements to ensure the described response times detailed in Table 4-2 are met.

The MODU availability registers contain details of the following criteria:

- MODU name, type and contract status (24 month LAH)
- Current regional location
- MODU specifications (as required by current respective dynamic well kill reports) including:
    - water depth capability (1500+ ft)
    - BOP specifications (15K+ psi, 5+ Rams)
    - mud pump number/specifications (3+/1500+ HP)
    - drilling fluid storage capacity
    - variable deck load
- Jurisdictional safety case status (NOPSEMA/ UK/ AOC)

### 4.2.2 Capping stack deployment vessel

INPEX monitors availability of vessels through monthly shipbrokers reports, which include capping stack deployment and debris removal vessels that may be required in the event of source control activities.

Current reports identify suitable vessels, required to meet minimum criteria for each source control activity, as defined in the INPEX Capping Stack Logistics Plan, Capping Stack Landing study and described in Table 4-4. The shipbroker report is designed to include a range of vessel capabilities that suit each source control activity. The following criteria have been used:

- Capping stack deployment: minimum of 120T active heave compensated (AHC) crane onboard
- Debris removal: minimum of 150T AHC crane (or greater) onboard
- Asia / Pacific region (3,400 nm from northern Australia)
- deck area
- DP2 redundancy
- working class ROV.

Pre-spud and quarterly risk reviews will be conducted which interrogate the ship brokers reports, to ensure the availability of identified vessels.

In the event suitable vessels are not available or are further afield than described in the respective response time model, adaptive management measures will be implemented which will assess alternative vessels and capabilities and the associated capping stack landing requirements to ensure the described response times detailed in Table 4-2 are met. That is, consideration may be given to suitable vessels that exceed (or fall below) optimal requirements for respective activities.

## 4.3 Summary of relief well analysis

INPEX engaged third-party specialist to undertake a relief well and dynamic well kill study for the Brewster and Plover production wells in WA-50-L (Add Energy 2019). The dynamic well kill portion of this study models a blowout rate for given subsurface and well architecture parameters and then models the kill rate for a given kill fluid density required to kill the well. Further to this, the Ichthys Phase 2c Select Stage Source Control Engineering Review (D021-AD-TCN-70007) assesses the applicability of previously performed dynamic kill modelling to Phase-2c wells. The review found that source control engineering performed for Phase 2a adequately covers Phase 2c.

NORSOK D-010 Rev 5 (Standards Norway, 2021) Section 5.8.1 gives clear guidance on the assumptions to be used during dynamic well kill modelling and these are outlined as follows:

- expected values for reservoir parameters (pore pressure, permeability, porosity, net gross pay, etc.)
- expected top of reservoir depth
- expected productivity index / transient productivity index
- expected fluid type parameters, if oil is expected, but gas cannot be disregarded both cases shall be simulated
- mechanical skin is zero
- no restrictions in the flow path
- planned well design (hole size, casing setting depth, etc.).

The modelling and subsequent analysis of logistical requirements presented in Browse Basin Common Relief Well Design and Response Time Models Technical Note (0021-AD-TCN-70000) has determined the design for and duration of, relief well drilling for a range of Ichthys wells in the Browse Basin. These include Ichthys Brewster and Plover wells, with a single well kill achievable in both reservoirs. These durations are summarised and presented in the form of a response time model in Table 4-1, developed in accordance with the Australian Offshore Titleholders Source Control Guideline (APPEA 2021).

**Table 4-1: Summary of time response models for Brewster and Plover reservoirs (Browse Basin Common Relief Well Design and Response Time Models Technical Note)**

| Activity | Brewster reservoir Ichthys (days) | Plover reservoir Ichthys (days) |
|---|---|---|
| Relief well MODU mobilisation | 28 | 28 |
| Relief well construction | 35 | 35 |
| Ranging and intercept (incl. kill) | 17 | 17 |
| **Total duration** | **80** | **80** |

The MODU used to drill the relief well will need a NOPSEMA accepted Safety Case Revision (SCR). A total of 28 days has been scheduled for the development, submission and acceptance of the SCR by NOPSEMA. An indicative schedule for the SCR approval is as follows:

- Day 0-1 – MODU(s) identification
- Day 1-2 – SCR development schedule created. Engagement meeting with NOPSEMA held to advise of submission schedule and request all attempts be made to assess SCR as a matter of priority
- Day 2-16 – SCR developed including HAZID with contractor personnel. Partially populated SCR template used as a starting point
- Day 16 – SCR submitted to NOPSEMA
- Day 16-23 – SCR Request For Further Written Information (RFFWI) received
- Day 26 – SCR resubmitted to NOPSEMA
- Day 28 – SCR accepted by NOPSEMA.

INPEX have prepared Scope of Validation templates for both Capping Stack Installation and Relief Well Drilling campaigns.

INPEX tracks the availability of MODUs capable of drilling a relief well on a monthly basis. The register includes whether the vessel currently has a valid Australian safety case and is provided to key source control team members. In addition, on a quarterly basis the latest edition of the register will be reviewed as part of exploration and production drilling EP quarterly risk reviews.

## 4.4 Relief well supply base capabilities and mud requirements

If required, drilling a relief well will necessitate supporting a MODU and other source control operations. INPEX operates an existing supply base in Broome which has previously supported a two MODU operations during the Phase 1 Ichthys development drilling campaign and will have sufficient arrangements in place for the Phase 2 Ichthys development drilling. At times, INPEX will likely also be supporting other exploration drilling operations in the region at the same time. Broome is now established as a mature oilfield supply centre with at least one liquid mud plant and cement plant in place. If additional resources or lay down area was required, INPEX operates a supply base in Darwin for its production operations which could also be utilised in the event of a source control operation.

Modelling shows that the well is killed relatively quickly (within 45 minutes) and liquid requirements are easily accommodated by typical relief well candidate MODUs operating in the country. Mud/kill fluid will be supplied through the above-mentioned supply bases.

## 4.5 Summary of capping stack feasibility analysis

High energy gas wells located in relatively shallow water (as seen in the Browse Basin) can present challenges with safe vertical access due to the resulting surface boil and Lower Explosion Limit (LEL) hydrocarbons associated with a well blowout. This in turn can preclude the deployment of a capping stack. This being said, INPEX are a member of a capping stack consortium and have access to a primary 15,000 psi, 18 ¾" capping stack in Singapore and the equivalent as secondary in Aberdeen. Because of this, INPEX undertook a capping study with the provider of this stack (Wild Well Control 2019).

This study involved computational fluid dynamics modelling to show the behaviour of the stack as it is landed on a flowing well with expected Plover reservoir properties (Plover reservoir has higher gas pressure than Brewster reservoir and is therefore a worst-case scenario). The study found that "the capping stack is able to move through the discharge plume in a controlled manner and can potentially be landed on the wellhead" (Wild Well Control 2019).

The study (Wild Well Control 2019) then looked at the behaviour of the subsea plume as it rises in the water column and then the dispersion of any gas at the sea surface, in order to infer if vertical access is possible. It was determined that with assumed current and wind conditions, the plume would be displaced 50 m downstream of the well centre but the 10% LEL radius extends up to 60 m upwind. This means that, if limited to 10% LEL, the closest a construction vessel could get to the well centre is 10 m. Therefore, deployment of the capping stack could be possible subject to crane capacity on the selected construction vessel.

While direct vertical access has been determined as not possible for the modelled Plover discharge rate, there are influences that would likely reduce the discharge rate and thus enable vertical access. These are outlined as follows:

- The situation may be a drilled kick escalating to blowout meaning less net pay and possibly non-Plover reservoir (being of lower quality)
- There may be wellbore flow restrictions which are likely to occur from:
  - Drill-string remaining in the hole (drilled kick/dropped drill-string) partial closure of BOP due to activation during/after the event from MODU or vessel
  - flowing zone collapse/bridging.

## 4.6 Assessment of capping stack deployment duration

Opting for capping as the primary means of containment yields a reduction in the time to contain the well. An operational analysis of capping stack mobilisation by air and vessel (sea freight) has been conducted and the options detailed in the INPEX Capping Stack Logistics Plan (D020-AD-PRC-10039). Vessel mobilisation has been assessed as the quickest option and is summarised in Table 4-2 below.

**Table 4-2: Deployment of capping stack – vessel freight option**

| Item | Maximum duration (days) | Comments |
|---|---|---|
| Mobilise personnel and equipment | 4 | Call out to arrival of crew in Singapore warehouse. Mobilise equipment including Fugro ROV skids to Kim Heng. |
| Source and mobilise construction vessel to Singapore (concurrent operation) | (3) | Typical response time based on market knowledge of suitably rated vessels with Australian Vessel Safety Cases. An appropriate vessel will be identified on INPEX register, updated monthly, tracking the location and availability of HLVs in the SE Asian region. |
| Stack up and test capping stack in Singapore and ready for load out (concurrent operation) | (3) | Based on capping stack mobilisation schedule stack-up and testing of capping stack in Singapore. |

| | | |
|---|---|---|
| Load out capping stack on to construction vessel from Singapore | 3 | Based on logistics plan from provider |
| Transit capping stack directly to licence area | 7 | Typical sailing time from Singapore to well location with some minor allowance for weather on route. |
| Deployment of capping stack onto well and shut-in of well | 7 | Assumes vertical access is possible with an allowance for unfavourable metocean conditions during deployment |
| **Total** | **21** | INPEX Capping Stack Logistics Plan (D020-AD-PRC-10039) |

Running in parallel with the above timeframe, a SCR for a capping stack deployment vessel would also be developed and submitted to NOPSEMA for acceptance. An indicative schedule for the SCR approval is as follows:

- Day 0-1 – vessel(s) identification
- Day 1-2 – SCR development schedule created. Engagement meeting with NOPSEMA held to advise of submission schedule and request all attempts be made to assess SCR as a matter of priority
- Day 2-12 – SCR developed including HAZID with contractor personnel
- Day 12 – SCR submitted to NOPSEMA
- Day 12-19 – SCR RFFWI received
- Day 21 – SCR resubmitted to NOPSEMA
- Day 22 – SCR accepted by NOPSEMA

INPEX tracks the availability of vessels capable of deploying a capping stack on a monthly basis. The register includes whether the vessel currently has a valid Australian safety case and is provided to key source control team members. In addition, on a quarterly basis the latest edition of the register will be reviewed as part of exploration and production Drilling EP quarterly risk reviews.

## 4.7 Evaluation of source control capability and arrangements

Table 4-3 presents an evaluation of the applicability of various source control options.

Table 4-4 presents further information regarding the environmental benefits and merit in improving the implementation of source control activities (i.e. implementing controls to a greater extent or within a faster timeframe and associated cost benefit considerations).

Table 4-5 presents the environmental performance outcomes, environmental performance standards and measurement criteria, related to the preparedness and implementation of source control activities.

**Table 4-3: Evaluation of applicability of source control response options**

| Source control response technique | Likelihood of success | Considered for implementation |
|---|---|---|
| Site survey | Site survey involves the use a response vessel and ROV to conduct visual/sonar observations, to determine the condition of well and BOP and search for any debris, following the source control event. This information is required, to enable the source control team to conduct detailed planning for all source control activities.<br>A detailed assessment of the logistical resources required to implement this response strategy are described in Table 4-4. | Yes |
| Debris clearance | Debris clearance involves the use of response vessel(s) with cranes/lifting equipment and work-class ROVs, equipped with cutting tools, to cut and relocate/recover debris on the seabed, to enable other response strategies such as BOP intervention, capping stack deployment and mooring a relief well MODU to occur safety.<br>A detailed assessment of the logistical resources required to implement this response strategy are described in Table 4-4. | Yes |
| BOP intervention | BOP intervention involves the use of response vessels and work-class ROVs with tooling to enable an additional hydraulic power source to power some BOP functions. The BOP intervention tooling can be used to attempt to close the shear-rams of the BOP to stop the flow from the well and/or unlatch the Lower Marine Riser Package to allow its removal for the installation of the capping stack.<br>A detailed assessment of the logistical resources required to implement this response strategy are described in Table 4-4. | Yes |
| Capping stack | A capping stack response involves the use of a heavy lift vessel (HLV) to lower and latch the capping stack on the blowing well, to stop the flow from the well.<br>A detailed assessment of the logistical resources required to implement this response strategy are described in Table 4-4. | Yes |
| Capping stack – offset installation equipment | The Offset Installation Equipment (OIE) is designed to support subsea well intervention operations in scenarios where conditions prohibit direct vertical access to a wellhead. It is essentially a mobile subsea crane which is used to perform debris clearance and then pick up a capping stack from a subsea parking stand and deploy it, though the discharge plume and on to a blowing well. | No |

| | | |
|---|---|---|
| | INPEX do not believe that the proactive gaining of access to this equipment for the planned operations in WA-50-L is in line with ALARP principles for the following reasons:<br>• Mobilisation: the equipment is stored in Trieste, Italy and is comprises 175 items with a shipping weight of 240 t. The carrier itself is 13 m x 13 m x 10 m in dimension and as such, preferred mobilisation method is by sea, not by air. Further consideration has been made to assess the possibility of airfreighting the equipment. The equipment would require disassembly in order to be of an appropriate size to travel by aircraft. Disassembly of just the carrier is predicted to result in 276 items. All items are required to be loaded into suitable aircraft. On this basis, the potential to airfreight the equipment in order to decrease the mobilisation time from Italy to Australia has been discounted given the time-saving gained by airfreighting is lost due to the additional time required for disassembly and reassembly. Whether by sea or air, the long mobilisation duration erodes the time saving realised by capping relative to a conventional relief well kill.<br>• Deployment mass: the deployment mass is understood to be 240 t. This is roughly three times the mass of a 15,000 psi 18 ¾" BOP style capping stack. It is understood that a 400 t crane is quoted as the minimum requirement for the installation vessel and it is stated that this is what was used during a field deployment trial. INPEX participated in an OIE workshop with other titleholders in May 2019, and at that time it was stated that the original equipment manufacturer of the OIE identified a minimum 600t crane vessel as being required. It was then noted from a marine advisor participating in the workshop that due to the overturning moment during the deployment of the OIE carrier, significant re-ballasting operations would be required, and this would likely necessitate a much larger vessel to maintain stability during the lift. The crane rating of such a vessel was stated at 900t. Nonetheless, despite the stated true minimum crane rating, it is noted that there are other minimum specifications, notably around the "active/passive anti roll system" and "ballasting capacity sufficient to minimise the installation and recover time of the OIS" which call for a specialised and likely large vessel. This vessel would be more specialised and larger, and thus less readily available than a vessel suitable for a standard capping stack deployment in the case of vertical access being possible. This greatly reduces the number of candidate vessels in the region, let alone those with current Australian Vessel safety cases. Less readily available means a longer response time and a further demonstration that OIE is not ALARP when compared to a relief well kill in the case were vertical access for capping is not possible.<br>• Debris clearance capabilities: it is understood that that OIE can perform some debris clearance tasks, including lifting debris up to 160 t. While this may be sufficient to remove a LMRP from a BOP, it is unclear what capabilities exist for the clearance work prior to this operation including but not limited to the deployment of super shears to sever riser and the like, if required. | |

| | | |
|---|---|---|
| | • Local fabrication: the OIE scope of supply excludes some significant equipment including but not limited to three gravity anchors and a subsea parking stand for the capping stack. It is understood that this fabrication would require up to 500 t of steel and it is estimated that even a significant supply hub such as Darwin would struggle with the scale of this fabrication. This may drive the sourcing of this fabrication to a regional hub such as Singapore which could place this fabrication on the critical path and further erode the time saving realised by capping relative to a conventional relief well kill.<br>• Exclusion zone: while theoretically vertical access is not required with OIE, access into 500 m is required for the initial deployment of the carrier and support operations with ROVs during capping operations. With unfavourable metocean conditions and a high energy blowout, even this may be difficult, particularly with at least 5 vessels being required (2 x anchor handers on either side of boil for initial deployment, 1 x survey, 1 x construction, 1 x air supply). Relief well planning performed for WA-50-L has spud locations 2,000 m away from the blowing well centre which is well beyond the downwind/down current extent of 10% LEL radius of 1,100 m.<br>• Localised soil conditions: The unique carbonate shallow soils present in the Browse Basin have posed significant challenges to well structural design to date and it is understood they are out with the acceptable range verified by Saipem as part of the design validation for the OIE anchors. While this does not preclude the use of the OIE, a revised anchor design needs to be generated in order to achieve the required 50 t capacity of each of the three anchors if they are to be deployed in the Browse Basin.<br>• Drag chain contact with seabed: For stability, the carrier requires a drag chain to be in contact with the seabed at all times. Ichthys drill centres are surrounded by a complex array of SPS infrastructure. The transit of the carrier, and its drag chain would need to be carefully evaluated, at the time of the blow-out, to determine if it was safe to attempt to run the drag chain through possible approach corridors without causing additional damage and possible gas/oil releases to the environment, through additional damage to existing subsea infrastructure. These corridors may be incompatible with the prevailing metocean conditions and the resulting surface boil location and geometry, thereby preventing the safe conduct of the activity.<br>The OIE is an extremely complex spread of equipment and as outlined above, comes with attendant risks, any of which if realised, may preclude its deployment. Fortunately, the system has not been used to respond to an actual source control event but that makes it, as yet, unproven. Comparing this with a well-established source control method of intersection with a relief well and dynamic well kill, it is seen that the proactive gaining of access to OIE is not ALARP for operations in WA-50-L or other near-by exploration drilling activities. | |

| | | |
|---|---|---|
| Relief well | A relief well can be drilled to intercept the original wellbore close to the reservoir. Kill fluid is then pumped through the relief well into the original well-bore, to provide an overbalance pressure to the reservoir, and stop the flow of hydrocarbons from the well. To conduct the relief well, a MODU with support vessels is required. In addition, extra vessels with additional drilling fluid and pumping equipment may be required, for the well kill activity.<br>Following the well kill, the MODU will use the relief well to isolate and abandon both wells.<br>A detailed assessment of the logistical resources required to implement this response strategy are described in Table 4-4. | Yes |
| Use of relief well injection spool | The Relief Well Injection Spool (RWIS) is a spool piece with side outlets installed below the BOP of the relief well which facilitates the connection of more surface pumping resources. These additional resources can deliver greater kill fluid rates to the relief well.<br>As all WA-50-L development wells can be killed with a single relief well using mud pumping resources available on standard MODUs, the use of the relief well injection spool would not be required. | No |
| Subsea dispersant injection | SSDI involves the use of an ROV, to inject dispersant directly into the hydrocarbon stream flowing from the damaged well. The outcome of SSDI is a significant increase of entrainment of oil in the water column. By increasing the proportion of hydrocarbons becoming entrained, there will be a reduction in hydrocarbons arriving on the ocean surface, and an associated reduction in hydrocarbons evaporating into the atmosphere.<br>Modelling results (RPS 2019) indicates that under a worst-case blowout scenario, VOC concentrations (from oil evaporating into the atmosphere) are likely to exceed safe exposure thresholds within 1 km of the release location. The workforce onboard vessels conducting source control activities such as BOP intervention, debris clearance and capping stack installation could therefore be exposed to VOCs, and if gas monitoring indicated exposure had exceeded the VOC thresholds, the vessel would be required to cease the activity move out of the area. In effect, VOC exposure may impact the feasibility of debris clearance/capping stack installation and ultimately limit available source control options to drilling a relief well.<br>Modelling results (RPS 2019) also concluded that SSDI would eliminate the risk of VOCs exceeding exposure thresholds. Therefore, the use of SSDI to significantly reduce the VOC risk to source control vessels/workers may contribute to the feasibility of capping stack, instead of a well kill via relief well, which would take several more months to achieve.<br>A detailed assessment of the logistical resources required to implement this response strategy are described in Table 4-4. | Yes |

**Table 4-4: Source control arrangements and capability evaluation**

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| A vessel with an observation or work-class ROV is required to undertake the site survey and record / report visual observations of the well location and surrounding area and will be in Broome within 7 days.<br>The location and availability of support vessels with ROVs will be tracked on a register which is updated on a monthly basis. | Only a single vessel with a single ROV is required for site survey activities.<br>Additional vessels and/or ROV's will not result in any better information being provided to the source control team, to facilitate ongoing source control planning.<br>Therefore, a single vessel and ROV is appropriate. | A support vessel with ROV would be identified from within Australia and would be expected to arrive and commence mobilisation activities in Broome, within 7 days.<br>INPEX's drilling support vessels and Ichthys Field support vessels are not required to be equipped with ROVs.<br>The cost of maintaining a vessel with full ROV spread and ROV crew at all times on a support vessel is not considered ALARP given the cost and many vessels with ROVs can be made available on short notice within the region.<br>Typically, several support vessels with ROVs are located in the NW region, with additional vessels around Australia / SE Asian region capable of completing the site survey.<br>To track and identify capable support vessels and ROVs, the most practicable option is to maintain an up to date register of suitable available support vessels. | No additional site survey response capability required. |
| A Construction Support Vessel (CSV) with lifting equipment of 150t lifting capacity and work-class ROVs will be utilised, if required, for debris clearance and will be in WA-50-L within 17 days. | Only a single CSV equipped with work class ROVs and lifting equipment rated for 150t is required for debris clearance. | A CSV with lifting equipment rated for approximately 150t with a work-class ROV would be identified and contracted from within Australia or the SE Asian region within 10 days and would arrive in the licence area within 17 days. | No additional debris clearance vessel response capability required. |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| The location and availability of a CSV with suitable lifting equipment and work-class ROVs will be tracked on a register which is updated on a monthly basis. The status of vessel safety cases will also be maintained on the register. | | A vessel with a reduced lifting capacity may be used for debris clearance if available and post debris clearance planning using the information presented by the site survey team.<br>Identification and contracting/mobilisation will typically commence when initial source control planning begins.<br>Response time could be improved by maintaining a CSV on stand-by. However, until site survey activities have been conducted and results evaluated by the source control team, it is unknown if debris clearance is even required. Therefore, the large costs of maintaining a CSV on stand-by are not considered ALARP, especially given CSVs with ROVs can be made available within the region.<br>To ensure the availability, the most practicable option is to maintain an up to date register of suitable, available vessels and their safety case status. | |
| Debris clearance ROV tooling is required for debris clearance activities.<br>The AMOSC subsea first response tool-kit (SFRT), is located in Perth and will be in Broome within 3 days.<br>Wild Well Control Inc (WWCI) debris clearance equipment is available in | Debris clearance equipment such as drill pipe and riser cutting shears are specifically designed tools for specific tasks, which typically only need to be utilised once during the debris clearance activity.<br>Primary and redundancy equipment is available through the AMOSC and WWCI contracts.<br>There is no benefit to increasing the quantities or capabilities of debris clearance equipment. | Debris clearance equipment will be mobilised when the initial source control planning begins.<br>The AMOSC SFRT can be mobilised, by road to Broome, within 3 days.<br>The WWCI debris clearance equipment can be mobilised by air to Broome within 5 days. | No additional debris clearance tooling capability required. |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| Singapore, with back-up equipment based in the United Kingdom. Primary equipment will be in Broome within 5 days. | | The debris clearance tooling will likely arrive in Broome before the debris clearance vessel, and whilst site survey and initial source control planning is still occurring.<br>If the debris clearance vessel is mobilising directly to the licence area, a small charter vessel can rapidly mobilise the debris clearance tooling from Broome to WA-50-L.<br>Therefore, maintaining additional debris clearance equipment in Broome is not considered ALARP. | |
| Support vessel with work-class ROVs and BOP intervention tooling (hot stabs) are required for the BOP intervention activity.<br>The location and availability of support vessels with work-class ROVs will be tracked on a register which is updated on a monthly basis and a support vessel with work-class ROVs and BOP intervention tooling will be in Broome within 10 days. | Only a single vessel equipped with a work-class ROV is required for BOP intervention.<br>BOP intervention uses standard hot-stabs, routinely used on offshore facilities. This type of tooling is readily available and will be mobilised with the BOP intervention vessel and ROV spread.<br>There is only a single BOP during well drilling, therefore additional vessels and ROVs will provide no benefit to the BOP intervention activity. | A support vessel with work-class ROV will mobilise from within Australia and commence mobilisation activities in Broome (including gas detection system), within 10 days.<br>Depending on the outcome of site survey activities, debris clearance may be required prior to attempting BOP intervention. However, under some circumstances, BOP intervention could occur without debris clearance. Therefore, mobilisation within 10 days is appropriate.<br>If the site survey vessel is using a work-class ROV instead of an observation class ROV, the site survey vessel with work-class ROV would be capable of attempting BOP intervention, eliminating the requirement to mobilise a second vessel.<br>INPEX's drilling support vessels and Ichthys Field support vessels are not required to be equipped with ROVs. | No additional BOP intervention tooling response capability required. |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| | | The cost of maintaining a vessel with a work class ROV and ROV crew at all times is not considered ALARP (given the cost and the availability of vessels with ROVs can be made available on short notice within the region).<br>Typically, several support vessels with work-class ROVs are located in the NW region, with additional vessels around Australia / SE Asian region with the capability of completing a BOP intervention.<br>To ensure the availability, the most practicable option is to maintain an up to date register of suitable, available support vessels. | |
| Capping stack – primary located in Singapore and secondary in the United Kingdom will be mobilised from Singapore and be available on location within 21 days. | INPEX are a member of a capping stack consortium and have access to a primary 15,000 psi, 18 ¾" capping stack in Singapore and the equivalent as secondary in Aberdeen.<br>INPEX and WWCI have reviewed the capping stack interface with the selected BOP, and have identified the required connections and its availability, and that anticipated pressures are within the operating parameters of the capping stack.<br>INPEX are also conducting a landing study, to plan how to safely lower and latch the capping stack onto the BOP.<br>As there is only a single BOP, only a single capping stack is required. | A breakdown of the individual steps and durations for capping stack mobilisation are provided in Table 4-2 and Table 4-4.<br>An operational assessment and deployment planning study conducted by WWCI, determined a one (1) day difference between air and sea freight logistics options (longer by air).<br>In addition, various uncertainties and risks to schedule were identified with the air freight option including handling restrictions at airports and wharfs. Another significant concern for stack up and testing of the capping stack in Australia is the reduced presence of original equipment manufacturer (OEM) and access to parts. | No additional capping stack response capability required. |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| | As INPEX have access to primary and back-up capping stacks, sufficient redundancy is available, should any issues arise during stack up, testing, mobilisation, deployment and activation of the primary capping stack. | As a result, the capping stack will be stacked up and tested in Singapore due to the established infrastructure and subject matter experts (SMEs) based in Singapore. WWCI conduct an annual stack up of the capping stack capturing lessons learned to improve the preparation time for mobilisation to field. | |
| A HLV with a work class ROV and minimum lifting capacity of 120t would be mobilised to Singapore, to receive the capping stack and ancillary equipment, then deploy to the licence area. The HLV will be used to land the capping stack on the blowing well and be on location within 21 days.<br><br>INPEX will maintain a register, updated on a monthly basis, of the location and availability of all HLVs in the SE Asian region. The register will maintain status of safety cases. | As there is only a single BOP and single capping stack, only a single HLV is required. | A breakdown of the individual steps and durations for capping stack mobilisation including sourcing of an appropriate HLV vessel are provided in Table 4-4.<br>Identification and contracting/mobilisation and planning will commence when initial source control planning begins.<br>Response time could be improved by maintaining a HLV on stand-by. However, until site survey and other activities have been conducted and results evaluated by the source control team, it is unknown if capping stack deployment will be possible. Therefore, the large costs of maintaining a HLV on stand-by are not considered ALARP, especially given HLVs with ROVs can be made available within the region.<br>To ensure the availability, the most practicable option is to maintain an up to date register of suitable, available HLVs and their safety case status. | No additional HLV response capability required. |
| A single MODU would be required to drill a relief well in an absolute worst-case scenario. | Approximate relief well locations have been identified around each drill centre in the WA-50-L licence area. | The time to contain the well has been conservatively assessed as 80 days based on an absolute worst-case discharge. | No additional relief well response capability required. |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| INPEX will maintain a register, updated on a monthly basis, of the location and availability of all MODUs internationally. The register will maintain status of safety cases.<br>The register will include:<br>• name, contractor, stacking status (cold/warm/on contract/yard)<br>• operator (if on contract)<br>• type<br>• water depth capability<br>• BOP pressure rating and # ram cavities<br>• maximum personnel on board<br>• mud pump, crane, helideck, variable deck load and top drive specifications<br>• base oil, bulk and liquid mud storage capacities<br>• vessel safety case status and jurisdiction. | Metocean and seasonal environmental conditions will be considered in final relief well location selection.<br>Preliminary designs have been completed for optimal interception of a blowing well and completing a dynamic kill for the worst-case scenario. | The relief well design and plan will be optimized to intersect the blowing well and to complete a dynamic kill. The relief well cannot be drilled to a shallower depth (less drilling time), and intercept the original well at a shallower depth, as there would not be sufficient hydrostatic head pressure and drilling fluid weight in a shallower relief well to successfully kill the original well.<br>Should the original MODU still be functional (however without BOP), a study would be conducted, and if practicable to implement, to have the MODU pre-drill the top-hole section of the relief well, prior to the arrival of the relief well drilling rig.<br>INPEX has signed the APPEA MoU for mutual assistance between Titleholders. This MoU requires Titleholders to make 'best endeavours' to release and transfer drilling units and well-site services between operators in a source control event. | |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| INPEX will also maintain its subscription to the APPEA MoU. | | | |
| Relief well long-lead items (LLIs) and equipment has been identified, e.g. casing and well-head.<br>INPEX drilling logistics team maintain a register of all drilling equipment to ensure relief well stocks are available. | The required consumables are available and tracked, as part of routine Ichthys development drilling.<br>Specifically, spares maintained include:<br>• wellhead system<br>• conductor<br>• surface casing<br>• intermediate casing<br>• relief well conduit<br>Miscellaneous equipment such as crossovers can be manufactured locally within Australia in relatively short timeframes. This would be undertaken using pre-existing arrangements that INPEX has in place for the manufacture of such consumables. | The response time to access the relief well equipment (including miscellaneous equipment items such as crossovers etc that may be required and can be fabricated locally), will not be a critical path activity during the relief well drilling, as a standard logistics supply chain for INPEX development drilling activities, involving the Drilling Supply Base in Broome (and back-up base in Darwin) and standard supply vessels, will continue to be utilised. | No additional relief well long lead equipment capability required. |
| A single SSDI spread would be required to implement SSDI. This equipment includes the dispersant stockpile and injection wands. | There is no requirement for additional/duplicate SSDI spreads. A single SSDI spread will be able to successfully inject dispersant into the well stream at the optimal ratio of approximately 100:1, which has been demonstrated to reduce VOC concentrations below safe levels (RPS 2019). | SSDI will only be activated when modelled and/or field measurements predict that VOC concentrations are likely to be exceeded during other source control activities such as BOP intervention, debris clearance or capping stack deployment and installation. | No additional SSDI capability required. |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| (Note – support vessels with work-class ROVs for SSDI are the same types of vessels as those required for BOP intervention). | Injecting additional dispersant into the well-stream will not result in any greater/beneficial reduction in VOC concentrations in the atmosphere.<br>Based on a worst-case oil release rate of 18,955 bbl/day (3014 $m^3$/day), at 100:1 treatment ratio, the dispersant requirement is 31 $m^3$/day.<br>For a worst case (complex) activity, 30 days of SSDI could be required. Therefore, a worst-case total of ~1000 $m^3$ dispersant could be required.<br>SSDI would generally not be required to commence mobilisation onto a vessel in Broome until approximately day 10 of a response (aligning with BOP intervention/debris clearance mobilisation activities).<br>The SSDI spread maintained by AMOSC in WA includes 500 m3 of Slick-Gone-NS dispersant and can be mobilised to Broome within 10 days. Therefore, 50% of the total worst-case dispersant requirement for a worst credible SSDI response can be mobilised outside of critical path timeframes. | The SFRT/SSDI spread is located in Western Australia and maintained by AMOSC. This equipment is rapidly able to be mobilised to Broome, the SFRT / SSDI spread is not anticipated to be on the critical path.<br>As such, response time for SSDI spread readiness/mobilisation is determined to be appropriate/ALARP. | |

| Source control element | Can a greater response effort be implemented? | Can the time to respond be improved? | Justification for increased response effort / reduced response time |
|---|---|---|---|
| | Additional Australian and global dispersant stockpiles can be mobilised, should it be estimated that the AMOSC 500 $m^3$ will be used up. Additional dispersant would not be required until a minimum of ~day 25 of the response, and therefore any additional dispersant stocks could be easily mobilised by vessel or aircraft to Broome within the required timeframe.<br>INPEX maintains access to the global dispersant stockpile through INPEX Corporations membership with OSRL.<br>Therefore, INPEX has access to sufficient dispersant for a worst case (30 day) SSDI activity. | | |

**Table 4-5: Environmental performance outcomes, standards and measurement criteria for source control preparedness arrangements**

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| INPEX will be prepared and ready to respond to source control events. | INPEX will maintain and monitor registers as described in Table 4-4 and Section 4.2 updated on a monthly basis, of the location and availability of support vessels, CSVs, HLVs and MODUs, including their capabilities (ROVs/crane capacity etc) and safety case status and jurisdiction. | Vessel and MODU registers |
| | INPEX will maintain a register of relief well long lead items. | Relief well long lead items register |
| | INPEX will maintain contracts for suitable debris clearance equipment. Debris clearance equipment will be able to be mobilised to Broome within 5 days. | Records of contracts for debris clearance equipment |
| | INPEX will maintain a contract for a SSDI spread, which can be mobilised to Broome within 10 days. The SSDI spread will contain a minimum of 500 $m^3$ of dispersant. | Records of contract for SSDI spread |
| | INPEX will maintain its OSRL membership, to ensure access to the global dispersant stockpile. | Records of INPEX OSRL membership |
| | INPEX will maintain contracts for suitable capping stack equipment. The capping stack equipment will be:<br>• identified as fit for purpose, capable of being lowered and latched onto the selected BOP, utilising a single HLV<br>• rated to achieve a well-kill, based on the expected pressures of the reservoir<br>• primary stack available to be mobilised onto a HLV within 5 days<br>• primary and secondary capping stack maintained in a suitable state of readiness. | Records of contracts for capping stack equipment |

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| | INPEX will continue to subscribe to the APPEA MoU. | Record of APPEA MoU |
| | INPEX will participate in the DISC steering committee for the development and submission of a SC template for a generic vessel including the activity of deploying a capping stack from this vessel. | Meeting minutes and records of attendance |
| | Source control team will maintain preparedness through training and exercises to validate source control logistical arrangements and ensure the source control team:<br>• understand the source control planning documents/procedures<br>• understand their defined roles and responsibilities<br>• validate communications with external source control service providers. | Records of training and exercises for the source control team |
| | INPEX will maintain a contract with WWCI, for the provision of personnel to:<br>• provide technical expertise to the INPEX source control team<br>• provide in-field supervision of source control activities. | WWCI contract |
| | Prior to spudding; source control documentation will be approved and in place in accordance with the WOMP, including:<br>• Drilling Browse Basin Emergency Response Plan<br>• Browse Basin Source Control Emergency Response Plan<br>• Well Control Modelling Service Report | Records confirm source control planning documentation was approved prior to spudding |

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| | • Capping Stack Deployment and Installation Procedure. | |
| INPEX will re-gain control of a well within 80 days of any source control event, through implementation of the environmental performance standards. | In the event of a loss of well control, conduct a site survey of well-head infrastructure, to inform source control planning activities. A vessel to undertake the site survey will be mobilised to Broome within 7 days. | Records of site survey |
| | In the event conditions allow for the safe deployment and installation of the capping stack, INPEX will mobilise, deploy and install the capping stack in accordance with response time model detailed Table 4-2: Deployment of capping stack – vessel freight option. | Records of capping stack feasibility report<br><br>Daily drilling report |
| | INPEX will mobilise relief well MODU and drill, intercept and regain control of the well, in accordance with the time frames detailed in Table 4-1: Summary of time response models for Brewster and Plover reservoirs (Browse Basin Common Relief Well Design and Response Time Models Technical Note). | Daily drilling report |
| | The source control team will utilise the source control planning documentation to develop and implement a source control plan. The source control plan will:<br>• evaluate, define and schedule source control activities<br>• utilise the asset registers to identify and safely mobilise suitable assets within the minimum timeframe possible<br>• evaluate the potential to use the site survey vessel/ROV for BOP Intervention<br>• evaluate the potential to use the original MODU to drill top-hole sections for any relief wells. | Source control plan documentation |

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| | The source control team will develop a SIMOPs plan, to support the source control plan. The SIMOPs plan will specify:<br>• licence area entry requirements, including DP checks<br>• exclusion zones<br>• minimum vessel separations<br>• communications requirements and frequencies<br>• SIMOPs planning meetings. | Records confirm SIMOPs plan developed and implemented |
| No incidents of loss of hydrocarbons to the marine environment as a result of a vessel collision during source control activities. | If debris clearance and wet-storage is required, the source control team will use existing site survey data to identify temporary wet storage areas which are not sensitive benthic habitats. | Records confirm any identified wet-storage areas do not contain sensitive benthic habitats |
| Impacts to the shallow water column through use of SSDI will be reduced to ALARP through the implementation of the Environmental Performance Standard. | SSDI will only be activated when:<br>• Air quality monitoring and/or modelling determines there is a credible risk of atmospheric VOC concentrations exceeding safe exposure thresholds for source control activities; and<br>• There is a requirement to conduct source control activities in the zone where atmospheric VOCs may present a hazard to the safety of workers; and<br>• Air quality monitoring and/or modelling of gas levels and lower explosive limits determines source control activities including SSDI could be safety conducted. | Records of:<br>• Air quality monitoring and/or modelling demonstrating a credible risk of atmospheric VOC concentrations exceeding safe exposure thresholds for source control activities<br>• SSDI injection occurring concurrently with source control activities. |
| | SSDI injection concentration will initially be set at 100:1 (based on best estimate of well flow-rate at the time of the blow-out). | Records of SSDI injection ratio<br>Records of atmospheric VOC concentration monitoring during source control activities |

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| | Effectiveness of SSDI will be monitored through ongoing measurement of VOC concentrations on the surface, by source control vessels. If VOC exposure thresholds are exceeded, SSDI ratio will be incrementally increased, until VOC concentrations are below safe exposure thresholds. | |

# 5 IMPLEMENTATION

An implementation strategy is described within all INPEX EPs. The implementation strategy addresses the following:

- overview of the INPEX Business Management System, including HSE management systems/processes
- leadership and commitment including Environment Policy
- capability and competency including the organisational team and responsibilities associated with the implementation of the EP
- documentation, information and data management related to the EP
- risk management process used within the EP
- operate and maintain; specific processes/systems required for EP implementation
- management of change, including the specific change management process for the EP
- stakeholder engagement, including processes for ongoing engagement and consultation with stakeholders potentially affected by the EP
- contractors and suppliers, including selection and management processes
- security and emergency management
- incident investigation and lessons learned, which also includes monthly and annual performance reporting
- monitor, review and audit; defining the processes to ensure ongoing compliance and continual improvement of the EP
- management review, including senior management review of the EP.

Within the implementation strategy of each EP, only some elements are relevant to this document. The following are considered necessary to include as stand-alone processes within this document:

- source control arrangements testing
- review of source control arrangements process
- management of change process
- annual performance reporting requirements
- management review process.

The details of these are provided in the following sections.

## 5.1 Source control arrangements testing

Environmental performance outcomes, standards and measurement criteria relating to testing of source control arrangements associated with INPEX exploration and production wells in the Browse Basin are presented in Table 5-1.

**Table 5-1: Environmental performance outcome, standards and measurement criteria for testing response arrangements**

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| INPEX will be prepared and ready to respond to source control events. | INPEX IMT and drilling source control team will conduct a well blow-out exercise in the Browse Basin biennially. The objectives of this exercise will include as a minimum:<br>• practice the interface between the source control team and IMT<br>• source control team verification of availability of rigs, vessels and equipment<br>• source control team verification of logistics plan<br>• to verify source control response timelines as specified in Table 4-4. | Exercise records demonstrate that a Browse Basin well-kill exercise has been conducted biennially. |
| | INPEX source control team will conduct an annual source control logistics desktop validation exercise. The objectives of this exercise will include:<br>• verification of availability of rigs, vessels and other required source control equipment, specified in Table 4-4.<br>• verification of a logistics plan which meets the source control response timelines specified in Table 4-4. | Exercise report demonstrate objectives have been tested annually. |

## 5.2 Review of source control arrangements and risk assessment

An environmental risk register for each EP is maintained and will be reviewed and updated quarterly. The quarterly environmental risk review process will be implemented to assess internal and external changes that may affect the performance outcome and standards as associated with the activity. Changes could include availability of source control response MODUs/vessels or other source control relevant information.

Pre-spud risk reviews will be conducted to verify the availability of relief well MODUs and capping stack deployment vessels with respective capabilities as described in Section 4.2 Adaptive management measures will be implemented, should identified MODU's and vessels be unavailable or outside the limits required to meet the described response time models detailed in Tables 4-1 and Table 4-2.

This document will be reviewed following any events requiring its activation, in order to identify any lessons learned, or other relevant triggers for review.

Environmental performance outcomes, standards and measurement criteria relating to source control capability and arrangements reviews and updates to this document are presented in Table 5-2.

**Table 5-2: Environmental performance outcome, standards and measurement criteria for updating this source control document**

| Environmental Performance Outcome | Environmental Performance Standard | Measurement Criteria |
|---|---|---|
| INPEX will be prepared and ready to respond to source control events. | This document will be reviewed and updated if necessary, following any INPEX source control team exercise or incident in which any source control capability used/activated. | Records demonstrate a review and update (if necessary) of this document. |
| | Verify availability of capable source control MODU and vessels required for the activity prior to, and during the drilling activity. | Records demonstrate pre-spud and quarterly risk review conducted. |
| | Implement adaptive management measures to identify a suitable alternative:<br>• relief well MODU and/or<br>• capping stack deployment vessel<br>to ensure the described response time models in Tables 4-1 and Table 4-2 are met. | Records demonstrate pre-spud and quarterly risk review conducted. |

| | | |
|---|---|---|
| | If new source control related information, which could affect source control capability and arrangements (such as MODU/vessel availability issues) is identified through the pre-spud and/or quarterly risk review process, the information will be assessed using New Information Risk Assessments and/or the Management of Change process. Depending on the outcome of the risk assessment and/or change assessment, this document will be updated as necessary. | Records demonstrate quarterly risk reviews consider source control risk elements. |
| | This document will be reviewed and updated if necessary, based on findings from the annual management review and annual performance report. | Records demonstrate a review and update (if necessary) of this document. |

## 5.3 Management of Change

Changes to INPEX documents are managed in accordance with a business-wide standard, and related procedures and guidelines. Where a change to management of an activity is proposed, it will be logged. Internal notification will be communicated via a management of change (MoC) request. The request will identify the proposed change(s) along with the underlying reasons and highlight potential areas of risk or impact. In accordance with the INPEX business rules, it is mandatory to undertake an environmental risk assessment in every case for changes that could affect the environment, including source control risks and response arrangements.

The MoC request will be managed by an environmental adviser who will then determine the necessary approval/endorsement pathway, in consultation with the environmental approvals coordinator. Minor changes (such as updating a document or process) that do not invoke a revision trigger are made in document reviews from time to time.

In accordance with Regulation 38 & 39 of the OPGGS (E) Regulations 2023, a revision of an EP will be submitted to NOPSEMA where:

- a change is considered to represent a new activity
- a change is considered to represent a significant modification to, or a new stage of, an existing activity
- a change will create a significant new environmental impact or risk that is not provided for in the current EP; or
- a change will result in a series of new (or increased) environmental impacts or risks that, together, will result in a significant new environmental impact or risk, or a significant increase in an existing environmental impact or risk.

The MoC request process will be periodically checked against NOPSEMA guidance to ensure ongoing compliance and will be undertaken as part of the management review process described in Section 5.5.

As this document is an integrated element for EPs associated with exploration and production wells, the MoC process is also applicable to this document. Therefore, where an MoC is required for changes to this document, the INPEX EP MoC template will be used to formally record/document the change.

When a new or revised EP is required to be re-submitted to NOPSEMA, and the new or revised EP also requires/results in changes to this document, the updated version of this document will be submitted, with the new/revised EP, to NOPSEMA.

## 5.4 Annual performance reporting

In accordance with Regulation 22(7) of the OPGGS (E) Regulations 2023, INPEX will undertake a review of its compliance with the environmental performance outcomes and standards set out in this document and will provide a written report of its findings to NOPSEMA on an annual basis.

The annual reporting period for this document will be from the 01 January to 31 December of each calendar year. The submission date for the environmental performance report will be 01 April each calendar year.

Any findings from the Annual Performance Report will be included on an INPEX action tracking register.

## 5.5 Management review

Management reviews of this document shall assess whether:

- control measures detailed in this document are effective in maintaining source control preparedness and response capability to an ALARP and acceptable level
- implementation of the MoC process has been applied consistently and appropriately, ensuring source control preparedness and response capability and arrangements remain ALARP and at acceptable levels, commensurate with INPEX's activities and source control risks
- any changes in legislation, NOPSEMA guidance or other matters relating to source control preparedness and response have been taken into consideration in relation to this document.

Where the documented findings of the management reviews have implications for this document, it will be updated in accordance with Table 5-2.

# 6 REFERENCES

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# Document Endorsement and Approvals

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### Document Identification

| Document Number | Revision | Security Classification | Date |
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### Delegation of Authority

| From Name | To Name | Date and Time | Action |
|---|---|---|---|
| Simon Zoller | Matt Jobe | 03/09/24 06:57 | Approver |
| | | | |

| Name | Title |
|---|---|
| Matt Jobe | Drilling Manager |
| Simon Zoller | General Manager Drilling |
| | |

### Electronic Endorsement and Approval

Electronic approval of this document complies with the issued INPEX Electronic Approval Standard (0000-A9-STD-60011) and records evidence that the applicable person has either endorsed and/or approved the content contained within this document. The reviewers of this document are recorded in the CDS.

| Name | Title | Date and Time | Action |
|---|---|---|---|
| Matt Jobe | Drilling Manager | 03/09/24 06:57 | Approver |
| Matt Jobe | Drilling Manager | 03/09/24 06:57 | Endorser |