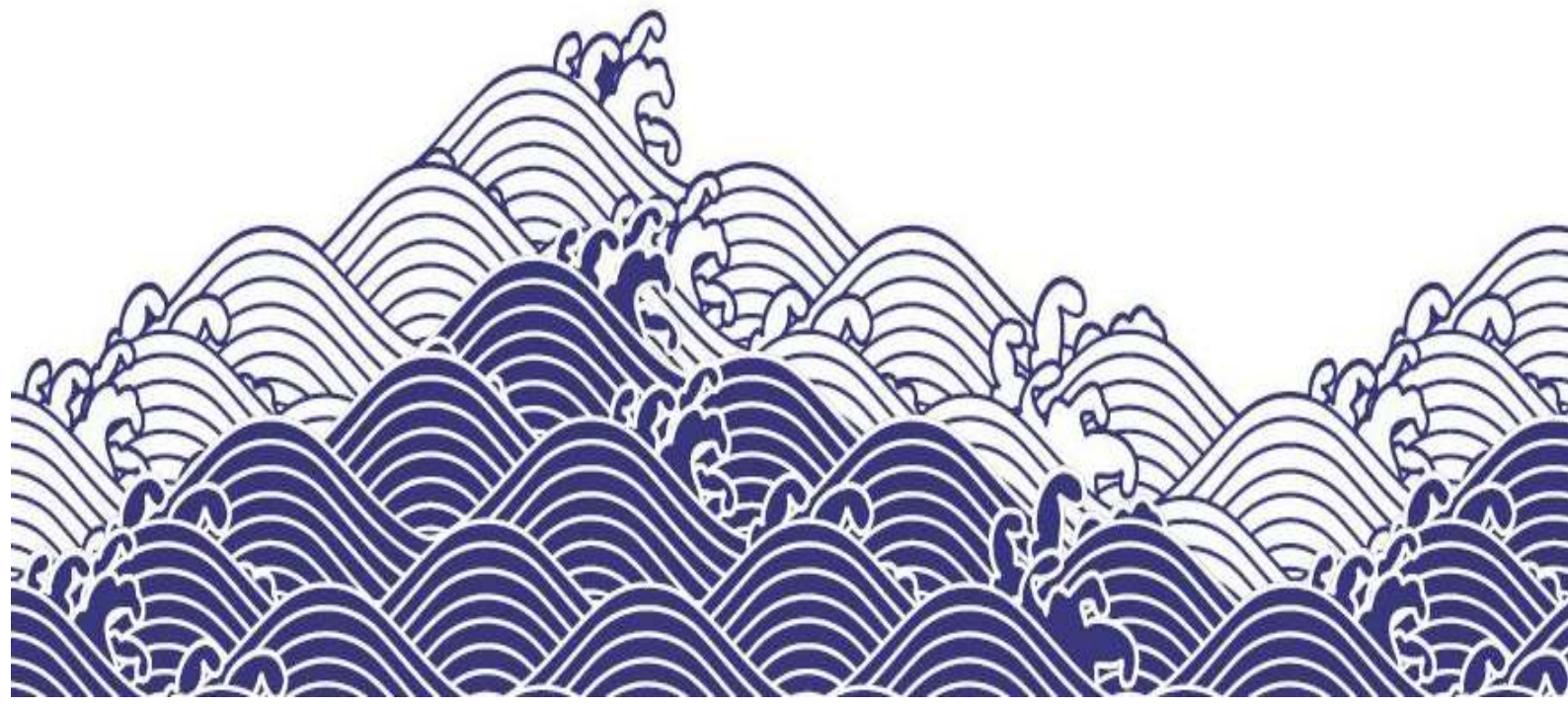


INPEX

Umbilicals, Risers and Flowlines and Subsea Production Systems Installation 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, 8.4 and INPEX Browse Regional Oil Pollution Emergency Plan
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
AEP	Australian Energy Producers formerly Australian Petroleum Production and Exploration Association (APPEA)
AFMA	Australian Fisheries Management Authority (Cwlth)
AHO	Australian Hydrographic Office
AICS	Australian Inventory of Chemical Substances
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)
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
AUV	autonomous underwater vehicle
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
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
BTEX	benzene, toluene, ethylbenzene and xylene
BWM	ballast water management

Term, abbreviation or acronym	Meaning
BWM Convention	International Convention for the Control and Management of Ships' Ballast Water and Sediments
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)
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety WA
DNP	Director of National Parks (Cwlth)
DP	dynamically positioned
EAA	East Asian-Australasian
EERS	emissions and energy reporting system
EEZ	exclusive economic zone
EFL	electrical flying lead
EHS	environment, health and safety
EIAPP	Engine International Air Pollution Prevention
EMBA	environment that may be affected
EP	environment plan
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cwlth)
EPBC Regulations	Environment Protection and Biodiversity Conservation Regulations 2000

Term, abbreviation or acronym	Meaning
EPEI	extent of potential ecological impacts
EPO	environmental performance outcome
EPS	environmental performance standard
ESD	ecological sustainable development
ESDV	emergency shutdown valve
FFFP	film forming fluoroprotein foam
FLET	Flowline end termination
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
HSE	health, safety and environment
Hz	hertz
IAPP	International Air Pollution Prevention
IBA	important bird area
ILT	in-line tee
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

Term, abbreviation or acronym	Meaning
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
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
MBES	multi beam echo sounder
MEG	monoethylene glycol
mg/L	milligrams per litre
MGO	marine gas oil
MMO	marine mammal observer
MNES	Matters of National Environmental Significance
MoC	management of change
MoU	memorandum of understanding
MP	marine park
MSI	Maritime Safety Information

Term, abbreviation or acronym	Meaning
NDC	nationally determined contribution
NGER	<i>National Greenhouse and Energy Reporting Act 2007</i>
nm	nautical miles
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
NOPTA	National Offshore Petroleum Titles Administrator
NORM	naturally occurring radioactive materials
NOx	mono-nitrogen oxides
NRSMPA	National Representative System of Marine Protected Areas
NT	Northern Territory
NWCS	North-west cable system
NWMR	north-west marine region
NWS	north-west shelf
ODS(s)	ozone-depleting substance(s)
OEM	original equipment manufacturer
OLGA	OLGA is a modelling tool for transportation of oil, natural gas and water in the same pipeline
OIW	oil in water
OPEP	oil pollution emergency plan
OPGGS Act	<i>Offshore Petroleum and Greenhouse Gas Storage Act 2006 (Cwlth)</i>
OPGGS (E) Regulations	Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (Cwlth)
OSPAR	The 1992 OSPAR Convention ("Convention for the protection of the marine environment of the north-east Atlantic")
OWS	oil-water separator
PCPT	piezocone penetration tests
PDCA	plan, do check, act
PFAS	per-and polyfluoroalkyl substances
PLONOR	pose little or no risk (to the environment)

Term, abbreviation or acronym	Meaning
POTS Act	<i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>
ppb	parts per billion
ppm	parts per million
ppt	parts per thousand
PTS	permanent threshold shift
PTW	permit to work
PVA	polyvinyl acetate
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
RO	reverse osmosis
ROV	remotely operated (underwater) vehicle
SBP	sub bottom profiling
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
SSIV	subsea isolation valve
SSS	side-scan sonar
STFL	steel tube flying lead
STP	sewage treatment plant
T	Tonne

Term, abbreviation or acronym	Meaning
t/d	tonnes per day
tCO ₂ -e	tonnes of carbon dioxide equivalent
TSS	total suspended solids
TTS	temporary threshold shift
UNEP	United Nations Environment Programme
URF	umbilicals, risers and flowlines
USBL	ultra-short baseline
USV	uncrewed survey vessel
VOC(s)	volatile organic compound(s)
WA	Western Australia
WA-50-L	production licence area within the Browse Basin
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
WCSS	worst credible spill scenario
WHO	World Health Organisation
WTBF	Western Tuna and Billfish Fishery
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).

The Ichthys LNG offshore facilities were constructed, installed and commissioned from 2014 through 2018. The assets commenced production in July 2018 and now routinely ship cargoes of condensate to international customers and sends gas to the Darwin plant via the Gas Export Pipeline (GEP) (Figure 1-1).

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 production wells to the central processing facility (CPF) and floating production storage and offtake (FPSO).

1.2 Scope

As listed in Table 1-1, INPEX has been expanding and further developing the Ichthys Field with URF and SPS installation activities (2020-2025) addressed in the in-force *Ichthys URF and SPS installation environment plan* (EP) (E075-AD-PLN-70000) accepted in April 2020 by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

Due to unforeseen project and weather delays, the scope covered by E075-AH-PLN-70000 remains unfinished. Therefore, INPEX is now preparing this EP revision to complete those outstanding activities and undertake pre-engineering survey activities for future planned activities in WA-50-L.

Therefore, the scope of this EP includes:

- ongoing installation, tie-in, pre-commissioning, mechanical completion and commissioning of well jumpers and associated control systems at existing drill centres in WA-50-L; a continuation of the activities described in E075-AD-PLN-70000 that have not yet been completed due to delays.
- geophysical and geotechnical surveying of the seabed within WA-50-L for future URF and SPS installation activities.

These activities will be conducted using various construction, installation, support and survey vessels with personnel transfers conducted by helicopter.

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).



Figure 1-1: Location of the Ichthys LNG Project

Table 1-1: INPEX Ichthys Project environment plans

Title	Activities	Indicative timing
<p><i>Ichthys URF and SPS Installation Environment Plan</i> (E075-AH-PLN-70000) (Accepted)</p>	<ul style="list-style-type: none"> • geophysical and geotechnical surveys • installation of an additional gathering system • installation of new infrastructure required to connect new production wells to the other existing gathering systems already operation • hydrotesting • pre-commissioning. 	<p>2020 – 2025</p> <p><i>Note this plan will be withdrawn once this EP revision is accepted.</i></p>
<p><i>Ichthys Development Drilling Campaign WA-50-L Environment Plan</i> (0000-AD-PLN- 60003) (Accepted)</p>	<ul style="list-style-type: none"> • continued drilling campaign (12 – 15 development wells over the duration of the EP) using semisubmersible drilling rigs • installation of well infrastructure and XTs • well clean-up and completions • inspection, maintenance and repair of proposed and existing wells in WA-50-L including well intervention and well work over activities • support activities, including equipment transfers, refuelling, crew transfers, and transfer of waste and general supplies to and from logistics support vessels. 	<p>2019-2024</p> <p><i>Note this plan will be withdrawn once the 5-year development drilling EP revision is accepted.</i></p>
<p><i>Ichthys Phase 2 Development Drilling Environment Plan</i> (D021-AD-PLN-70057) (5-year revision under NOPSEMA assessment)</p>	<ul style="list-style-type: none"> • continued drilling campaign (7 – 13 development wells over the duration of the EP) using semisubmersible drilling rig • installation of well infrastructure and XTs • well clean-up and completions • inspection, maintenance and repair of proposed and existing wells in WA-50-L including well intervention and well work over activities • support activities, including equipment transfers, refuelling, crew transfers, and transfer of waste and general supplies to and from logistic support vessels. 	<p>2024-2029</p>

Title	Activities	Indicative timing
<p><i>Ichthys Project Offshore Facility (Operation) Environment Plan</i> (X060-AH-PLN-70007) (Accepted)</p>	<ul style="list-style-type: none"> • 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. • inspection, maintenance and repair (IMR) activities on the facility and installed subsea infrastructure • installation and commissioning of a booster compression module • 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
<p><i>Ichthys Project Gas Export Pipeline (Operation) Environment Plan</i> (F075-AH-PLN-10001) (Accepted)</p>	<ul style="list-style-type: none"> • operation of the GEP from the GERB to the boundary of Commonwealth waters (Northern Territory) • IMR of GEP infrastructure during the Operations stage • deployment of a pipeline repair system during a repair scenario • post-repair discharges of residual hydrocarbon, air, nitrogen gas, filtered inhibited seawater or monoethylene glycol (MEG) to the environment. 	2022 – 2027

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* (OPGGGS Act) and the OPGGS (E) Regulations.

1.4 Overview of activity description

Table 1-2 provides an overview of the proposed activities 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
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.
Water depth	Ranges from 235–275 m at lowest astronomical tide (LAT)
Vessels	Offshore construction, installation, support, survey vessels and remotely operated vehicles (ROV) and autonomous underwater vehicles (AUV).
Activities	Ongoing installation, tie-in, pre-commissioning, mechanical completion and commissioning of well jumpers and associated control systems at WA-50-L drill centres. Geophysical and geotechnical surveying within WA-50-L.
Duration of the activity	24 months from the date this EP is accepted.

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
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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).

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
<p><i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act; Cwlth) and Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations)</p>	<p>Provides for the protection and management of nationally and internationally important flora, fauna, ecological communities, and heritage places.</p>	<p>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. Part 8 of the EPBC Regulations outlines requirements for vessel when interacting with cetaceans. 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). 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). Australian Marine Parks (AMPs) are proclaimed under this Act and associated management plans are enacted under this legislation.</p>	<p>Relevant approval conditions within approval decision EPBC 2008/4208 have been addressed in this EP and are summarised in Appendix A. Section 4.3 – Australian marine parks Section 7.4.2 Interaction with marine fauna. Section 8 – Emergency conditions. INPEX Browse Regional Oil Pollution Emergency Plan (OPEP) A demonstration of how this EP addresses the relevant conservation management documents related to EPBC-listed species has been presented in Appendix B.</p>
<p><i>OPGGS Act 2006</i> and OPGGS (E) Regulations (Cwlth) 2023</p>	<p>The OPGGS Act provides the regulatory framework for petroleum exploration, production and greenhouse gas activities in Commonwealth waters. The OPGGS (E) Regulations under the OPGGS Act require a titleholder to have an accepted plan in place for a petroleum activity.</p>	<p>The OPGGS (E) Regulations require that the petroleum activity is undertaken in an ecologically sustainable manner, and in accordance with an accepted EP.</p>	<p>Implementation of the BMS.</p>

Legislation	Description	Requirements	Demonstration of how requirements are met in EP
<p><i>Navigation Act 2012</i> (Cwlth)</p>	<p>The primary legislation that regulates ship and seafarer safety, shipboard aspects of protection of the marine environment, and employment conditions for Australian seafarers.</p>	<p>The <i>Navigation Act 2012</i> 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.</p> <p>The <i>Navigation Act 2012</i>, in conjunction with the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> and through legislative Marine Orders, also requires vessels to have pollution prevention certificates (see below).</p>	<p>Section 7.6.1 – Physical presence – disruption to other marine users Section 8.2 - Vessel collision Implementation of the BMS.</p>
<p><i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> (POTS Act; Cwlth)</p>	<p>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.</p> <p>In conjunction with Chapter 4 of the <i>Navigation Act 2012</i>, the POTS Act gives effect to relevant requirements of the International Convention for the Prevention of Pollution from Ships, 1973/1978 (MARPOL) in Australia.</p>	<p>The requirements of the POTS Act and the <i>Navigation Act 2012</i> 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 <i>Navigation Act 2012</i> and their relevance to the activity are outlined separately below.</p>	<p>Section 7 and Section 8 Implementation of the BMS.</p>

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). 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.	Vessels ≥ 400 gross tonnes (GT) are required to maintain: <ul style="list-style-type: none"> • 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). • Oil Record Books to record activities, such as fuel/oil bunkering and discharges of oil, oily water, mixtures and residues. • SOPEPs outlining the procedures to be followed during an oil pollution incident. • 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 Section 7.7.1 – Accidental release Section 8 - Emergency Conditions INPEX Browse Regional OPEP Implementation of the BMS.
Marine Order Part 93 – Marine pollution prevention – noxious liquid substances	Marine Order Part 93 - Marine pollution prevention – noxious liquid substances (made under the <i>Navigation Act 2012</i> 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 Part 93 include: <ul style="list-style-type: none"> • International pollution prevention certificates • reporting requirements • emergency plans, record books and tank cleaning. INPEX and 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. 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 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 Part 94 include: <ul style="list-style-type: none"> • management of harmful substances in packaged form • considerations prior to washing substances overboard • notifying and reporting incidents. INPEX and 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 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). 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.	Vessels ≥ 100 GT, or vessels certified to carry 15 persons or more, are required to maintain a Garbage Management Plan. Vessels ≥ 400 GT are required to maintain a Garbage Record Book. The requirements will apply to vessels (as appropriate to their size, type and class) at all times.	Section 7.2 – Waste Management 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).	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. 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 Implementation of the BMS.

Legislation	Description	Requirements	Demonstration of how requirements are met in EP
	<p>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.</p>		
<p>Marine Order Part 97 – Marine pollution prevention – air pollution</p>	<p>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).</p> <p>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).</p>	<p>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.</p> <p>Low-sulphur fuel oil / marine diesel with 0.5% mass for mass (m/m) sulphur content is required to be used.</p> <p>In accordance with Annex VI of MARPOL, the requirements do not apply to the following:</p> <ul style="list-style-type: none"> • emissions associated solely and directly with the treatment, handling, or storage of seabed minerals (i.e. hydrocarbons) • emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of seabed mineral resources (i.e. hydrocarbons). <p>Vessels ≥ 400 GT are required to have an International Maritime Organization (IMO)-approved waste incinerator, as confirmed by the IAPP certificate.</p> <p>Vessels ≥ 400 GT with rechargeable systems containing ODS to maintain an ODS Record Book.</p>	<p>Section 7.1.2 – Atmospheric emissions Implementation of the BMS.</p>

Legislation	Description	Requirements	Demonstration of how requirements are met in EP
		<p>Vessels ≥ 400 GT to have an International Energy Efficiency (IEE) certificate (as applicable to the vessel and engine size, type and class).</p> <p>Vessels ≥ 400 GT to have a Ship Energy Efficiency Management Plan (SEEMP) (as applicable to the vessel and engine size, type and class).</p>	
<i>Biosecurity Act 2015</i> (Cwlth)	The <i>Biosecurity Act 2015</i> 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.	<p>Of specific relevance to this EP, the <i>Biosecurity Act 2015</i> (Cwlth) requires that ballast is managed within Australian seas. The <i>Biosecurity Act 2015</i> (Cwlth) now defines Australian seas as:</p> <ul style="list-style-type: none"> • 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 • for all other international vessels – the Australian territorial seas (all waters within 12 nm). 	<p>Section 7.4.1 - Invasive marine species</p> <p>Implementation of the BMS.</p>
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.	<p>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:</p> <ul style="list-style-type: none"> • Mandatory pre-arrival questions related to biofouling management practices namely: <ul style="list-style-type: none"> ○ Confirm if the vessel has an effective biofouling management plan? ○ Has the vessel been cleaned of all biofouling within 30 days of arriving in Australia? 	<p>Section 7.4.1 - Invasive marine species</p> <p>Implementation of the BMS.</p>

Legislation	Description	Requirements	Demonstration of how requirements are met in EP
		<ul style="list-style-type: none"> ○ Does the vessel have an alternative biofouling management method that has been pre-approved by the department? ○ Do you intend to in-water (underwater) clean biofouling in Australia? • Vessel operators to demonstrate proactive management of biofouling by implementing one of the three accepted proactive biofouling management options: <ul style="list-style-type: none"> ○ Implementation of an effective biofouling management plan; or ○ Cleaned all biofouling within 30 days prior to arriving in Australian territory; or ○ Implementation of an alternative biofouling management method pre-approved by the department. 	
<p><i>Biodiversity Conservation Act 2018 (WA)</i></p> <p><i>Animal Welfare Act 2002 (WA)</i></p> <p>Biodiversity Conservation Regulations 2018 (WA)</p>	<p>Ensures the protection of biodiversity and humane treatment of native fauna.</p> <p>Ensures appropriate treatment and management of wildlife in the event of a potential hydrocarbon spill and response activities.</p>	<p>Consult with WA Department of Biodiversity, Conservation and Attractions (DBCA) and obtain relevant permit(s) before a wildlife hazing and post-contact wildlife response.</p>	<p>Section 8 – Emergency conditions</p> <p>INPEX Browse Regional OPEP.</p>

Legislation	Description	Requirements	Demonstration of how requirements are met in EP
<i>Fish Resources Management Act 1994</i> (WA)	The <i>Fish Resources Management Act</i> 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 <i>Fish Resources Management Act</i> (1994) 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 Implementation of the BMS.
<i>Aquatic Resources Management Act 2016</i> (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 <i>Fish Resources Management Act 1994</i> (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 Implementation of the BMS.
<i>Underwater Cultural Heritage Act 2018</i>	This Act replaced the <i>Historic Shipwreck Act 1976</i> 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.	<p>Discovery of underwater cultural heritage (UCH) must be notified within 21 days of the discovery.</p> <p>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.</p> <p>The Act prohibits certain activities within protected zones (prohibited conduct) including but not limited to:</p> <ul style="list-style-type: none"> • entry of persons or vessels • allowing a vessel to become stationary • underwater activities • anchoring or mooring vessels • release or deposit of objects or materials. 	<p>Section 4.9.4 - Underwater cultural heritage</p> <p>Section 7.5 – Seabed disturbance</p> <p>Section 8 – Emergency conditions</p>

Legislation	Description	Requirements	Demonstration of how requirements are met in EP
	Disturbance of a protected shipwreck, or any other adverse impact including an indirect impact, without a permit is an offence under the Act.	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'.	
<i>National Greenhouse and Energy Reporting Act 2007</i> (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.	<p>The Clean Energy Regulator administers the NGER Act, its legislative instruments, and related policies and processes.</p> <p>Reporting requirements under the NGER Act are made via the Emissions and Energy Reporting System (EERS) on an annual basis.</p> <p>EERS allows all NGER reporters to submit emissions and energy reports under sections 19, 22G and 22X of the NGER Act.</p> <p>Vessel contractors are responsible for NGER reporting* for the proposed activities described within this EP as they have operational control under the NGER Act.</p> <p>*subject to exceeding the reporting threshold of 25 kt or more of GHG (scope 1 and 2 emissions).</p>	Section 7.1.2 - Atmospheric 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. The Bonn Agreement Oil Appearance Code may be used during spill response activities.
Australian Energy Producers formerly The Australian Petroleum Production and Exploration Association (APPEA) <i>Code of Environmental Practice</i> (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: <ul style="list-style-type: none"> Assess the risks to, and impacts on, the environment as an integral part of the planning process. Reduce the impact of operations on the environment, public health and safety to ALARP and to an acceptable level by using the best available technology and management practices. Consult with stakeholders regarding industry activities. 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 <i>Biosecurity Act 2015</i> .

Guideline	Description
Australian Biofouling Management Requirements (Version 2) (DAFF 2023)	<p>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:</p> <ul style="list-style-type: none"> • Does the vessel have an effective biofouling management plan? • Has the vessel been cleaned of all biofouling within 30 days of arriving in Australia? • Does the vessel have an alternative biofouling management method that has been pre-approved by the department? • Do you intend to in-water (underwater) clean biofouling in Australia? <p>Vessel operators must also demonstrate proactive biofouling management by implementing one of the 3 accepted proactive biofouling management options:</p> <ul style="list-style-type: none"> • Implementation of an effective biofouling management plan; or • Cleaned all biofouling within 30 days prior to arriving in Australian territory; or • Implementation of an alternative biofouling management method pre-approved by the department. <p>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.</p>
International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention)	<p>All vessels are required to manage their ballast water and sediments in accordance with the Convention and <i>Biosecurity Act 2015</i>. The convention came into force on 8 September 2017 and Australia's ballast water policy and legislation align with the convention.</p>
Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (IMO 2023)	<p>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.</p>
National Light Pollution Guidelines for Wildlife (DCCEEW 2023a)	<p>The Guidelines provide best-practice industry standard for managing potential impacts of light pollution on marine fauna.</p>
United Nations Framework Convention on Climate Change (1992)	<p>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.</p>

Guideline	Description
Paris Agreement on Climate Change (2015)	<p>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 °C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 °C.</p> <p>The Paris Agreement provides the international framework and context around Australia's nationally determined contributions (NDC).</p>
National disaster risk reduction Framework	<p>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.</p>

3 ACTIVITY DESCRIPTION

3.1 Location, timing and schedule

Production licence, WA-50-L, is located within the Browse Basin in Commonwealth waters within WA (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 LAT. The closest major town is Derby, located approximately 390 km south of the southern boundary of the licence area.

As described in Section 1.2, the scope of this EP includes the continuation of the installation, tie-in, pre-commissioning, mechanical completion and commissioning of well jumpers and associated control systems at existing drill centres in WA-50-L (refer Figure 3-2). This work is scheduled to be undertaken mid-2025 and will last for approximately 100 days.

In preparation for future URF and SPS installation activities, covered by a separate EP, pre-engineering geophysical and geotechnical survey activities will also be undertaken in WA-50-L and will last for approximately 30 days.

The duration of this EP is for 24 months from acceptance of this EP to allow for any delays to project schedule.

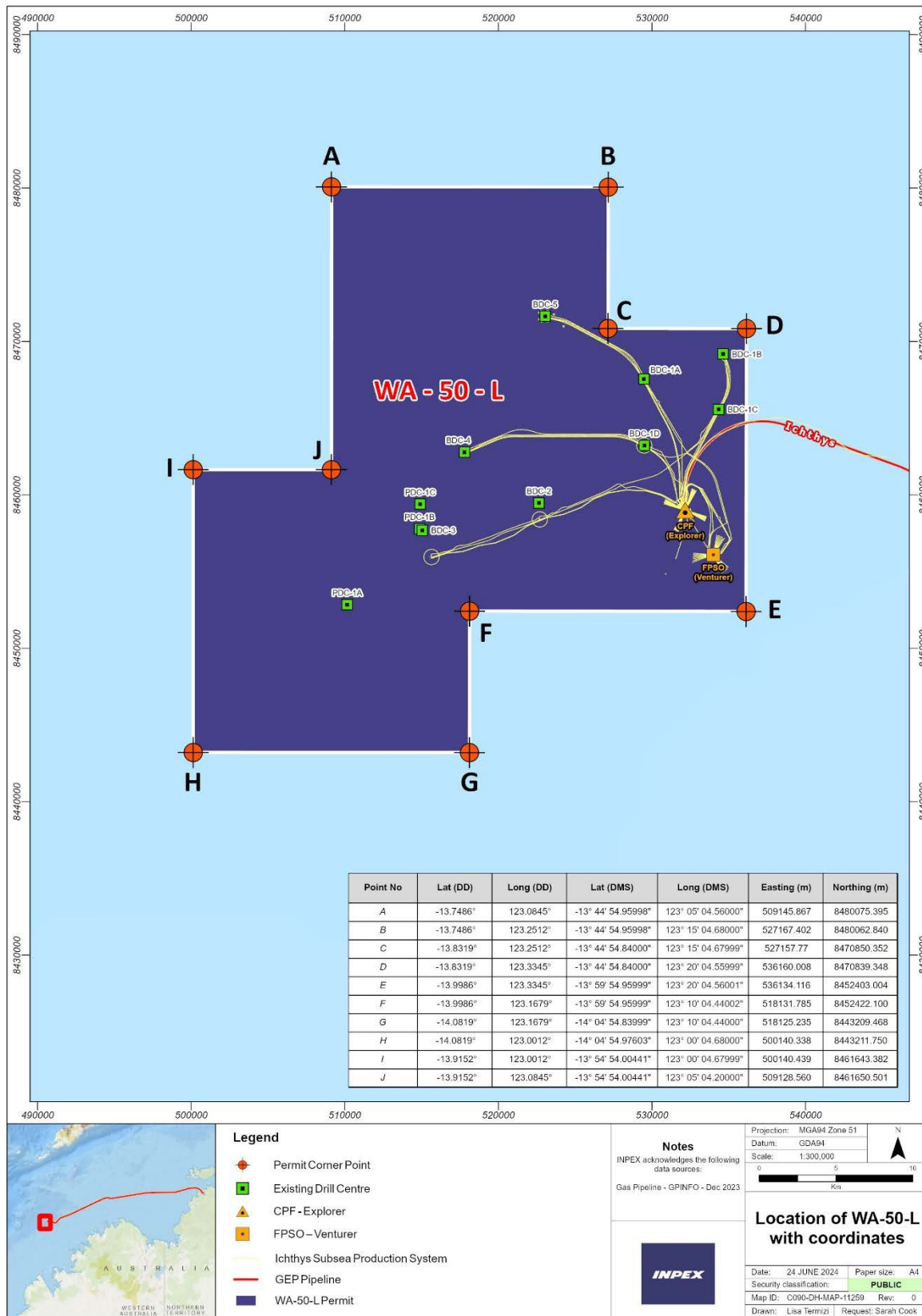


Figure 3-1: Location and coordinates of WA-50-L

COLOUR KEY

- REMAINING PHASE 2a SCOPE
- EXISTING PHASE 1 AND PHASE 2a

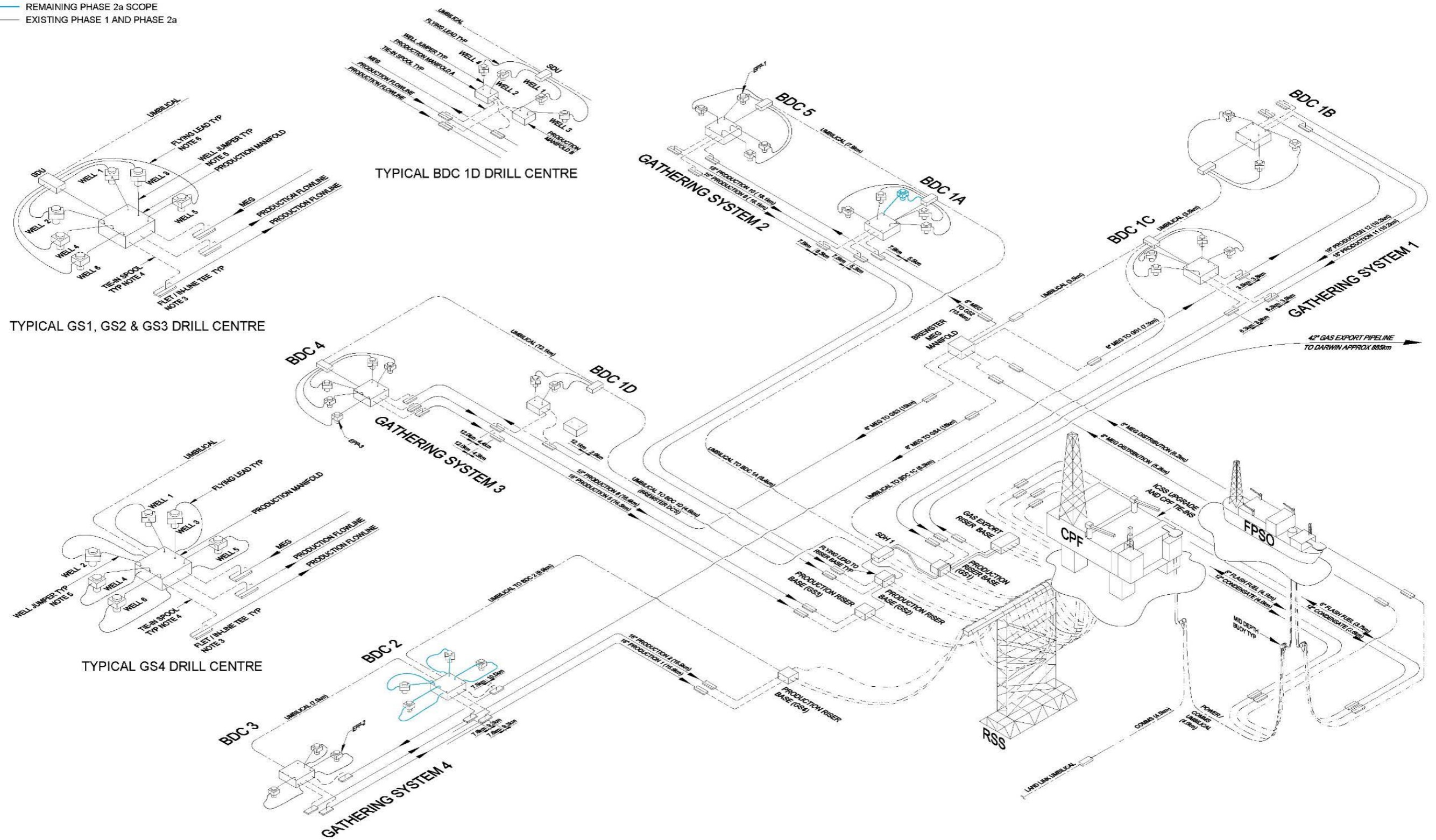


Figure 3-2: Indicative representation of Ichthys LNG infield installations

3.2 Summary of activities

The installation activities to be undertaken under this EP include the following:

- installation of URF infrastructure including:
 - well jumpers
 - smaller miscellaneous subsea structures such as mattresses and scour protection equipment
 - control systems such as umbilicals and flying leads.
- the connection of URF infrastructure and systems to the existing subsea infrastructure and offshore facility including:
 - tie-ins between subsea equipment
 - tie-ins to the well head XTs at drill centres
 - power cables and communication cables
 - subsea connection of umbilicals (electric and hydraulic control cables) and flying leads.
- pre-commissioning, mechanical completion and commissioning of the well head XTs at drill centres.
- seabed rectification activities such as jetting for freespan correction and seabed levelling to support installation of URF infrastructure.
- potential for IMR of existing and proposed URF and SPS infrastructure in WA-50-L including marine growth removal.

The survey activities to be undertaken under this EP include the following:

- geophysical survey scope comprising:
 - multibeam echo sounder (MBES)
 - side scan sonar (SSS)
 - sub-bottom profiling (SBP).
- geotechnical survey scope comprising:
 - piston or vibro-coring/sampling
 - piezocone penetration tests (PCPTs)
 - box core sampling
 - geotechnical boreholes.
- ultra-short baseline positioning (USBL):
 - USBL positioning system
 - mini transponders attached to geotechnical and geophysical equipment.
- long baseline positioning (LBL):
 - subsea transponder array for positioning and metrology
 - multiple transponders configured in an array to allow high accurate subsea positioning and measurements controlled via vessel dunker and or ROV transponder.

3.3 Installation activities

The scope of this EP includes the ongoing installation, tie-in, pre-commissioning, mechanical completion and commissioning of five well jumpers and associated control systems at existing drill centres within WA-50-L.

The installation activities are scheduled to be undertaken mid-2025 and will last for approximately 100 days.

3.3.1 Tie-ins

Well jumpers are sections of pipework which connect XT's with the production manifolds to permit the flow of hydrocarbons into to the production flowlines and flow of MEG from the FPSO to the XT's. Each well jumper, approximately 38 m in length, will be suspended above the seabed without seabed supports.

Well jumpers will either be filled with treated water or MEG, chemical preservation fluids and dosed with a clear dye; either before load-out or immediately before subsea deployment.

Manoeuvring of the well jumpers into position on structures will be achieved using a crane or winch systems on a vessel with ROV support.

All subsea connections will be performed by ROVs. When in position, the jumpers will be tied into the seabed structures. Prior to tie-in operations, end caps will be removed, and it is expected that small volumes of preservation fluids will be displaced from each of the jumper ends and the manifolds to which they are being connected.

A small volume of untreated "raw" seawater is also expected to enter into the open ends of the well jumper during tie-in to receiving structures, this poses a risk of corrosion of the jumper and will be addressed through either chemical treatment (chemical sticks) or flushing using MEG.

Chemical sticks are either solid forms of preservation chemicals (biocide, oxygen scavenger and clear dyes) coated in dissolvable polyvinyl acetate (PVA) or PVA tubes filled with undiluted liquid chemical at manufacturers recommended dosage rate for the desired preservation/protection. The chemical "sticks" may be inserted into any cavity that requires preservation and protection from corrosion. PVA is used to delay the dissolution and release of chemicals until connection is made-up and minimise release to the environment, they typically dissolve in several hours, dependent on surrounding media and temperature.

As a base case chemical sticks are not intended to be used during well jumper installation as the long-term preservation status of the well jumpers will be achieved through the positive displacement of raw seawater to leave the well jumper fully MEG filled. One end of the well jumper will be connected at one of the receiving structures. During make-up of the second end of the well jumper MEG and clear dye are supplied via ROV or downline from a vessel and flushed through the open end of the well jumper to displace the raw seawater to sea, MEG will also be lost to sea during this flushing process.

3.3.2 Control systems (flying leads)

The three main types of flying leads are steel tube flying leads (STFLs), electrical flying leads (EFLs) and optical flying leads. Flying leads form part of the control system and convey hydraulic production control system fluids, electrical and optical signals between the control structures within the seabed infrastructure.

The STFLs will be approximately 100-150 m long and enable hydraulic control between the XT's and the distribution structures, with one STFL per XT. STFLs are installed from reels and cassettes and are pre-filled with preservation MEG and hydraulic control fluids before being placed on the seabed. A small amount (50-100 ml) of marine grade hydraulic control fluid will be lost to sea during each connection make or break.

The EFLs will be approximately 80-100 m long and connect the electrical distribution system between the various subsea structures to send and receive signals and sensor information for the control of the subsea components, valves etc. There are 2 to 3 EFLs connected to each XT. The electrical cables are housed in a sealed hose which is filled with hydraulic oil, there is no planned discharge of hydraulic oil to sea.

3.3.3 Subsea structures

During the installation and tie-in activities described in this EP, additional subsea structures may be required to be installed to support the SPS.

Scour protection mattresses, grout bags and sandbags

Grout bags and sandbags will be used for various purposes including to fill uneven areas of the seabed for stability, act as support to structures on the seabed, to cover installation aids that could not be removed and as turning bollards if required.

Grout bags, scour protections mattresses and STFL crossing mattresses, as required, will form part of the permanent URF and SPS infrastructure and will remain on the seabed.

Metoccean wave rider buoy

A metoccean wave rider buoy may be installed to assist with the safe installation by providing real-time wave and current information. The buoy will be located at the surface and will be connected by a chain/cable to a weight deployed on the seabed. This weight will be up to 2 m x 2 m in size. Up to 15 m of chain is also expected to be in contact with the seabed. The buoy may be re-positioned within WA-50-L several times and will be removed once URF activities are completed.

3.3.4 Mechanical completion and pre-commissioning and commissioning

Once the URF infrastructure has been installed, the structural integrity of well jumpers and SPS equipment will be verified, and all lines prepared to ensure they are suitable for long term preservation before commencement of hydrocarbon production. The principal activities are:

- pre-commissioning
- mechanical completion
- commissioning.

Pre-commissioning

This involves first filling and MEG flushing to displace raw seawater (as described in Section 3.3.1) to leave the infrastructure in a preserved state prior to commissioning and start-up.

One end of the well jumper will be connected at one of the receiving structures. During make-up of the second end of the well jumper, MEG and clear dye are supplied via ROV or downline from the construction support vessel and flushed through the open end of the well jumper to displace the raw seawater within the well jumper to sea. MEG will also be discharged to sea during this flushing process.

Mechanical completion

The installed equipment will be leak tested to verify system integrity. This involves leak testing the production and MEG systems using MEG to confirm that these systems are leak-tight before the actuation of valves during commissioning and any introduction of hydrocarbons.

Subsea connections will be monitored for leaks using an ROV UV light or an acoustic leak detection device, which will screen for the clear dye which has been added to the fill media (lean MEG). Clear dye is detected using specific frequency UV light as opposed to visual detection.

Commissioning

Commissioning of the SPS and URF infrastructure consists of the final preparations performed on the well head XTs, subsea structures and control system prior to the commencement of hydrocarbon production. The preparations include final hydraulic system leak tests and confirming the correct functionality of each element of equipment via dynamic verification (i.e. valve cycling and profiling and verifying sensor feedback).

The commissioning scope also includes the performance of defined operational tests, safety/shutdown tests and the introduction of in-service/ready for start-up fluids to sealed, proven leak-tight systems (where these were not previously completed during pre-commissioning).

3.4 Maintenance and removal

Maintenance and removal of infrastructure described in this EP will be undertaken in accordance with the requirements of the OPGGS Act and the OPGGS (Resource Management and Administration) Regulations 2011. In accordance with Section 572 of the OPGGS Act (Maintenance and removal of property etc. by titleholder), INPEX proposes to remove structures, equipment and other property described in this EP when production permanently ceases or when the infrastructure is no longer being used for the Project. INPEX has an inspection, maintenance and repair program for subsea assets described in the Offshore Facility (Operation) Environment Plan (X060-AH-PLN-70007).

3.5 Inspection maintenance and repair

3.5.1 Marine growth removal

The mating faces of subsea connections may require cleaning to remove calcium formed through biological fouling. 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. This will be achieved by putting a cap over the connection sealing surfaces and injecting a weak acid solution. After the acid has dissolved the calcium deposits, the cap will be removed, and the remaining acid and salts will be discharged to sea.

3.6 Remotely operated vehicles

All subsea activities will involve ROVs with onboard cameras and sensors to monitor and perform the installation activities. Due to the water depth, all deep-water connections between components will be guided and actuated by the ROVs. However, there will be contingency plans to allow for saturation diving to support seabed installation activities, and air diving at shallow water depths to support the connection of components at the CPF and FPSO.

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

3.7 Survey activities

In preparation for future expansion and development of the Ichthys Field in WA-50-L, the acquisition of high-resolution geophysical survey and geotechnical data is required to improve on the resolution of existing survey data in the licence area. This data will support the pre-engineering and detailed design of flowlines, umbilicals and subsea structures associated with future Ichthys Field development.

Survey activities may occur anywhere within WA-50-L but are expected to focus on future flowline corridors connecting new drill centres to existing drill centres. The survey data will be used to ensure positioning future subsea infrastructure takes into account the seabed profile and soil type. The data may also be used for future mooring anchor design associated with mobile offshore drilling units.

The geophysical and geotechnical survey work has an expected duration of approximately 30 days, excluding transit time.

3.7.1 Geophysical survey methodology

Multibeam echo sounder

MBES surveys will enable the collection of bathymetry data and the correlation of depth information. This type of survey uses a sonar system to transmit short pulses of sound energy, analysing the return signal from the seafloor or other objects.

A MBES transmits at frequencies typically between 100 kHz and 700 kHz with pulse lengths from approximately 10 to 1200 μ s when transmitted as a continuous wave pulse. Indicative sound output at source is equipment dependent and may range from 163 to 220 dB re 1 μ Pa @1m.

Side-scan sonar

Use of SSS methods will enable the identification of seabed obstructions or features and assist with sea floor sediment classification. This type of survey is a hydro-acoustic technique, comprising a set of transducers mounted on either side of a towed vehicle (towfish) or ROV/AUV. The transducers produce high frequency pulses, most commonly as pairs of approximately 100 kHz/410 kHz or 300kHz/600 kHz, i.e. two simultaneous lower and higher frequency pulses, and the signal is reflected from seabed features. Depending on the particular equipment, the frequencies may range between 75 kHz and 1600 kHz. Indicative sound output at source may range from 137 to 240 dB re 1 μ Pa @1m.

Sub-bottom profiling

Acoustic sub-bottom profiling systems can be 'ping and chirp' and/or 'boomer' type equipment, used to determine the physical properties of the sea floor and to image and characterize the geological formations below the sea floor.

Typically towed behind the survey vessel or mounted to ROV/AUV; these SBP acoustic systems transmit high frequency pulses, although lower than SSS and MBES frequencies. Typical frequencies for chirp SBP systems range between 0.5 kHz and 24 kHz with indicative sound outputs at source ranging from 142 to 220 dB re 1 μ Pa @1m. Typical frequencies for boomer SBP systems range between 0.2 kHz and 8.0 kHz with indicative sound outputs at source ranging from 142 to 215 dB re 1 μ Pa @1m.

3.7.2 Geotechnical survey methodology

Piston coring/sampling

During the geotechnical survey, piston core (or alternatively vibrocorer) sampling will occur within WA-50-L to characterise seabed properties. The system will use either a piston gravity coring technique or a vibrating corer technique targeting a depth of 6 m (refer to Figure 3-3). The coring/sampling system shall be deployed from the survey vessel typically using a winch or crane and shall be placed on the seabed.

Upon collection of the core, the sample and the equipment will be retrieved back to the vessel, and nothing left on the seabed. Data will be obtained at approximately 20 to 30 locations within WA-50-L.



Figure 3-3: Example Piston corer and cradle

Piezocone penetration tests

The PCPT system, weighing approximately 7 tonnes, will be lowered to the seabed to assess the in-situ strength of the seabed sediments at target depths of between 10 – 30 m (refer to Figure 3-4). Typical PCPT systems consist of a seabed frame with an integrated wheel drive unit. The drive unit uses two silent hydraulic powered wheels which are pushed against a round small diameter solid rod (string) using hydraulic cylinders. The rod, equipped with a cone or probe, is pushed into the soil by the rotating wheels at a controlled rate to record the seabed properties. Electric power, data and real-time communication are transmitted via an underwater power cable connected to the vessel.

Upon completion of each PCPT, the system is retrieved back to the vessel, leaving nothing on the seabed and then prepared for deployment at the next location. During the geotechnical survey, PCPT data will be obtained at approximately 20 to 30 locations within WA-50-L.



Figure 3-4: Example PCPT system

Box core sampling

Sampling of seabed sediments will enable the validation and ground-truthing of geophysical survey data. The box core sampling equipment (refer to Figure 3-5 for an example) will be deployed using either a crane or winch on board the survey vessel. Once the sample has been collected it will be brought back to the vessel where it is logged and stored for further analysis. Nothing will be left on the seabed at the sampling locations.

During the geotechnical survey, box core samples will be collected from approximately 15 locations within WA-50-L, with each sample disturbing approximately up to 1 m².



Figure 3-5: Example box core sampling equipment

Geotechnical boreholes

Up to three geotechnical boreholes are planned within WA-50-L each extending to a depth of approximately 15 m below the seabed. The boreholes will be drilled using subsea coring equipment, employing either a sea floor system or directly from a survey vessel.

The duration to complete each borehole will be approximately one day. Upon completion of the geotechnical boreholes all equipment and samples/cores will be retrieved back to the vessel with nothing left on the seabed.

3.7.3 USBL positioning

For positioning and tracking of ROVs and other subsea items, all deployed items will have USBL transducers attached to them, which is industry standard. The purpose of the USBL is to ensure adequate accuracy in the positioning and real-time navigation during offshore operations, and to minimise the risk of accidental collisions and damage.

The USBL transceiver head is mounted on a pole and either deployed through the moonpool or lowered through a tube in the hull depending on the survey vessel used. The system emits a pulse with a frequency of typically between 15 kHz and 40 kHz, but can range between 5 kHz and 100 kHz, (up to 200 dB re 1 μ Pa@1m) which is received by a mini transponder beacon that is attached to the underwater device being positioned. The transponder then transmits its own signal (185-190 dB re 1 μ Pa @1m) back to the transceiver head.

The mini transponders will also be attached to all geotechnical equipment including: coring equipment, PCPT and towfish to provide accurate positioning.

3.7.4 LBL positioning

In order to assist with equipment positioning for the installation activities, INPEX may require the deployment and retrieval of LBL acoustic positioning arrays at selected drill centres.

The installation or support vessels will utilise specialist service contractors to provide the services and equipment relating to the LBL array installation including the use of a vessel crane for temporary installation of seabed acoustic positioning systems.

Drill centre LBL arrays will generally consist of several transponders installed temporarily around the drill centre in fixed stands, standing approximately 2 m above the seabed and covering an area of approximately 2 – 3 m². Upon completion of the installation activities all equipment will be retrieved back to the vessel with nothing left on the seabed.

Transponders in the array are interrogated via either ROV or vessel USBL/LBL system and emit pulses (187–196 dB re 1 μ Pa@1m) which in turn are received by the other transponders. The transducers within the LBL array operate with a frequency range of (20–34 kHz).

3.8 Vessels

3.8.1 Installation and support vessels

Offshore installation and support vessels will be used to perform the various installation activities that will typically be conducted in specific campaigns of varying durations ranging from several weeks to months.

The URF and SPS installation activities may involve several types of vessels, including installation vessels, deep-water construction vessels, derrick lay vessels, construction support vessels, light construction vessels, support vessels, DP transport vessels, platform supply vessels, tugs and barges. Support vessels will be used to transport equipment, materials and fuel between vessels and the port of Broome or Darwin noting that these supply vessels in transit are outside the scope of this EP.

Vessels may arrive directly from international destinations and/or may transit to and from Australian ports. The specific vessels to be used during the activities are yet to be confirmed. However, the fuel type used by all vessels will be marine gas oil (MGO)/Group II hydrocarbons.

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

Vessels and helicopters may be refuelled in WA-50-L as operationally required.

3.8.2 Survey vessels

The survey vessels will use MGO fuel and will be equipped with ROV and AUV as required. Vessel speeds during geophysical survey data acquisition are expected to be low (typically <5 knots) and during the geotechnical scope the vessel will be stationary. The survey vessels are expected to be mobilised from Broome or Darwin. Due to the relatively short duration of the survey (approximately 30 days in total), vessel refuelling, or crew changes are not anticipated to be required. Survey vessels will be dynamically positioned, and no anchoring will take place in WA-50-L unless in the event of an emergency.

Uncrewed survey vessels

During the proposed survey in WA-50-L, an uncrewed survey vessel (USV) may be used. USVs typically have geophysical survey equipment (SSS, MBES, USBL) and may also be equipped with a small work-class ROV that launches directly from the stern of the USV. The USV can operate at the sea surface or sub-surface and is fitted with visual and thermal imaging cameras. The USV will be remotely operated from a land-based remote operations centre/bridge control room staffed with a client representative, USV captain/master, USV ROV operator, engineers and survey operator. All personnel will have the same qualifications and experience as for traditional survey vessel operations.

A typical USV is approximately 12 m in length with a maximum speed of 6 knots. However, operating speeds are expected to be approximately 4 knots. USVs will sail from a port of departure on the WA mainland such as Broome or Darwin, to WA-50-L, to undertake the survey activities. A USV will typically have a traditional crewed small support vessel (e.g. ~20 – 30 m length), which would remain on stand-by at a relevant port (Broome or Darwin). The USV support vessel would only be deployed if the USV required infield maintenance and support such as re-fuelling or breakdown recovery (e.g. loss of communication). In the unlikely event of a total loss of communication with the USV, the USV is designed to go into 'virtual anchoring' mode and will hold station/position. The USV has an emergency tow-bridge attached to the exterior of the vessel to enable recovery/attachment of a tow-bridle by any available support vessel.

The USV would be powered by marine diesel with fuel consumption estimated as 0.1 m³ diesel per day. The total fuel tank capacity onboard the USV is 3.35 m³. No other chemicals are stored onboard, noting that if equipped with an ROV there will a small volume (approximately 1 L) of marine grade hydraulic fluid. When not in use, the USV is stored out of the water with no specific IMS requirements. No garbage, sewage or other routine emissions or discharges are associated with the USV. Vessel lighting is minimal and limited to that required for safety and navigational purposes



Figure 3-6: Example uncrewed survey vessel with ROV

Autonomous Underwater Vehicles

Although the geophysical survey activities described in Section 3.7.1 are typically conducted from a vessel they may also be undertaken by AUV as part of this EP. If available, the AUV fitted with acoustic instruments would be deployed in WA-50-L by the survey vessel and would perform geophysical survey activities in parallel with the survey vessel performing the geotechnical survey.

A typical AUV is approximately 5 m in length with a maximum speed of 5 knots; operating speeds are generally 3.5 knots. All geophysical surveying equipment onboard the UAV will be within the frequency ranges described in Section 3.7.1.

The AUV is battery powered with a capacity of up to 30 hours, covering over 150 km of survey per dive. No chemicals or fuel are stored onboard and when not in use the AUV is stored out of the water with no specific IMS requirements.

As for the USV, the AUV has no garbage, sewage or other routine emissions or discharges are associated with the USV. Vessel lighting is minimal and limited to that required for safety and navigational purposes.



Figure 3-7: Example autonomous underwater vehicle

3.9 Greenhouse gas emissions

Expected direct greenhouse gas (GHG) emissions associated with the proposed activities are presented in Table 3-1. Emissions are calculated using the NGER Emissions and Energy Threshold Calculator 2023-2024. Noting that these direct emissions relate to 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 3-1: Expected direct GHG emissions generated during the proposed activities

Activity	GHG emissions (t-CO ₂ -e) *
Installation activities	5,792 t-CO ₂ -e
Geophysical and geotechnical survey	816 t-CO ₂ -e
Helicopters	919 t-CO ₂ -e
Total	7,527 t-CO ₂ -e

*Assumptions: Figures based on 100 days of installation activities; 30 days of survey activities undertaken by traditional survey vessels however, if USV or UAV are used fuel consumption and hence GHG emissions would be less. Helicopter visits (100 days ~ 15 weeks) 3 per week for 15 weeks.

3.10 Summary of emissions, discharges and wastes

A summary of the emissions, discharges, and wastes resulting from the proposed activities are described in Table 3-2. All chemicals to be discharged to the marine environment will be subject to the INPEX *Chemical Assessment and Approval Procedure* (Section 9.6.1) before they can be used.

Table 3-2: Emissions (E), discharges (D) and wastes (W) generated during the proposed activities

Source	E, D, W	Description
Installation - incidental loss from well jumper, manifold and XT while proving/confirming isolation.	D	Passive subsea discharges of MEG during installation approximately 2 m ³ per well jumper
Pre-commissioning - displacement of raw seawater from well jumper connection ("flushing").	D	Subsea discharges of MEG containing clear dye (50 ppm/0.3 L) during flushing to displace raw seawater from well jumpers approximately 6 m ³ MEG per well jumper with potential for repeat flushing in the event of a failed leak test. Release of 1.5 m ³ MEG containing clear dye (50 ppm) for flushing of downline, discharged subsea during each downline deployment, approximately 1 event per well jumper. Release of 1.5 m ³ fresh water (potable) for flushing of downline, discharged subsea during each downline recovery, approximately 1 event per well jumper.
Leak testing of well jumpers and valves via	D	Subsea discharges of 0.5 m ³ MEG containing clear dye (50 ppm) during depressurisation of leak test, approximately 1

Source	E, D, W	Description
downline/ROV for mechanical completion.		event per well jumper with potential for repeat in the event of a failed leak test. Release of 0.5 m ³ MEG containing clear dye (50 ppm) for flushing of downline, discharged subsea during each downline deployment, approximately 1 event per well jumper. Release of 0.5 m ³ fresh water (potable) for flushing of downline, discharged subsea during each downline recovery, approximately 1 event per well jumper.
Unplanned detachment of pressurisation or flushing downline during pre-commissioning activities.	D	1.5 m ³ MEG to sea surface or subsea where discharge volumes are mitigated through the use of dry-break couplings on the downlines.
Loss of hydraulic media during connection/disconnection and leak testing of driverless control system connectors.	D	Hydraulic media - similar to MacDermid HW740R (100L) 50% MEG / 50% water (100 L) = 200 L per connection / disconnection (total of ~15), resulting in a total loss of approximately 3,000 L or 3 m ³
Installation aids that may be left behind (i.e. cable ties, sacrificial slings, rigging etc.)	W	Discarded plastic/fabric material, approximately 3 m ³ . Use of biodegradable cable ties has been implemented.
Incidental smearing of grease and wax found on infrastructure, tooling and lifting equipment.	D	10 kg grease, subsea and sea surface
Contingency use of chemical sticks (biocide, oxygen scavenger and clear dye) to treat seawater that may ingress into subsea structures during connection make-up.	D	Chemical stick comprise of biocide (200 ppm), oxygen scavenger (800 ppm) and clear dye (50 ppm).
Use of grout bags	D	Overspill of grout during filling of grout bags. Minor spills may occur (< 0.5 m ³) during filling of each bag.
IMR - marine growth removal	D	Subsea discharges of acetic or sulfamic acid during cleaning < 1 m ³ per activity
ROV operations	D	Routine subsea discharges of water-based hydraulic fluids and subsea control fluids (< 1 m ³).
Power generation	E	Combustion emissions from vessels and diesel-powered equipment onboard (e.g. generators, compressors and pumps) emitted to atmosphere.
	E	Acoustic emissions from vessel engines and propulsion systems (such as DP thrusters).
Geophysical survey equipment	E	Acoustic emissions from geophysical survey equipment.
Seawater cooling	D	Seawater used as heat-exchange medium for machinery engines. Return seawater containing residual heat and residual sodium hypochlorite is returned to sea.

Source	E, D, W	Description
Vessel deck drainage	D	Vessel deck drainage water may be discharged to sea.
Bilge system	D	Treated contaminated bilge water with < 15 ppm (v) oil-in-water (OIW) is discharged to sea.
Sewage, grey water and macerated food waste effluent	D	Treated effluent produced by vessel sewage treatment plants is discharged to sea.
Ballast system	D	Return ballast is discharged to sea.
Foam fire-extinguishing	D	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. (Note no planned discharges from system testing will occur during the activity)
Desalination brine	D	Brine produced from the Reverse Osmosis (RO) process will be diluted and discharged to sea.
Sundries / miscellaneous	E	Light emissions from deck and navigational lighting on vessels.
	W	Solid and liquid wastes from general maintenance operations, equipment replacement, etc., and domestic wastes are transported to the mainland 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 scenarios identified for the activity (refer Table 7-14) 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, the EPEI and the EMBA polygons (Appendix B). For ease of reference, all figures within this section of the EP include the boundaries of WA-50-L, the EPEI and EMBA, and all potential shoreline contact locations.

Oil spill modelling of 300 simulations predicted shoreline contact may occur from a vessel collision at two 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 contained within the EMBA or EPEI polygons for floating, entrained and dissolved hydrocarbons, a description of the two locations of potential shoreline contact have been included within this existing environment section of the EP refer to Sections 4.3 and 4.4 and assessed in Section 8.

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. WA-50-L, the EMBA, EPEI and any predicted areas of shoreline contact are located entirely within the North-west Marine Region (NWMR). The relevant key features of the NWMR 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 with predicted shoreline contact are limited to Cartier Island, described in Section 4.3.

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 three KEFs are located within the EMBA and EPEI or may potentially be contacted by shoreline accumulations of oil (Figure 4-1) as follows:

WA-50-L:

- Continental slope demersal fish communities.

EMBA and EPEI:

- Ancient coastline at 125 m depth contour
- Seringapatam Reef and Commonwealth waters in the Scott Reef complex
- Ashmore Reef and Cartier Island and surrounding Commonwealth waters.

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).

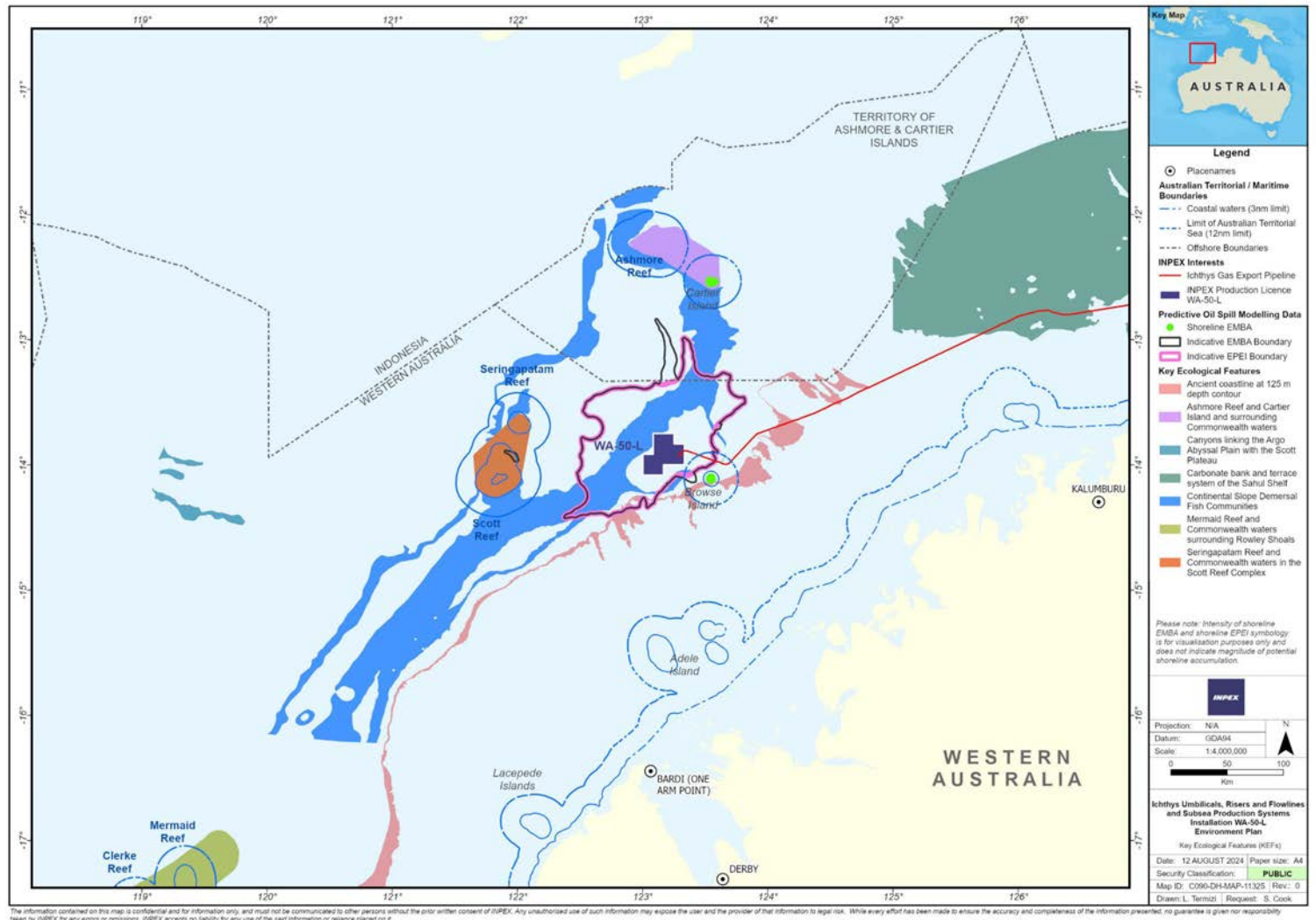


Figure 4-1: Key ecological features in north-west Australia

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).

4.2.3 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 km² (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 km² (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 km². Scott Reef South is a large crescent-shaped formation with a double reef crest. The reef and its lagoon cover an area of 144 km².

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 and wedge-tailed shearwater (Donovan et al. 2008).

4.2.4 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 does not overlap WA-50-L, the EPEI or the EMBA polygons directly; however, spill modelling results indicated the potential for shoreline contact at Cartier Island.

The Ashmore Reef and Cartier Island and surrounding Commonwealth waters 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. 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 Cartier Island is provided in Section 4.3.

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.

While WA-50-L, the EPEI or the EMBA polygons do not directly overlap any AMPs, spill modelling results indicated the potential for shoreline contact at Cartier Island, located within the Cartier Island MP (Figure 4-2).

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 category applicable to Cartier Island is IUCN Category 1a, Strict nature reserve – Protected area managed mainly for science.

The Director of National Parks (DNP) may make, amend and revoke prohibitions, restrictions and determinations under 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 Cartier Island MP due to the presence of unexploded ordnance. This prohibition has been in place for many years. All visitors to Cartier Island require approval from the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).

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.

4.3.1 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 km² (Parks Australia 2024). 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 2024). 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).

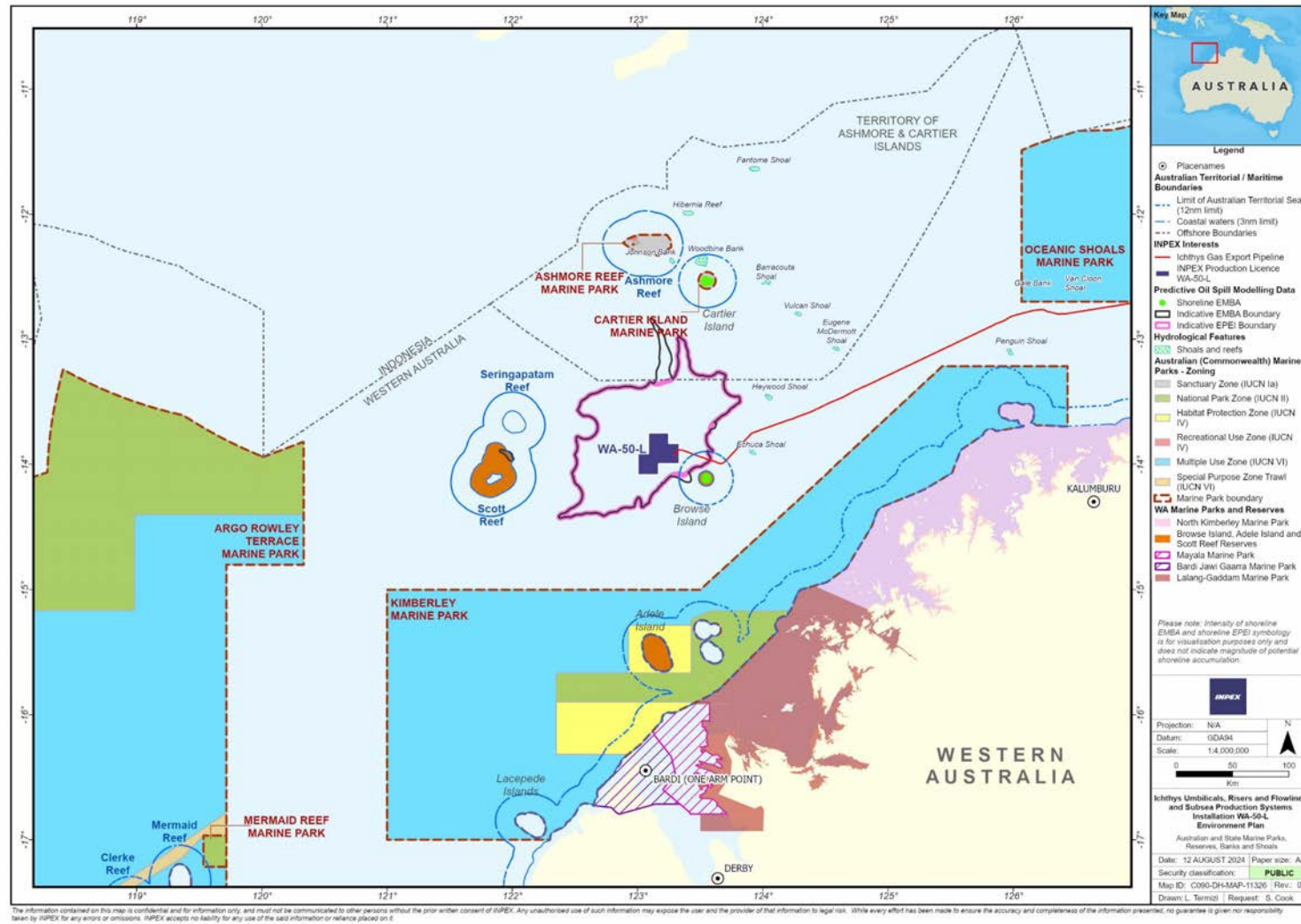


Figure 4-2: Australian and state marine parks, reserves, banks and shoals

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 one State reserve (Scott Reef Nature Reserve) within the EMBA. In addition, oil spill modelling (refer to Section 8.2.4) predicted potential accumulation of oil on shorelines at Browse Island (at levels below those associated with ecological impacts).

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 Scott Reef Nature Reserve

Scott Reef Nature Reserve is located approximately 125 km from WA-50-L within the EMBA and may be exposed to a visible sheen of floating oil at the sea surface (>1 g/m²). Sandy Islet is a C class nature reserve (under WA legislation) for the purpose of conservation, declared to low water mark. It has an approximate area of 117 km². 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 and wedge-tailed shearwater (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.

Scott Reef has been identified as key habitat for sea snakes including the dusky sea snake (*Aipysurus fuscus*) with the health, cover and extent of reef ecosystems directly impacting on the occurrence of reef-specialist species such as the dusky sea snake (Udyawer et al. 2020). Monitoring of heat stress in coral communities at Scott Reef indicates coral bleaching and death can contribute to declines and local extinctions of reef-dependent sea snakes from shallow areas (DCCEE 2024g).

4.4.2 Browse Island Nature Reserve

Browse Island is the nearest landform to WA-50-L (approximately 26 km away at the closest point). 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 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.

Browse Island 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 previous stakeholder consultation between INPEX and the WA DBCA, as an important location for seabirds.

4.5 Wetlands of conservational significance

There are no wetlands of international importance (Ramsar) or nationally important wetlands that overlap WA-50-L, the EMBA/EPEI or locations of potential shoreline contact.

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.

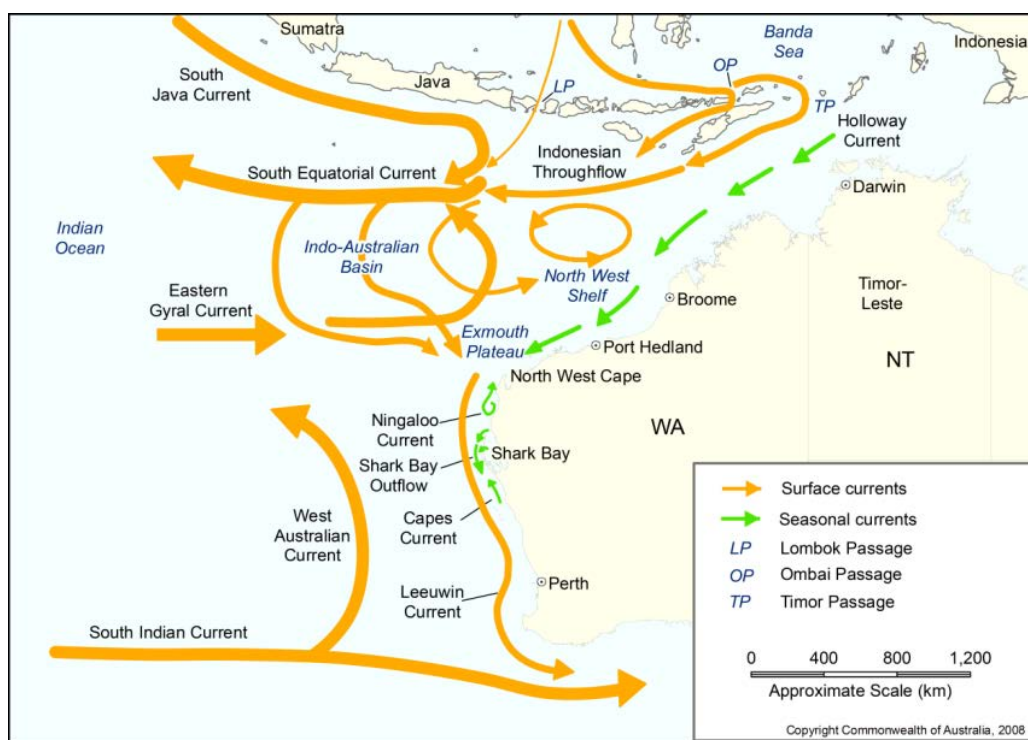


Figure 4-3: Surface currents for Western Australian waters

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 NWS 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 and 2024, 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 4-1.

Table 4-1: Summary of water quality parameters in the vicinity of WA-50-L

Parameter	Description
Surface-water temperature	<p>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).</p> <p>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).</p> <p>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).</p>
Salinity	<p>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).</p> <p>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).</p> <p>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).</p>

Parameter	Description
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	<p>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).</p> <p>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.</p>
Turbidity and light attenuation	<p>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 resuspension of materials from the seafloor includes organic material, which could comprise a pathway for hydrocarbon materials to become incorporated into sediments.</p> <p>Light attenuation coefficients calculated from photosynthetically active radiation measurements ranged from 0.026 to 0.043 $\mu\text{Mol}/\text{m}^2/\text{s}$ in October and December 2006, and 0.048 to 1.09 $\mu\text{Mol}/\text{m}^2/\text{s}$ in June 2007. These were observed to be consistent with reported “typical” levels for the region (RPS 2007).</p>
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 $\mu\text{g}/\text{L}$ 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 (NRMCC).

Parameter	Description
Metals	<p>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).</p> <p>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).</p> <p>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).</p>

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 4-2:

- 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 4-2: Summary of sediment quality parameters in the vicinity of WA-50-L

Parameter	Description
Particle size distribution (PSD)	<p>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).</p> <p>The PSD of sediment at sites located within the Ichthys Field was primarily sand, with some silts.</p>
Petroleum hydrocarbons	<p>Concentrations of benzene, toluene, ethylbenzene and xylene (BTEX) and polycyclic aromatic hydrocarbons 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).</p> <p>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).</p>
Radionuclides	<p>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).</p> <p>Sampling undertaken in 2019 found NORMs were below background concentrations at all sampling sites (fixed and mobile) (Jacobs 2019).</p>
Metals	<p>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).</p> <p>Organometallics (i.e. tributyltin) were below ANZG (2018) guidelines and lower than the LLR at all sampling locations.</p> <p>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).</p>

4.6.6 Underwater noise

The Centre for Marine Science and Technology 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. 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) although none are present within WA-50-L, the EMBA or EPEI. 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.

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 km² plateau had less unconsolidated substrate, such as sand or rubble, than Heywood Shoal's plateau of approximately 31 km². 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 or at potential shoreline contact locations include:

- Browse Island (26 km from WA-50-L)
- Scott Reef (125 km from WA-50-L)
- Cartier Island (130 km from WA-50-L).

The above reefs are described in more detail in sections 4.2 and 4.4.

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

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).

There is no seagrass within WA-50-L due to water depth (approximately 250 m) and lack of suitable habitat. However, seagrass habitats are found at Browse Island, Scott Reef and Cartier Island.

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 habitat includes Cartier Island which along with Browse Island has associated Commonwealth or State marine park/reserve status. The values and sensitivities associated with the shorelines of these islands are described in sections 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 and Browse Island as described in sections 4.3 and 4.4.

Generally, sands are highly mobile and therefore do not 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.

4.7.4 Marine fauna

Species of conservation significance

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

A total of 26 “listed threatened” species and 41 “listed migratory” species were identified as potentially using or passing through the EMBA. In addition to the listed threatened or listed migratory species, 74 “listed marine” species were identified including 25 “whales and other cetaceans” that may also occur at, or immediately adjacent to, the EMBA. The full search results are contained in Appendix B.

Table 4-3 presents the marine species that are “listed threatened” species or “listed migratory species”. Note that true terrestrial species have not been included in Table 4-3.

Table 4-3: Listed threatened and/or migratory marine species under the EPBC Act potentially occurring within the EMBA and EPEI

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

Species	Common name	Conservation status	Migratory
<i>Carcharodon carcharias</i>	Great white shark	Vulnerable	Migratory
<i>Glyphis garricki</i>	Northern river shark	Endangered	N/A
<i>Sphyma lewini</i>	Scalloped hammerhead shark	Conservation dependent	N/A
<i>Carcharhinus longimanus</i>	Oceanic whitetip shark	N/A	Migratory
<i>Pristis pristis</i>	Northern sawfish, Freshwater sawfish, Largetooth sawfish	Vulnerable	Migratory
<i>Pristis zijsron</i>	Green sawfish	Vulnerable	Migratory
<i>Anoxypristis cuspidata</i>	Narrow sawfish	N/A	Migratory
<i>Isurus oxyrinchus</i>	Shortfin mako	N/A	Migratory
<i>Isurus paucus</i>	Longfin mako	N/A	Migratory
<i>Manta alfredi</i>	Reef manta ray	N/A	Migratory
<i>Manta birostris</i>	Giant manta ray	N/A	Migratory
Marine avifauna			
<i>Anous tenuirostris melanops</i>	Australian lesser noddy	Vulnerable	N/A
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Vulnerable	Migratory
<i>Calidris canutus</i>	Red Knot	Vulnerable	Migratory
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered	Migratory
<i>Numenius madagascariensis</i>	Eastern curlew	Critically Endangered	N/A
<i>Papasula abbotti</i>	Abbott's Booby	Endangered	N/A
<i>Phaethon lepturus fulvus</i>	Christmas Island White-tailed Tropicbird, Golden Bosunbird	Endangered	N/A
<i>Phaethon rubricauda westralis</i>	Red-tailed tropicbird	Endangered	N/A
<i>Anous stolidus</i>	Common noddy	N/A	Migratory
<i>Ardenna pacifica</i>	Wedge-tailed Shearwater	N/A	Migratory
<i>Calonectris leucomelas</i>	Streaked shearwater	N/A	Migratory

Species	Common name	Conservation status	Migratory
<i>Fregata ariel</i>	Lesser frigatebird	N/A	Migratory
<i>Fregata minor</i>	Great frigatebird	N/A	Migratory
<i>Phaethon lepturus</i>	White-tailed tropicbird	N/A	Migratory
<i>Sterna albifrons</i>	Little tern	N/A	Migratory
<i>Sula sula</i>	Red-footed booby	N/A	Migratory
<i>Actitis hypoleucos</i>	Common Sandpiper	N/A	Migratory
<i>Calidris melanotos</i>	Pectoral Sandpiper	N/A	Migratory

Conservation management plans

In addition to species being identified as threatened or migratory and Matters of National Environmental Significance (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 4-4 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 and Cartier Island.

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

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

F = foraging; B = breeding; N/IN = nesting/interesting; 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 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 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.

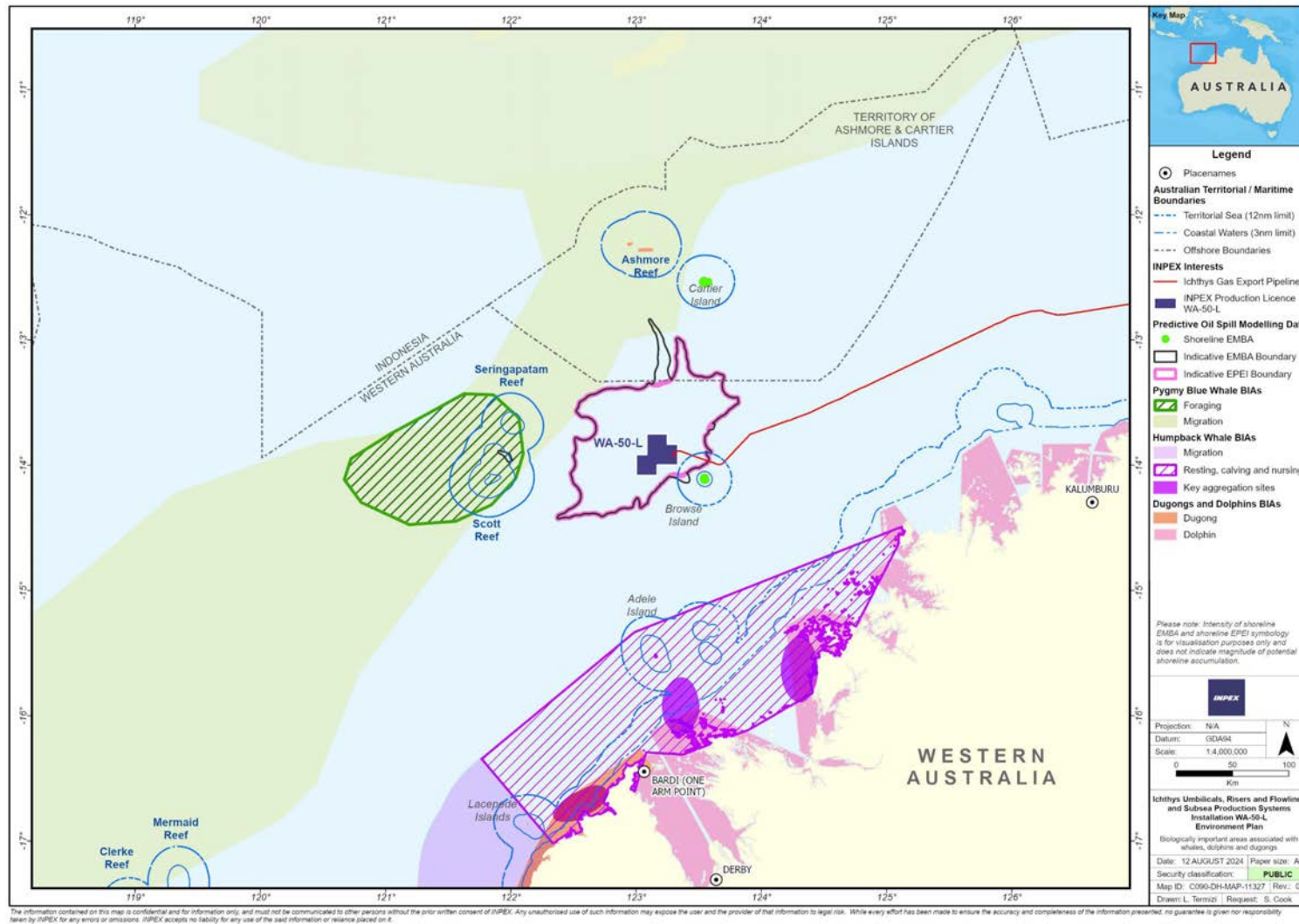
The migratory habitat for the humpback whale around mainland Australia is primarily coastal waters less than 200 m in depth and generally within 20 km of the coast (Jenner et al. 2001). Breeding and calving generally occurs between the Lacepede Islands and Camden Sound. Camden Sound is considered the 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.

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 over 150 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 and Cartier Island.

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 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 17 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, particularly for the dusky sea snake (Udyawer 2020). Heat stress in coral communities at Scott Reef indicates coral bleaching and death has been reported to contribute to declines and local extinctions of reef-dependent sea snakes from shallow areas (DCCEEW 2024g).

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.

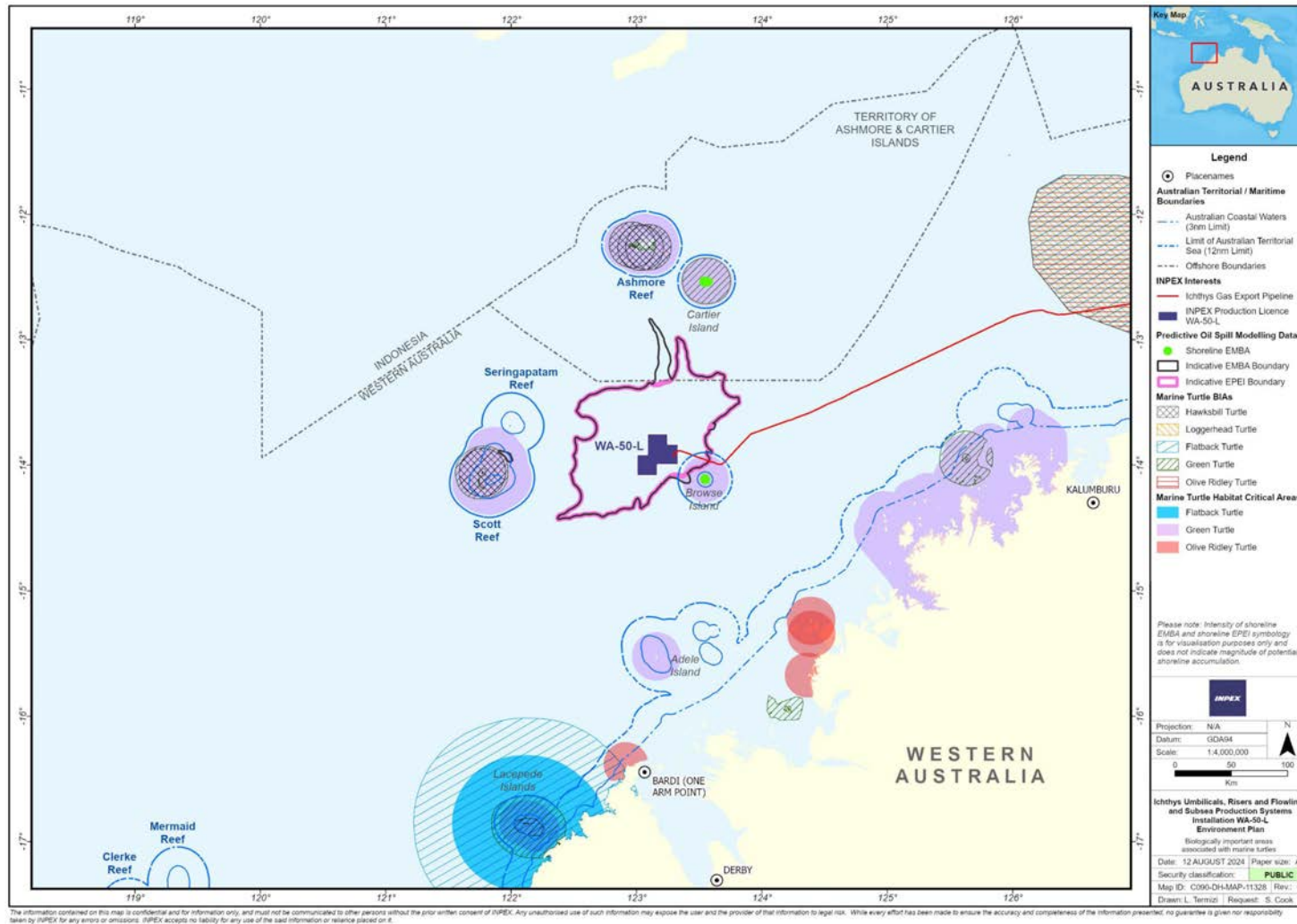


Figure 4-5: Biologically important areas associated with marine turtles

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 EMBA and 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 EMBA/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

Three species of sawfish (largetooth/freshwater/northern, narrow and green sawfish) were identified in the EPBC Act Protected Matters database search (Table 4-3). 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 found in the shallow waters (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.

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 4-3; 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.

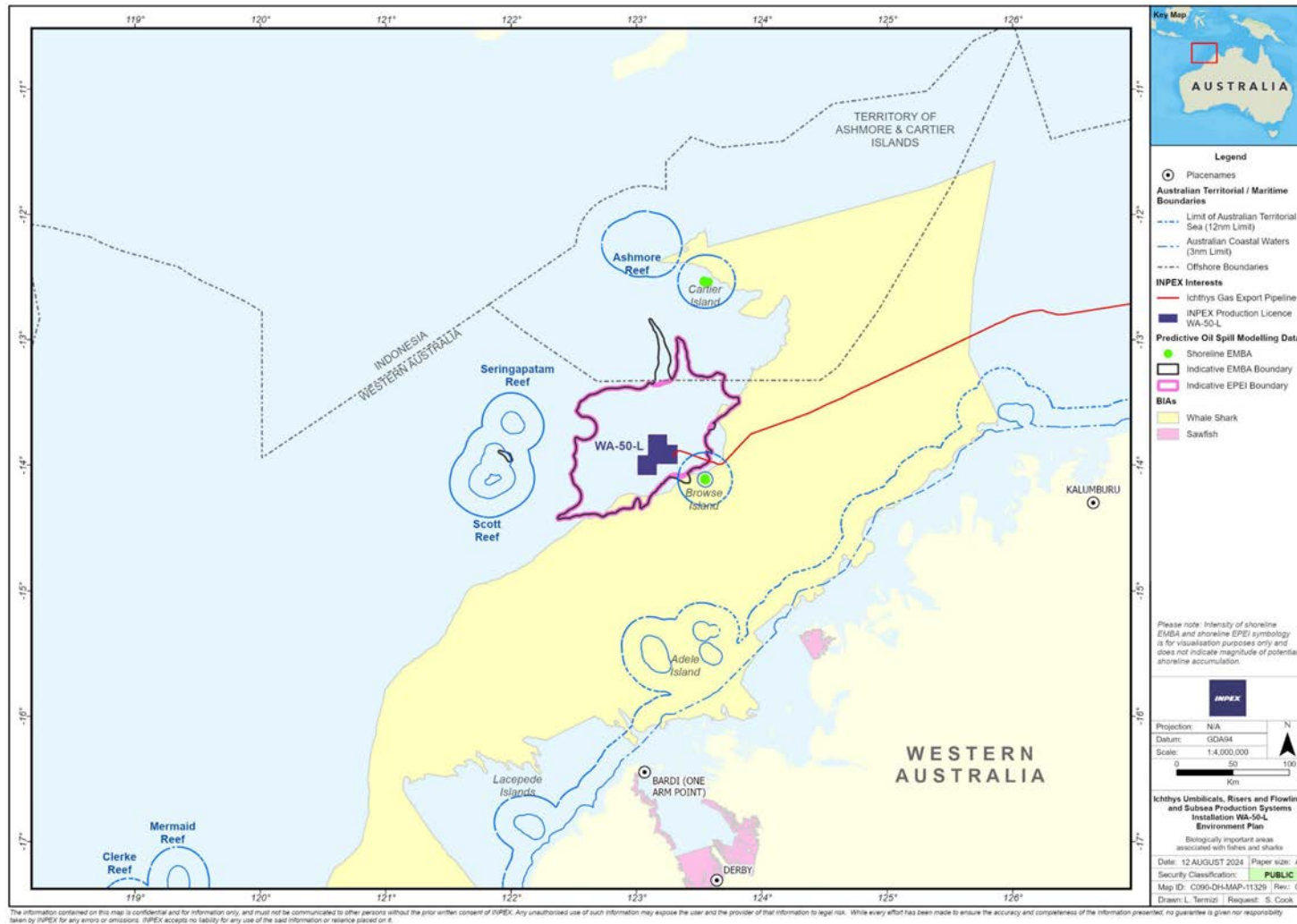


Figure 4-6: Biologically important areas associated with fishes and sharks

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 BIAs for a number of different marine avifauna species (Table 4-4; Figure 4-7). These relate to breeding and resting behaviours centred at Cartier Island and Scott Reef.

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 six 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.

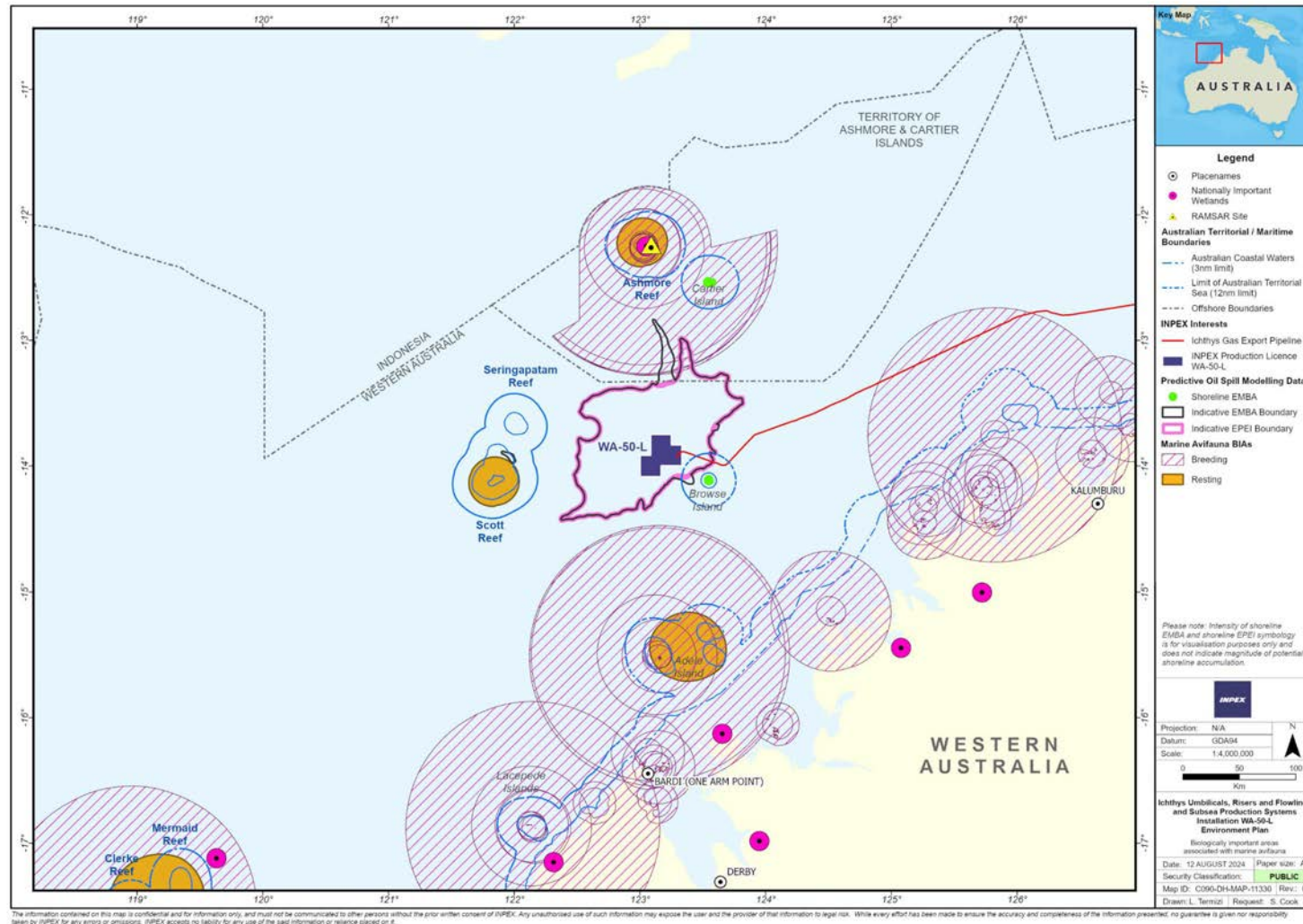


Figure 4-7: Biologically important areas associated with marine avifauna

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 proposed activities 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 °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. One area, Scott Reef Nature Reserve, overlaps the EMBA and its natural heritage values are described in Section 4.4.1.

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 2024d). 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 or artefacts within WA-50-L.

In the Browse Island area and therefore in proximity to WA-50-L, 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 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 heritage

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 2024e).

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.

In WA, recognition of Aboriginal rights 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.

A search of the National Native Title Tribunal spatial dataset confirmed that Native Title has 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 and locations of potential shoreline contacted are located a considerable distance offshore from the Kimberley coast (over 150 km from the outer boundary), no Native Title exists within the EMBA.

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 of the continental shelf (Ward et al. 2022). Aboriginal and Torres Strait Islander peoples have been sustainably using and managing 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.

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). There is a potential for the existence of submerged landscapes with associated Aboriginal heritage values due to strong cultural connections between Traditional Owners and the sea (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 Cartier Island MP to indigenous Australians (DNP 2018) potentially due to the distance from the Australian mainland (approximately 250 km). 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, the EMBA or at any potential locations of shoreline contact (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 150 km from the outer boundary of the EMBA at the closest points.

Aboriginal seasonal calendars

Given the offshore waters of the EMBA are located over 150 km from the Kimberley coastline at the closest point, they do not support any traditional activities influenced by Aboriginal seasonal calendars.

Traditional use of resources

The practice of traditional fishing includes taking turtles, dugong, fish and other marine life (DCCEEW 2024f), with traditional fishing methods consisting of the use of lines, hand collection, nets and spears (National Oceans Office 2004). No indigenous protected areas 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 Commonwealth waters surrounding Ashmore Reef and Cartier Island KEF (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 4-5, 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 4-5: Commercially significant fish species

Key commercial fish species	Spawning/aggregation times
Goldband snapper (<i>Pristipomoides multidentis</i>)	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 (<i>Scomberomorini commerson</i>)	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 (<i>Epinephelus multinotatus</i>)	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 (<i>Lutjanus sebae</i>)	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 (<i>Lethrinus erythracanthus</i>)	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 (<i>Thunnus maccoyii</i>)	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 °C (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 4-6.

In addition to the Commonwealth-managed fisheries, 12 State-managed commercial fisheries have the potential to operate within the EMBA. Of these, 11 fishery boundaries overlap with WA-50-L (Table 4-7). 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 4-6: Commonwealth-managed commercial fisheries

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
North West Slope Trawl Fishery	<p>The North West Slope Trawl Fishery predominantly targets scampi (<i>Metanephrops australiensis</i>) 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).</p> <p>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.</p>
Western Tuna and Billfish Fishery	<p>The Western Tuna and Billfish Fishery (WTBF) targets bigeye tuna (<i>Thunnus obesus</i>), yellowfin tuna (<i>Thunnus albacares</i>), broadbill swordfish (<i>Xiphias gladius</i>) with striped marlin (<i>Kajikia audax</i>) a minor component of the catch (Butler et al. 2024; AFMA 2024c).</p> <p>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).</p> <p>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).</p> <p>Tuna Australia has previously informed INPEX in 2023 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.</p>
Western Skipjack Tuna Fishery	<p>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 (<i>Katsuwonus pelamis</i>) (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).</p>
Southern Bluefin Tuna Fishery	<p>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.</p> <p>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 seine sector targets school fish to grow out in ocean cages, while adult fish are targeted by the longline sector.</p>

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
	<p>Since 1992, most Australian catch has been taken by purse seine targeting juvenile (age 2-4 years) southern bluefin tuna (<i>Thunnus maccoyii</i>) 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.</p> <p>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).</p>

Table 4-7: State-managed commercial fisheries (WA DPIRD-managed)

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
<p>Northern Demersal Scalefish Fishery (WA) Area 2</p>	<p>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.</p> <p>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).</p>
<p>Mackerel Managed Fishery (WA) Area 1 (Kimberley)</p>	<p>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 (<i>Scomberomorus commerson</i>) 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.</p>

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
Joint Authority Northern Shark Fishery (Cw/ith/WA) Northern Zone WA North Coast Shark Fishery (WA)	<p>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.</p> <p>In 2005, management measures were put in place due to unsustainable fishing mortality levels of sandbar shark (<i>Carcharhinus plumbeus</i>). 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.</p>
Pearl Oyster Managed Fishery (WA) Zone 3	<p>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.</p> <p>Indo-Pacific, silver-lipped pearl oysters (<i>Pinctada maxima</i>) 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.</p>
West Coast Deep Sea Crustacean Fishery (WA)	<p>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 (<i>Chaceon albus</i>) 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).</p>

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
Abalone Managed Fishery (WA) Northern Zone/Area 8	<p>The Abalone Managed Fishery includes the West Coast Roe's Abalone (<i>Haliotis roei</i>) resource and the South Coast Greenlip (<i>H. laevigata</i>) / Brownlip (<i>H. conicopora</i>) 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.</p>
Marine Aquarium Fish Fishery (WA)	<p>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 <i>Marine Aquarium Fish Managed Fishery Management Plan 2018</i>. 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).</p> <p>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 (<i>Istiblennius meleagris</i>), Scribbled Angelfish (<i>Chaetodontoplus duboulayi</i>) Black-axil Chromis (<i>Chromis tripterygialis</i>), Margined Coralfish (<i>Chelmon marginalis</i>), Stripey (<i>Microcanthus strigatus</i>) and Allen's Glidergoby (<i>Valenciennea allenii</i>) (Newman et al. 2023).</p> <p>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.</p>
Specimen Shell Managed Fishery (WA)	<p>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 or EMBA given the water depth and lack of suitable habitat.</p>

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
Broome Prawn Managed Fishery (WA)	<p>The Broome Prawn Fishery predominantly targets western king prawns (<i>Penaeus latisulcatus</i>) but also catches brown tiger prawns (<i>Penaeus esculentus</i>) and blue endeavour prawns (<i>Metapenaeus endeavouri</i>) using trawling methods (Newman et al. 2023).</p> <p>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).</p> <p>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.</p>
Hermit Crab Fishery (WA)	<p>The Hermit Crab Fishery specifically targets the Australian land hermit crab (<i>Coenobita variabilis</i>) for the domestic and international live pet trade (Newman et al. 2023). <i>Coenobita variabilis</i> 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.</p> <p>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).</p>
South West Coast Salmon Managed Fishery (WA)	<p>South West Coast Salmon Managed Fishery targets Western Australian salmon (<i>Arripis truttaceus</i>). 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).</p>

Commercial fishery (BOLD denotes overlap of fishery management area with WA-50-L)	Fishery summary
Kimberley Prawn Managed Fishery (WA)	<p>The Kimberley Prawn Managed Fishery predominantly targets banana prawns (<i>Penaeus merguianus</i>) but catch also includes western king prawns (<i>Penaeus latisulcatus</i>), brown tiger prawns (<i>Penaeus esculentus</i>) and blue endeavour prawns (<i>Metapenaeus endeavouri</i>) using trawling methods (Newman et al. 2023).</p> <p>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 eastern boundary of the EMBA. No fishing effort occurs in the EMBA given the water depth and lack of suitable habitat.</p>

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.

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).

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 traditionally fish for sedentary reef species including sea cucumbers, using sail boats in this area of Australian waters (AFMA 2024g; 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. There are no pearl farm sites within the EMBA as they are located along the Kimberley coast, particularly in the Buccaneer Archipelago, in Roebuck Bay and at the Montebello Islands.

4.10.3 Shipping and ports

Vessel tracking data from AMSA's Craft Tracking System (CTS) for June 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.

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 Kimberley 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).

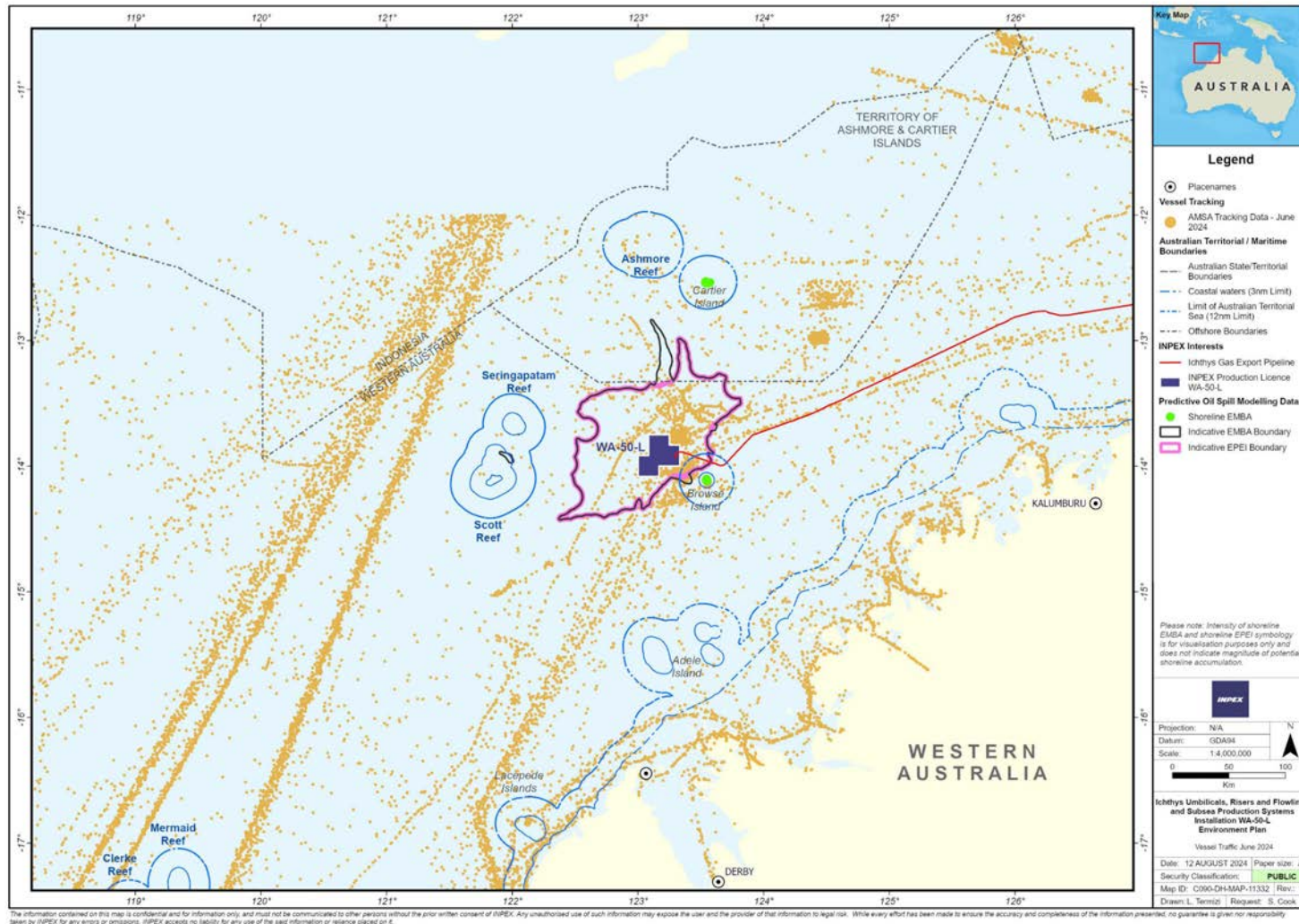


Figure 4-8: Vessel tracking data in the Browse Basin (June 2024)

Broome Port waters are dominated by the tidal regime of the region, with the 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 salleri*) 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, platform supply vessels, anchor-handling support vessels, 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 NT government: *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, Golder 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 (Golder 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 LNG and 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 petroleum and 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 south eastern corner of WA-50-L (servicing the INPEX Ichthys offshore facility) there are no submarine cables in proximity to the proposed 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 (over 150 km) 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 and areas for sightseeing 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 may include Scott Reef and Cartier Island (Newman et al. 2023).

4.11 Summary of values and sensitivities

4.11.1 WA-50-L

Table 4-8: 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 <i>Environmental Assessment Guidelines for Protection of Benthic Primary Producer Habitat in Western Australia's Marine Environment</i> 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.
Presence of a listed migratory species within the meaning of the EPBC Act.		These have been categorised as marine fauna: <ul style="list-style-type: none"> • marine mammals • marine reptiles • fishes and sharks • marine avifauna. Also refer to Appendix B (EPBC Act Protected Matters Report).
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 4-9: 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 <i>Environmental Assessment Guidelines for Protection of Benthic Primary Producer Habitat in Western Australia's Marine Environment</i> 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).	<p>KEFs:</p> <ul style="list-style-type: none"> Continental slope demersal fish communities Ancient coastline at 125 m depth contour Ashmore Reef and Cartier Island and surrounding Commonwealth waters Seringapatam Reef and Commonwealth waters in the Scott Reef complex. <p>Benthic habitats:</p> <ul style="list-style-type: none"> Various banks and shoals, coral reefs, seagrass (Section 4.7.2) <p>Shoreline habitats:</p> <ul style="list-style-type: none"> 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.	None identified within this area.
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.
Presence of a listed migratory species within the meaning of the EPBC Act.	<p>These have been categorised as marine fauna (Section 4.7.4):</p> <ul style="list-style-type: none"> marine mammals marine reptiles fishes and sharks marine avifauna. <p>Also refer to Appendix B (EPBC Act Protected Matters Report).</p>

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.		<p>A number of BIAs are present within the EMBA/EPEI including:</p> <p>Marine mammals</p> <ul style="list-style-type: none"> pygmy blue whale foraging and migration <p>Marine reptiles</p> <ul style="list-style-type: none"> Turtle nesting and internesting <p>Fish and sharks</p> <ul style="list-style-type: none"> whale shark foraging area KEFs associated with increased species diversity and abundance (i.e. continental slope demersal fish communities and the ancient coastline at 125 m depth contour). <p>Marine avifauna</p> <ul style="list-style-type: none"> breeding and resting areas associated with shoreline habitats (e.g. Browse Island, Cartier Island and Scott Reef).

5 CONSULTATION

This section of the EP, in conjunction with Appendix C, describes consultation undertaken by INPEX between 7 October 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 2024a)
- Petroleum activities and Australian marine parks (NOPSEMA 2024b)
- Consultation with Commonwealth agencies with responsibilities in the marine area (NOPSEMA 2024c)
- 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 petroleum 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

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. 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.

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. 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	Anyone else who may be indirectly impacted or have interests. Includes extended enquiry for persons who are not known to INPEX.
Consultation strategy level	

Category	Description of category
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/ichthysurf/page/Home>) as the primary tool to convey information about the proposed activities, potential environmental risks and controls in place (INPEX 2024a). A link to the website was included in 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 7 October 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 activities 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 proposed activities.
- 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 KEFs, marine parks 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 capability – described INPEX's Browse Regional OPEP including links to access the documents.

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

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 activities. 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 activities. 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 petroleum activity

Newspaper	Coverage	Publication dates
The West Australian	Regional (WA)	24 October 2024 14 November 2024
Broome Advertiser	Local (WA)	10 October 2024 7 November 2024
Kimberley Echo	Local (WA)	17 October 2024 14 November 2024

Social media advertising

In conjunction with the newspaper advertisements, geotargeted social media advertising campaigns for the proposed activities were ran on the Meta platforms in two rounds from 11 October until 25 October, and 8 November until 22 November. These social media advertisement campaigns focused on the Kimberley region, targeting the geographical area of Broome and Derby with an 80-kilometre radius. Social media posts were also made on the INPEX Australia official LinkedIn page. All posts included a link to the EP specific website.

The objectives of the social media advertisements and posts were to reach a target audience of relevant persons to inform them of the EP and provide them with information about the proposed activities; and to inform them on how they can find out more and/or provide comment via the EP summary website or by phone.

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 activities on 7 October 2024 with a link inviting members of the public to provide comment on the proposed activities via the EP summary website. In addition to this, INPEX published a copy of the information sheet for the proposed activities on the INPEX Australia website (Appendix C.3).

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 and newspaper advertising) have been used to comply with INPEX's requirement to consult with relevant persons on the proposed activities. 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 activities 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.

5.1.4 Consultation outcomes

In accordance with Regulation 24(b), a consultation summary report for the petroleum 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 activities.

Ongoing consultation for the proposed activities 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.



Risk Matrix


Refer to the Risk Matrix Guideline [0000-A0-GLN-70019] for guidance on how to apply the risk matrix.

CONSEQUENCE TABLE								LIKELIHOOD TABLE						
Consequences								Severity	Likelihood Level					
Financial (USD)	Ichthys Production	Health & Safety	Environment	Reputation	Community	Legal	6 Remote		5 Highly Unlikely	4 Unlikely	3 Possible	2 Likely	1 Highly Likely	
>\$1B	> 30 days Ichthys full shutdown	>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 condemnation and public protests. Loss of host government support and/ or social licence to operate. Company reputation severely tarnished.	Catastrophic and long-term impact, and destruction of highly valued social and cultural matters	Prosecution, potential jail sentences for directors and senior officers. Prolonged litigation, heavy fines (>50M), threat to license to operate and future approvals.	A Catastrophic		6	5	4 Critical Risk	3	2	1
\$100M – \$1B	> 10 days Ichthys full shutdown	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	Major and widespread disruption to a number of communities with damage to highly valued social and cultural matters	Prosecution of company, directors or senior officers. Prolonged litigation, heavy fines (<50M), significant restrictions on license to operate	B Major	7	6	5	4	3	2	
\$10M – \$100M	3 – 10 days full shutdown	Serious injury or fatality	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 disruption to a community, regional communities, and to social and cultural matters of significant value	Significant, or multiple moderate breaches of legislation, regulation, contract or licence conditions. Significant litigation and fines (<5M)	C Significant	8	7	6 High Risk	5	4	3	
\$1M – \$10M	1 – 2 days full shutdown	Permanent partial disability, serious illness or 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 concern or disruption with moderate impact on social and cultural values	Moderate breach of legislation, regulation, contract or licence condition. Investigation by regulatory authorities. Potential litigation and moderate fines (<1M)	D Moderate	9	8	7	6	5	4	
\$100K – \$1M	Production Trip with immediate restart < 1 day Ichthys full system lost production	Alternate Duties Injury, Medical Treatment Injury, minor illness	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 of local community. Criticism by community or NGOs	Minor and localised community concern or disruption with limited and short-term impact on social and cultural values	Minor breach of legislation, regulation, contract or licence condition. Report provided to regulatory authorities. Potential for minor fines (<100K)	E Minor	10	9	8 Moderate Risk	7	6	5	
<\$100K	No production impact	First Aid Case	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 – potential for community or union concerns	Isolated community concern with no lasting effect on social and cultural values	Breach of internal standards. Potential scrutiny by regulatory authorities	F Insignificant	10	10	9 Low Risk	8	7	6	

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Figure 6-1: INPEX risk matrix



Most Preferred	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 occurring
		Detection	Design measures that facilitate early detection of a hazardous event
		Control	Design measures that limit the extent/escalation potential of a hazardous event
		Mitigation	Design measures that protect the environment 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	
Least Preferred			

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 2024d), 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 <i>HSE Hazard and Risk Management Standard</i> 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 activities.
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 vessel lighting

Identify hazards and threats	
<p>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.</p> <p>During the proposed activities light emissions will be generated from vessel lighting, predominantly for navigational and safety purposes. Low-intensity light spill will also be generated from the vessels undertaking the activities as a consequence of providing safe illumination of work and accommodation areas. Lighting on vessels will be directed over the work area, which aids in limiting light spill to the marine environment.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by light emissions from vessel lighting are:</p> <ul style="list-style-type: none"> marine turtles (including the 20 km internesting green turtle BIA at Browse Island) marine avifauna. <p>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.</p>	<p>Insignificant (F)</p>

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 installation activities will be occurring are located throughout WA-50-L, with individual drill centres ranging from 38 – 50 km from Browse Island at the closest points. The geophysical and geotechnical survey activities will all be contained within the boundaries of WA-50-L, located 26 km from Browse Island at the closest point. 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 distance from the light source (vessels). 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.

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).

Vessel navigational and deck lighting is not expected to cause any discernible effect on adult turtles' or hatchlings' abilities to orientate to water at Browse Island. Any potential for light from vessels to attract marine turtles once they are at sea is expected to be temporary with an inconsequential ecological significance (Insignificant F).

Light emissions associated with vessels undertaking the proposed activities are several orders of magnitude lower than those that may result from the operation of the Ichthys interlinked facility also present within WA-50-L. Any increase in light emissions associated with vessel lighting during concurrent operations within WA-50-L is not expected to result in significantly increased ambient light levels. 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.

<p>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).</p> <p>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). 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).</p> <p>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 vessels associated with the proposed activities in WA-50-L is low due to 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 vessels is considered to be of inconsequential ecological significance (Insignificant F).</p>			
Identify existing design and safeguards/controls measures			
<ul style="list-style-type: none"> 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

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 <i>Navigation Act 2012</i> and associated Marine Orders (which are consistent with COLREGS requirements). Unnecessary outdoor/deck lighting is already eliminated.
Substitution	Exclude vessel lighting during sensitive periods for marine avifauna and turtles (internesting November – April).	No	<p>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).</p> <p>Lighting of 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.</p>
Engineering	Reduce light intensity and/or frequencies which may attract turtles.	No	<p>Lighting will be designed in accordance with the relevant Australian and international standards to ensure that worker and vessel safety is not compromised.</p> <p>Most wildlife is 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 vessels.</p>

	Use light shielding.	No	<p>As described in the National Light Pollution Guidelines for Wildlife (DCCEEW 2023a) 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 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 vessels.</p> <p>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.</p>
	Use adaptive smart controls and LED technology to manage light timing, intensity and colour.	No	<p>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 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 vessels and the distances to the nearest avifauna foraging BIAs (>50 km) this control is not considered necessary.</p>
Procedures & administration	Premobilisation review and planning of vessel lighting to be undertaken prior to activities commencing.	Yes	<p>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).</p>

			Given artificial light sources in proximity to the proposed activities, such as the permanently moored Ichthys facility and the lighthouse on Browse Island (Section 4.4.2), external vessel lighting will not result in additional light impacts. Nevertheless, a review of deck lighting will be undertaken pre-mobilisation HSE inspection of 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 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 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 Pollution 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 vessels.
	Implementation of a seabird management plan to prevent seabird landings on vessels due to attraction from artificial lighting.	No	<p>A seabird management plan to prevent seabird landings on 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).</p> <p>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 the Ichthys offshore facility permanently located in WA-50-L. Therefore, this control is not considered necessary.</p>

	Implementation of a light management plan to prevent impacts to marine turtles from artificial lighting on vessels.	No	<p>The effect of light emissions resulting in disruption to turtle orientation and behaviour has been observed from up to 18 km away (DCCEE 2023a). The location of the drill centres and hence the proposed installation activities in WA-50-L is located approximately 38 - 50 km from Browse Island at its closest point. All survey activities will be within WA-50-L, located approximately 26 km from Browse Island at the closest point.</p> <p>Although light from 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.</p>
Identify the likelihood			
<p>Based on the distance between the location of proposed activities within WA-50-L and the closest turtle nesting beaches (approximately 26 - 50 km to Browse Island) and relatively short duration of the activities (100 days installation; 30 days survey), impacts to turtles from light emissions is Highly Unlikely (5). 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).</p> <p>While impacts to seabirds from lighting of offshore platforms and vessels have been reported in the industry, given the presence of alternative resting/foraging habitat in the region (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 vessels is considered Highly Unlikely (5).</p>			
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			

Legislative requirements

Navigational lighting is required under the *Navigation Act 2012* (which is consistent with COLREGS requirements) for the safe operation of vessels offshore. The 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 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 activities 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. Installation activities will occur at drill centres within WA-50-L located approximately 38-50 km from Browse Island and geophysical/geotechnical surveying activities will be within WA-50-L, located 26 km from Browse Island at the closest point; therefore, no displacement of turtles from within the internesting buffer surrounding Browse Island is expected. The proposed activities 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
- 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 vessel lighting is reviewed to reduce unnecessary lighting.	Premobilisation HSE inspection records.
	Lighting onboard vessels is directed to working areas (rather than overboard) to minimise light spill to the ocean.	Checks incorporated into weekly vessel inspection/environmental checklist to confirm lighting is directed inboard where practicable.
	Blinds will be lowered on vessel portholes and windows at night.	Checks incorporated into weekly 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 vessels and helicopters

Identify hazards and threats	
<p>Atmospheric emissions (GHG such as CO₂ and CH₄; non-GHG such as sulphur dioxide and nitrogen oxides) will be generated by combustion engines, compressors, steam generators and ODS containing equipment on board vessels and from the use of helicopters to transfer crew to vessels offshore.</p> <p>Atmospheric emissions from the petroleum activity 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 3.9.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by atmospheric emissions are:</p> <ul style="list-style-type: none"> • climate • marine avifauna. <p>Atmospheric emissions arising from vessels and helicopters, will be relatively short term and temporary in duration and insignificant in volume on a global scale. Therefore, the potential consequence on climate is considered to be Insignificant (F).</p> <p>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 resting and breeding BIAs for marine avifauna species at Cartier Island and Scott Reef (Figure 4-7). 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.</p>	<p>Insignificant (F)</p>

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 NO₂ 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 helicopter, 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. The proposed activities are not expected to result in a significant increase in exposure to marine avifauna as atmospheric emissions will rapidly disperse following release in the open marine environment.

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, SO₂, 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 can 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).

If concurrent operations were to occur in WA-50-L, given the distance between operating assets (vessels/facility), 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.

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

- 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
- Vessels (as applicable to vessel, engine/propulsion size, type and class) will comply with energy efficiency requirements of Marine Order 97

- 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)

Hierarchy of control	Control measure	Used?	Justification
Elimination	Eliminate the use of vessels	No	The use of vessels to undertake the activity cannot be eliminated. The geophysical survey scope may be undertaken using a USV or AUV if there are suitable vessels available at the time of the survey (Section 3.8.2). The fuel consumption of an USV or AUV is significantly less than that of traditional vessels and would result in a reduction in GHG emissions associated with the survey. Installation and geotechnical scopes require vessels with cranes that have sufficient lifting capability to safely deploy equipment to the seabed and therefore USV or AUV would not be suitable.
Substitution	Replace any ODS systems	No	In accordance with MARPOL Regulation 12, no chlorofluorocarbon 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 hydrochlorofluorocarbon 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. 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 vessel selection and availability in the short term.

	Use vessels to transfer crew instead of helicopters	No	Helicopters will be used to transfer crew during installation activities. Using vessels instead of helicopters would not result in a reduction of atmospheric emissions or an environmental gain and presents unacceptable personnel safety risks during vessel-to-vessel transfers. Given the distance to the mainland, is not practicable for vessels to leave WA-50-L during installation campaigns for crew change purposes.
Engineering	None identified	N/A	N/A
Procedures & administration	Preventative maintenance system	Yes	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.
Identify the likelihood			
<p>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 Highly Unlikely. Marine avifauna that may pass by near the vessels during the activity are highly unlikely to be in close enough proximity to be exposed to the emissions sources and are therefore highly 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.</p> <p>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 Highly Unlikely (5).</p>			
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 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.

Emissions, energy consumption and energy production data will be reported annually to the Clean Energy Regulator by 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 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
<p>Planned emissions and discharges from vessels undertaking the petroleum activity are in accordance with MARPOL requirements and industry good practice.</p>	<p>Vessel pre-mobilisation audits confirm that marine diesel engines on board vessels >400 GT meet the requirements of Marine Order 97, (as applicable to the vessel, engine/propulsion size, type and class).</p>	<p>EIAPP certificate IAPP certificate Bunker delivery notes IMO type approval for waste incinerators where installed Training records for personnel responsible for operating waste incinerators IEE certificate SEEMP</p>
	<p>Fuel oil and marine diesel with 0.5% m/m sulfur content will be used.</p>	<p>INPEX fuel specification records confirm that fuel provided to the facility and vessels has 0.5% m/m sulfur content</p>
	<p>Where present equipment or systems on board 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).</p>	<p>ODS Record book.</p>
	<p>Vessel contractor has a preventative maintenance system to ensure diesel powered, power generation equipment is maintained and operated within OEM specification.</p>	<p>Preventative maintenance system records.</p>
	<p>INPEX will provide emissions data to vessel contractors to enable legislative reporting requirements under the NGER Act to be met for the petroleum activity.</p>	<p>Data provided to vessel contractors to enable NGER reporting to the Clean Energy Regulator.</p>

7.1.3 Routine discharges to sea

Subsea discharges

Table 7-3: Impact and evaluation – subsea discharges

Identify hazards and threats	
<p>Subsea discharges to the marine environment during installation 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 3-2 and include:</p> <ul style="list-style-type: none"> Planned discharges of MEG (containing clear dye) during installation of well jumpers (pre-commissioning - flushing), leak testing of well jumpers and valves during mechanical completion and incidental losses while confirming isolations Unplanned discharges of MEG in the event of detachment during pressurisation Subsea control fluids from ROV operations Hydraulic media discharges during connection/disconnection and leak testing IMR discharges including marine growth removal chemicals (acetic or sulfamic acid) Contingent use of chemical sticks (biocide, oxygen scavenger and clear dye). <p>MEG containing clear dye (50 ppm) will be discharged to the marine environment potentially in both planned and unplanned scenarios with volumes ranging from approximately < 0.5 m³ to 6 m³ per activity. MEG is considered to pose little or no risk to the environment (PLONOR) by OSPAR (2012).</p> <p>Subsea control fluids, typically glycol based are also considered PLONOR. Other control fluids such as hydraulic media/water-based hydraulic fluids will also be discharged subsea during the installation activity in small volumes (< 0.5 m³ to 3 m³) which may result in a temporary and localised reduction in water quality.</p> <p>Small quantities (<1 m³ per activity) of weak acid (acetic or sulfamic acid) 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.</p> <p>Contingent subsea discharges of biocide and oxygen scavenger may result in a change in ambient water quality.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities with the potential to be impacted by subsea discharges are:</p> <ul style="list-style-type: none"> EPBC-listed species 	Insignificant (F)

<ul style="list-style-type: none"> • fish (demersal fish community KEF and commercial species) • benthic communities. <p>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, some discharges could result in a localised 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.</p> <p>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, any 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).</p> <p>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).</p> <p>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).</p>	
<p>Identify existing design and safeguards/controls measures</p>	
<ul style="list-style-type: none"> • INPEX chemical, assessment and approval procedure used for the selection of chemicals to be discharged. 	
<p>Propose additional safeguards/control measures (ALARP Evaluation)</p>	

Hierarchy of control	Control measure	Used?	Justification
Elimination	No subsea discharges released to the marine environment	No	<p>Function and pressure testing of key subsea equipment is required to ensure safe and effective operation of the SPS. 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 m³).</p> <p>During pre-commissioning, mechanical completion and IMR activities there are no practicable ways to capture the relatively small volumes of subsea discharges and based on the chemical composition (water/glycol based) these discharges are considered to PLONOR when discharged to the marine environment.</p>
Substitution	None identified	N/A	N/A
Engineering	None identified	N/A	N/A
Procedures & administration	Subsea flow components will be purged with MEG, to remove residual hydrocarbons before being disconnected.	Yes	By ensuring that subsea flow components are first purged with MEG, when the component is disconnected from the SPS, MEG is lost to the marine environment, rather than hydrocarbons.
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		
<p>Legislative requirements</p> <p>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.</p> <p>Relevant person consultation</p> <p>No concerns have been raised regarding potential impacts and risks from planned subsea discharges.</p> <p>Conservation management plans / threat abatement plans</p> <p>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 have specific actions relating to subsea discharges of MEG/control/hydraulic fluids in remote offshore waters.</p> <p>ALARP summary</p> <p>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.</p> <p>Acceptability summary</p> <p>Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:</p> <ul style="list-style-type: none"> 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 proposed activities so that impacts to receptors will be localised.	Chemicals to be discharged to the marine environment will be selected in accordance with the INPEX <i>Chemical Assessment and Approval Procedure</i> to minimise potential environmental risks.	Records demonstrate that chemicals have been selected in accordance with the INPEX <i>Chemical Assessment and Approval Procedure</i> .
	Subsea flow components will be purged (100% of volume) with MEG, to remove residual hydrocarbons before being disconnected/replaced.	Records confirm subsea flow components have been purged with MEG before being disconnected/replaced.

Sewage, grey water and food waste

Table 7-4: Impact and evaluation – vessel sewage, grey water and food waste discharges

Identify hazards and threats			
<p>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.</p> <p>The average volume of sewage and greywater expected from the vessels (including domestic wastewater) generated by a person per day is approximately 230 L (based on calculations in Huhta et al. 2009), with an assumption of up to 180 persons on board (POB) vessels during the activities.</p>			
Potential consequence			Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by sewage, grey water and food waste discharges are:</p> <ul style="list-style-type: none"> planktonic communities. <p>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).</p> <p>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. 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).</p>			Insignificant (F)
Identify existing design and safeguards/controls measures			
<ul style="list-style-type: none"> Vessels will manage the discharge of sewage effluent and grey water in accordance with Marine Order 96 (as appropriate to class) Vessels will manage the discharge of garbage in accordance with Marine Order 95 (as appropriate to class) 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 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 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	STP installed and used on all vessels	No	Although larger construction vessels will have STP, a requirement for all vessels to have STPs installed is not practicable and costs are considered to be grossly disproportionate for what is a permitted discharge under relevant legislation.
Procedures & administration	Preventative maintenance system	Yes	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			
<p>Sewage and garbage discharges from 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.</p> <p>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.</p> <p>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).</p>			
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

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.

Relevant person consultation

No relevant person concerns have been raised regarding potential impacts and risks from planned discharges (sewage, grey water and food waste).

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 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.

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 vessels undertaking the petroleum activity are in accordance with MARPOL	Comply with Marine Order 96 including: <ul style="list-style-type: none"> • Current ISPPC. 	ISPPC
	Comply with Marine Order 95 including:	Garbage disposal record book

requirements and industry good practice.	<ul style="list-style-type: none"> • Garbage that has been ground or comminuted to particles <25 mm discharged >3 nm from the nearest land. • Garbage disposal record book maintained. 	
	Vessel contractors have a preventative maintenance system to ensure STP and macerators, where present onboard, are maintained.	Preventative maintenance system records.

Deck drainage, bilge and firefighting foam

Table 7-5: Impact and evaluation – vessel deck drainage, bilge and firefighting foam discharges

Identify hazards and threats	
<p>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 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.</p> <p>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 m³ per hour.</p> <p>Vessels are equipped with fire suppression systems, which may include firefighting foam systems, as a safety critical requirement. The foam systems generally supply 3% alcohol resistant aqueous film-forming foam (AR-AFFF) and 3% film forming fluoroprotein foam (FFFP) foams to be used in the event of an incident. No maintenance testing of the foam systems will occur in WA-50-L during the activity, therefore any foam discharges to sea will be the result of an incident. Foam discharges on board vessels will be routed to the open-drains system for discharge to sea.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by deck drainage, bilge and firefighting foam discharges are:</p> <ul style="list-style-type: none"> • EPBC listed species • planktonic communities • fish (demersal fish communities KEF and commercial species). <p>Discharges of oily water will be treated to <15 ppm (v) in accordance with MARPOL requirements. 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).</p>	<p>Insignificant (F)</p>

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.

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).

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).

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).

Firefighting foams generally contain organic and fluorinated surfactants (such as PFAS), which can deplete dissolved oxygen in water (Schaefer 2013; IFSEC Global 2014). However, in their diluted form (as applied in the event of a fire), these foams are generally considered to have a relatively low toxicity to aquatic species (Schaefer 2013; IFSEC Global 2014) and further dilution of the foam mixtures in dispersive aquatic environments may then occur before there is any substantial demand for dissolved oxygen (Schaefer 2013; IFSEC Global 2014).

<p>There has been evidence emerging in recent years regarding the potential for all types of firefighting foams to have immediate and long-term detrimental effects on environmental values due to releases of foam into the environment such as bodies of water, soils and groundwater. Toxicological effects from these types of foams are typically only associated with prolonged or frequent exposures, such as on land and in watercourses near firefighting training areas (McDonald et al. 1996; Moody & Field 2000). To date, limited research regarding the potential impacts of firefighting foam to the marine environment has been undertaken with respect to bioaccumulation and persistence (Suhring et al 2017). However, Suhring et al (2017) reported that modelled predictions of ‘worst-case’ annual firefighting foam discharges from an offshore platform would pose a significant environmental risk in an area of several km around the release site. The predicted environmental risk in the modelling study was based on acute release and toxicity with chronic or sub-lethal effects not considered, and therefore overlooked the issues of persistence and the potential for bioaccumulation (Suhring et al 2017).</p> <p>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 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.</p> <p>If concurrent operations were to occur, deck drainage, bilge and firefighting foam discharge plumes from vessels are not expected to overlap due to the distance between operating assets (vessels/facility). Therefore, no cumulative impacts to EPBC listed species, planktonic or fish communities from such discharges are expected.</p>			
Identify existing design and safeguards/controls measures			
<ul style="list-style-type: none"> • Vessels are equipped with OWS, which remove traces of oil from the bilge and drainage water prior to discharge to sea. • 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 vessels. • Vessel crew will receive an induction/training to inform them of deck spill response requirements in accordance with Table 9-3. 			
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 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 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. It is not possible to retain and dispose of foam during an incident by any other practicable means.
	Firefighting foam systems or equipment will not be tested in WA-50-L during the activity.	Yes	To prevent discharges of firefighting foam to sea no firefighting foam systems or equipped will undergo routine testing during the activity.
Substitution	Use of alternative firefighting foams during an incident.	No	The maintenance of Safety Critical Systems is the responsibility of the vessel contractor, where INPEX has limited control of the equipment used. It is expected that over time all 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 in an incident if required during this activity.
Engineering	None identified	N/A	N/A
Procedures & administration	None identified	N/A	N/A
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. 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.			

<p>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.</p>		
<p>Residual risk summary</p>		
<p>Based on a consequence of Insignificant (F) and a worst-case likelihood of Unlikely (4) the residual risk is Low (9).</p>		
Consequence	Likelihood	Residual risk
Insignificant (F)	Unlikely (4)	Low (9)
<p>Assess residual risk acceptability</p>		
<p>Legislative requirements</p> <p>Vessels OWS will meet relevant international regulatory requirements, including MARPOL; Marine Order 91: Marine Pollution Prevention - Oil. For vessel bilge the discharge of OIW of <15 ppm(v) is permitted under MARPOL.</p> <p>Relevant person consultation</p> <p>No concerns have been raised regarding potential impacts and risks from deck drainage, bilge or firefighting foam discharges.</p> <p>Conservation management plans / threat abatement plans</p> <p>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/firefighting foam discharges. Managing oily water discharges in accordance with legislative requirements is consistent with the intent of the conservation management documents.</p> <p>ALARP summary</p> <p>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.</p> <p>Acceptability summary</p> <p>Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:</p> <ul style="list-style-type: none"> 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
<p>Planned emissions and discharges from vessels undertaking the petroleum activity are in accordance with MARPOL requirements and industry good practice.</p>	<p>Vessel contractors will comply with the <i>Navigation Act 2012</i> – Marine Order 91 including:</p> <ul style="list-style-type: none"> • vessels (of appropriate class) to have IOPP certificate to show they have passed structural, equipment, systems, fittings, and arrangement and material conditions. • OWS tested and approved as per IMO resolutions MARPOL (Annex I). 	<p>Record of current IOPP certificate.</p> <p>Calibration and maintenance records of the OWS.</p>
	<p>Vessel liquids from drains will only be discharged if the OIW content does not exceed 15 ppm.</p>	<p>Documented use of oil record book to record all oil disposal.</p>
	<p>Spill kits will be located on vessels to allow clean-up of any spills to the deck.</p>	<p>Inspection records confirm spill kits are available and stocked.</p>
	<p>Firefighting foams will only be deployed in the event of an emergency.</p>	<p>Incident log.</p>

Cooling water

Table 7-6: Impact and evaluation – vessel cooling water discharges

Identify hazards and threats	
<p>Sea water will be used as a heat exchange medium for the cooling of machinery engines on vessels. It is pumped aboard and may be treated with biocide (e.g. hypochlorite) before circulation through heat exchangers. It is subsequently discharged from 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.</p> <p>CW discharge rates vary largely depending on the vessel type. However, as a worst-case, the rate of CW discharge from the largest vessels used during the activity is estimated to be approximately 10,000 – 20,000 m³ 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).</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by cooling water discharges are:</p> <ul style="list-style-type: none"> • EPBC listed species • planktonic communities. <p>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).</p> <p>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).</p>	<p>Insignificant (F)</p>

<p>The use of biocide (hypochlorite) for the control of biofouling is 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:</p> <ul style="list-style-type: none"> 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 long term exposure to chlorination residues on fish species did not impose any apparent ecotoxicological stress 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. <p>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.</p> <p>If concurrent operations were to occur, cooling water discharge plumes from vessels are not expected to overlap due to the distance between operating assets (vessels/facility). Therefore, no cumulative impacts to EPBC listed species or planktonic communities from such discharges are expected.</p>			
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 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 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			
<p>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).</p> <p>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.</p>			
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			
<p>Legislative requirements</p> <p>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 °C at 100 m from discharge point (this is based on higher discharge temperatures and significantly greater discharge rates than would apply to the vessels undertaking the proposed activities).</p> <p>Relevant person consultation</p>			

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 7-7: Impact and evaluation – vessel desalination brine discharges

Identify hazards and threats	
<p>Potable water will be generated on the vessels using a RO plant which is supplied with sea water. Potable water is primarily supplied to the 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.</p> <p>Discharging desalination brine has the potential to cause changes in water salinity. The estimated volume of brine discharge from the vessels is estimated to be in the order of 60 - 140 m³ 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).</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by desalination brine discharges are:</p> <ul style="list-style-type: none"> planktonic communities. <p>The discharge of desalination brine from 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.</p> <p>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).</p> <p>If concurrent operations were to occur, desalination brine discharge plumes from vessels are not expected to overlap based on the distance between operating assets (vessels/facility). Therefore, no cumulative impacts to planktonic communities from such discharges are expected.</p>	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 vessels	No	The significant financial cost and health risks associated with providing fresh water to vessels from the mainland 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 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 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		

7.2 Waste management

Table 7-8: Impact and evaluation – waste management

Identify hazards and threats	
<p>The 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.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by improper waste management are:</p> <ul style="list-style-type: none"> • planktonic communities • EPBC listed species. <p>Improper management of wastes on 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).</p> <p>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).</p> <p>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).</p>	Insignificant (F)
Identify existing design and safeguards/controls measures	
<ul style="list-style-type: none"> • Spill containment and recovery equipment 	

<ul style="list-style-type: none"> 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 &	Premobilisation HSE inspections of vessels	Yes	HSE inspection conducted pre-mobilisation will confirm correct storage, labelling and handling of wastes including presence of netting to prevent windblown waste.
	Reporting of equipment or materials lost to sea	Yes	Any equipment or materials lost to the marine environment will be reported.
Identify the likelihood			
<p>During previous INPEX vessel-based and operational activities in WA-50-L, 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.</p>			
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 vessel garbage management plans, 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
	Spill kits will be available on-board vessels.	Inspection records confirm spill kits are available and stocked.

No unplanned loss of equipment, materials or wastes to the marine environment during the activity.	<p>Garbage management plans will be maintained and implemented on vessels in accordance with Marine Order 95, and will specifically include:</p> <ul style="list-style-type: none"> • procedures for collecting, storing, processing and disposing of all waste types (including segregation and labelling) • the use of waste storage and transfer equipment • the use of food waste macerators/comminuters • garbage record keeping requirements, including discharges, and disposals of waste in a Garbage Record Book • communication of waste management practices and awareness materials for crew. 	HSE inspection records confirm garbage management plans are implemented on vessels.
	Premobilisation HSE inspections of vessels confirm capability for the correct storage, labelling and handling of wastes.	Premobilisation HSE inspection records.
	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 7-9: Impact and risk evaluation – underwater noise

Identify hazards and threats	
<p>Marine fauna may be exposed to several sources of noise emissions during the proposed activities, as summarised below:</p> <ul style="list-style-type: none"> Operating vessels used to conduct the installation and survey activities 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). The survey activities will use underwater acoustic techniques including the use of MBES, side-scan sonar and sub-bottom profiling (Section 3.7.1). Conducted from a dedicated geophysical survey vessel there is a potential to expose sound sensitive marine fauna to localised changes in underwater noise levels. The different survey devices shall emit various levels of sound at a range of frequencies. MBES and side-scan sonar transmit at high frequencies (approximately 100–700 kHz) and produce a highly focused beam of sound towards the seabed, due to this there is very limited horizontal sound propagation, and it is expected to rapidly attenuate. Indicative ranges of sound outputs at source are 163 - 220 dB re 1 μPa at 1 m and 137–240 dB re 1 μPa at 1 m, for MBES and side-scan sonar respectively. Sub-bottom profiling systems operate at low frequency (0.5–24 kHz) directing beams of sound towards the seabed and therefore horizontal sound propagation is again limited. Sound outputs at source may range from 142–215 dB re 1 μPa at 1 m. 	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by underwater noise are:</p> <ul style="list-style-type: none"> EPBC listed species fish (demersal fish community KEF and commercial species). <p>The generation of underwater sound from vessel movements and survey activities in WA-50-L has the potential to impact EPBC-listed marine fauna, specifically marine mammals and turtles. Recently updated underwater noise impact thresholds stated in the Marine Mammal Acoustic Technical Guidance (2024) published by the National Marine Fisheries Service (NMFS) for cetaceans, covering a range of hearing frequency groups, range from 159 – 230 dB re 1 μPa for level A harassment (onset of auditory injury) from impulsive sound sources. For non-impulsive sound sources, the thresholds range from 195 - 201 dB re 1 μPa. Level B harassment (behavioural impacts) thresholds are 120 dB re 1 μPa for continuous sound sources and 160 dB re 1 μPa for non-explosive, impulsive or intermittent sound sources. Popper et al. (2014) proposes conservatively protective sound pressure thresholds of 207 - 213 dB re 1 μPa for potential injury to various types of fish and for marine turtles.</p>	Insignificant (F)

Based upon the sound levels generated during the survey (up to 240 dB re 1 $\mu\text{Pa}@1$ m) there is the potential for noise impacts to occur in close proximity to the source, with sound levels likely to be above ambient noise levels over several kilometres. 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). 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).

A limited number of commercially significant fish stocks may be present in WA-50-L that may be exposed to underwater noise emissions (Table 4-5). 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 °C 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).

Vessel noise

Based on the expected noise emissions associated with the operation of vessels during the proposed activities in WA-50-L, any noise emissions (ranging from 108 to 182 dB re 1 μ Pa at 1 m) are not expected to result in permanent or temporary impacts to marine fauna (including level A or B harassment for cetaceans (NMFS 2024) or injury to fish and turtles (Popper et al. 2014)). 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 μ Pa within 8 km of the source location with the area receiving 130–140 dB re 1 μ Pa predicted to be less than 1 km in radius. The sound levels produced by installation, survey and support vessels associated with the proposed activities are 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 vessels. 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).

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).

Survey activities

MBES and side-scan sonar are high-frequency, low-energy geophysical survey instruments, which are significantly less intrusive than high-energy seismic survey instruments. As described in Section 3.7.1, sound source levels produced by these different instruments range from 137–240 dB re 1 μ Pa at 1 m. The high frequency pulses of sound are produced in highly directional and narrow beams, which rapidly attenuate outside of the beam (Zykov 2013). The high operating frequencies of MBES and side-scan instruments (100–700 kHz) place the dominant sound frequencies above the auditory range of most marine fauna species, including cetaceans, turtles and fish, although some instruments may be audible to mid-frequency and high-frequency cetaceans such as some dolphin species (MacGillivray et al. 2013; Zykov 2013).

It is not expected that fauna would persist in close proximity to the instruments long enough for impacts to occur. Therefore, no impacts to these species' groups are expected and hearing impairment impacts to marine fauna from MBES, and side-scan sonar have not been previously reported. Therefore, the consequence is considered to be Insignificant (F).

Sub-bottom profilers produce directional beams of sound towards the seabed and therefore sound propagation tends to be downwards in the water column with limited horizontal propagation. The sub-bottom profiling system to be used in the survey will operate at low frequency (0.5–24 kHz). Acoustic modelling of sub-bottom profilers by Zykov (2013), MacGillivray et al. (2013) and McPherson and Wood (2017), indicates limited horizontal sound propagation outside of the main directional field

of sound. The modelling studies indicate that peak pressure (PK) and sound exposure level (SEL) 24h thresholds for permanent threshold shift are not exceeded. The potential for temporary threshold shift resulting from SEL24h is limited to a few metres from the moving sound source (McPherson and Wood 2017), which is not considered to be a credible exposure scenario for mobile marine fauna. Exceedance of the 160 dB re 1 µPa sound pressure level (SPL) behavioural response threshold for impulsive sound is limited to within a few tens of metres in most instances, or up to a maximum of 150 m depending upon the type of SBP, water depth and the seabed sediment characteristics (Zykov, 2013; McPherson and Wood 2017).

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 and is 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).

As described for vessel noise, a range of pelagic and demersal fish species may be present in the licence area, but these highly mobile species 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 the survey activities in WA-50-L with no impacts to 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).

If concurrent operations were to occur within WA-50-L, given the distance between operating assets (vessels/facility) sound from vessel engines, thrusters and survey instruments may be audible to marine fauna over several km but most likely limited to within 1 – 2 km of the source, potentially resulting in behavioural avoidance responses. Additional vessel traffic in WA-50-L associated with concurrent operations may result in cumulative sound emissions that are detectable to receptors (EPBC-listed species and fish) but given the transient nature of vessel movements as well as the often transient nature of marine fauna it is likely that they would move away from the area and therefore any behavioural response would be limited to short-term avoidance of the area with no significant alteration of behaviour (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 vessels	No	The use of vessels to undertake the activity cannot be eliminated. The geophysical survey scope may be undertaken using a USV or AUV if there are suitable vessels available at the time of the survey (Section 3.8.2). Sound source levels associated with an USV or AUV is significantly less than that of traditional vessels engines and would result in a reduction in overall underwater noise emissions associated with the survey. Installation and geotechnical scopes require vessels with cranes that have sufficient lifting capability to safely deploy equipment to the seabed and therefore the use of vessels cannot be eliminated.
Substitution	Alter the timing of the proposed 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 activities to only 4 months of the year (May to August) as this would result in significant delays. 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 vessels in WA-50-L will not result in injury or hearing impairment implementing this control does not provide any significant environmental benefit.

	Implement EPBC Act Policy Statement 2.1	No	Implementation of controls described in EPBC Act Policy Statement 2.1 – <i>Interaction between offshore seismic exploration and whales</i> is not considered appropriate given the nature of the geophysical surveys to be undertaken. The geophysical survey will utilise low energy equipment that is not comparable to commercial seismic survey equipment.
Identify the likelihood			
<p>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 vessels operating in WA-50-L are considered Highly Unlikely (5).</p> <p>Transient marine fauna individuals may be exposed to increased sound source levels in the expected propagation distances (most likely limited to within 1 – 2 km of the source) associated with the survey noise emissions. Any impacts to marine fauna and fish species would be limited to individuals and the timeframes associated with these operations are considered to be of short duration. Therefore, given that marine fauna would not persist in close proximity to the sound source long enough for impacts to occur and it is considered Unlikely (4).</p>			
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			
<p>Legislative requirements</p> <p>As required by law the EPBC Regulations 2000 – Part 8, Division 8.1 will be implemented during the proposed activities.</p> <p>Relevant person consultation</p> <p>Feedback received from licence holders from the southern bluefin tuna fishery and Tuna Australia during previous INPEX EP consultation in 2023 has been incorporated into the consequence assessment presented in this table of the EP. Noting that previous relevant matters raised were not specifically in relation to underwater noise.</p> <p>Conservation management plans / threat abatement plans</p>			

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.

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 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 <i>Interacting with cetaceans</i>) within the 500m exclusion zone including: <ul style="list-style-type: none"> • vessels will not travel faster than 6 knots within 300 m of a cetacean or turtle (caution zone) and minimise noise. • 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). 	Records of breaches of vessel - cetacean interaction requirements outlined in the EBPC Regulations 2000.

	<ul style="list-style-type: none">• 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.	
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7.4 Biodiversity and conservation protection

7.4.1 Introduction of invasive marine species (IMS)

Table 7-10: Impact and evaluation – Introduction of invasive marine species

Identify hazards and threats	
<p>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.</p> <p>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).</p> <p>There are several pathways for the introduction and spread of IMS of concern associated with the proposed activities in WA-50-L including the mobilisation of vessels 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).</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by the introduction of an IMS are:</p> <ul style="list-style-type: none"> 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. fisheries (commercial, traditional (Indonesian) and recreational fishing). <p>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).</p>	Significant (C)

Benthic communities, shallow water coastal environments in WA marine parks and reserves (the closest of which is Browse Island) and fisheries (commercial, traditional (Indonesian) and 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.

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.

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.

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.

Domestic conveyances undertaken by 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 and this may result in medium term impacts to benthic communities with a consequence rating of Significant (C).

The transfer of IMS propagules via anthropogenic dispersal mechanisms and/or stepping-stone dispersal from vessels colonised with IMS, has the potential to affect distant commercial, traditional (Indonesian) and recreational fishing through impacts on economic or recreational values. The main areas of recreational fishing effort is known to occur at population centres around Broome and Wyndham not within the EMBA; 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 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).
- Vessels will have an approved ballast water management plan and valid ballast water management certificate, unless an exemption applies or is obtained.
- Vessels operating within Australian seas will manage ballast water discharge using one of the following approved methods of management (DAWE 2020):
 - an approved ballast water management system
 - ballast water exchange conducted in an acceptable area *
 - 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)
 - retention of high-risk ballast water on board the vessel
 - discharge to an approved ballast water reception facility.

* 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):

- Vessels servicing an offshore facility: at least 500 m from the facility, and no closer than 12 nm from the nearest land
- 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 vessels that use ballast water will comply with the Australian Ballast Water Requirements Version 8 (DAWE 2020) enforceable under the *Biosecurity Act 2015*.
- 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 the use of vessels	No	The use of vessels to undertake the activity cannot be eliminated.

			The geophysical survey scope may be undertaken using a USV if there is a suitable vessel available at the time of the survey (Section 3.8.2). When not in use, the USV is stored out of the water and does not present an IMS risk. Installation and geotechnical scopes require vessels with cranes that have sufficient lifting capability to safely deploy equipment to the seabed and therefore the use of vessels cannot be eliminated.
Substitution	Only use vessels already operating in Australian waters.	No	Although using only local vessels may be possible for certain aspects of the activity, it may not be possible for all vessels such as specialist offshore construction vessels. The potential cost and time needed to source capable vessels locally is disproportionate noting that there are known locations within Australia which harbour IMS and could potentially act as a source for the further spread of IMS within Australian regions (Section 4.8). Therefore, substituting to the use of a locally available vessels only may not provide an environmental benefit.
Engineering	None identified	N/A	N/A
Procedures administration &	Complete a biofouling risk assessment (including immersible equipment) for 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	<p>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).</p> <p>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.</p>

			<p>For any 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:</p> <ul style="list-style-type: none"> • vessel specifications: vessel name, type, size and Flag State, etc. • movements: port of origin, voyage history, destination, transport method, evidence of recent dry-docking and/or inspection, etc. • anti-fouling coating: type (i.e. biocidal/non-biocidal), age, service life, application area, record of Antifouling Systems Certificate, etc. • inspection/cleaning: inspection and cleaning history including any relevant independent biofouling inspection reports, etc. • 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. • duration of stay: at overseas or interstate locations, and duration in WA coastal waters etc. <p>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.</p>
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	<p>Complete a biofouling risk assessment (including immersible equipment) for 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.</p>	<p>No</p>	<p>As described above, 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 vessels already operating within Australian waters a biofouling risk assessment will not be completed as this is not considered necessary for domestic vessels as any 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.</p> <p>An additional biofouling risk assessment is disproportionate and unnecessary if the vessels have already demonstrated compliance with regulations upon entry to Australia as administered by DAFF.</p>
<p>Identify the likelihood</p>			
<p>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.</p> <p>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 (Lejeune et al. 2014; Roman & Darling 2007) thereby becoming 'introduced'. Many propagules may be released but never survive to join local populations.</p>			

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.

Vessels 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).

Domestic conveyances by support vessels may use Broome, Darwin or Dampier ports as supply bases. The presence of jetties and wharves in ports, provides substrate for IMS, meaning that the ports could act as a source of IMS inoculum. The attachment of biofouling may occur in as short a time frame as 24 hours; however, 7 days has been considered to provide a pragmatic balance between logistical factors versus the risk of a vessel being contaminated with an IMS. 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. 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		
<p>Legislative requirements</p> <p>Vessel ballast water will be managed in accordance with the intent of the Australian Ballast Water Requirements Version 8 (DAWE 2020) and the <i>Biosecurity Act 2015</i>. 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 have met the D2 standard by 8th September 2024 leading 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 2024e).</p> <p>Relevant person consultation</p> <p>No relevant person concerns have been raised regarding potential impacts and risks from IMS.</p> <p>Conservation management plans / threat abatement plans</p> <p>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.</p> <p>ALARP summary</p> <p>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.</p> <p>Acceptability summary</p> <p>Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:</p> <ul style="list-style-type: none"> 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 		

<ul style="list-style-type: none"> 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
<p>No establishment of IMS of concern in the Commonwealth Marine Area or coastal waters via ballast water or biofouling attributable to the petroleum activity.</p>	<p>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 <i>Protection of the Sea (Harmful Antifouling Systems) Act 2006</i> (Cwlth).</p>	<p>Current International Anti-fouling Systems certificate or a Declaration on Anti-fouling Systems.</p>
	<p>All vessels will have:</p> <ul style="list-style-type: none"> approved vessel-specific ballast water management plan maintained, or record of DAWE issued exemption (if not automatic exemption) on board. valid ballast water management certificate or record of DAWE issued exemption (if not an automatic exemption) on board. 	<p>Vessel premobilisation inspections confirm vessels have:</p> <ul style="list-style-type: none"> an approved ballast water management plan, unless an exemption applies or is obtained. a valid ballast water management certificate, unless an exemption applies or is obtained.
	<p>Vessels operating within Australian seas will manage ballast water discharge using one of the following approved methods of management (DAWE 2020) including:</p> <ul style="list-style-type: none"> an approved ballast water management system exchange of ballast water exchange conducted in an acceptable area 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) retention of high-risk ballast water on board the vessel discharge to an approved ballast water reception facility. 	<p>Vessels premobilisation inspection and annual verification audit reports confirm through ballast water records that an approved ballast water management option has been used.</p>

	Vessels that use ballast water will comply with the Australian Ballast Water Requirements Version 8 (DAWE 2020).	Records confirm vessels meet Australian Ballast Water Requirements Version 8.
	All vessels currently operating in Australian waters will implement a: <ul style="list-style-type: none"> • biofouling management plan. • biofouling record book in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements. 	Vessels pre-mobilisation inspection confirms 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.
	A biofouling risk assessment will be completed by an independent IMS expert for 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.	Vessel specific biofouling risk assessment and any records of mitigation measures implemented confirming the vessel presents a low risk.

7.4.2 Interaction with marine fauna

Table 7-11: Impact and risk evaluation – Physical presence of vessels and interaction with marine fauna

Identify hazards and threats	
<p>The physical presence and use of vessels in the licence area during the proposed activities has the potential to result in collision with marine fauna (vessel strike) which may result in death or injury to individuals. Marine fauna may also interact with subsea equipment such as towed survey instruments (Section 3.7.1) or installation aids (i.e. rope loops or cables) on deployed seabed structures which may result in potential injury or death due to entanglement.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by vessel strike or entanglement are:</p> <ul style="list-style-type: none"> • EPBC listed species. <p>The physical presence of vessels undertaking the proposed activities 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).</p> <p>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 proposed activities are 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.</p>	Minor (E)

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. The blue whale has a foraging BIA at Scott Reef (Figure 4-4) approximately 100 km west from WA-50-L; therefore, blue whales are not expected to occur in the licence area.

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.

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 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 vessels will 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.

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.

<p>Entanglement of marine fauna with submerged equipment has recently been reported (NOPSEMA 2024e) where installation aids used to safely deploy subsea equipment may present a risk of entanglement to marine fauna. Marine fauna may also be attracted to towed equipment used during the proposed geophysical survey activities such as SSS or SBP which may be towed by a vessel if not mounted to a ROV/AUV. There have been reports of marine turtles being trapped by towed seismic equipment (Ketos Ecology 2009). However, these instances have been associated with dilt floats on the leading end of streamers or on the tail buoys several kilometres behind the vessel and are therefore not comparable to the proposed geophysical survey activities.</p> <p>Given the slow speeds (4.5 knots) at which the geophysical survey vessel will travel there is limited potential for a vessel strike or entrapment to result in mortality to large marine fauna, although injury may occur. While there is potential for individual marine fauna to be impacted by vessels associated with the activity, any potential vessel strike or entrapment of marine fauna is likely to be an isolated event. In the event of the death of an individual cetacean or turtle, it would not be expected to have a significant effect at the population level (Minor E).</p> <p>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 and entanglement may act as contributor to a stock level decline.</p>				
Identify existing design and safeguards/controls measures				
<ul style="list-style-type: none"> • 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 control	of	Control measure	Used?	Justification

Elimination	Eliminate the use of vessels	No	The use of vessels to undertake the activity cannot be eliminated. The geophysical survey scope may be undertaken using a USV or AUV if there are suitable vessels available at the time of the survey (Section 3.8.2). As an USV or AUV are both significantly smaller than traditional vessels they would present a lower potential for vessel strike. Installation and geotechnical scopes require vessels with cranes that have sufficient lifting capability to safely deploy equipment to the seabed and therefore the use of vessels cannot be eliminated.
	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 vessels transiting between 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. 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 to undertake the activities	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 may have space/weight or technical limitations such as lifting capacity for equipment required for the installation and survey activities.
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 fauna observer (MMO) on vessels	No	The use of dedicated MFOs 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. 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.
	Alternative design of installation aids for subsea equipment.	Yes	To prevent potential entanglement of marine fauna with equipment installed on the seabed in WA-50-L, the use of lifting loops is kept to a minimum. Any loops used are kept as short as possible and where unable to be removed (due to risk of damage to the equipment) they are covered with sandbags. Monkey's fist lanyards are used where possible.
	Installation aids will be removed to prevent marine fauna interactions with equipment deployed subsea.	Yes	All installation aids will be removed from subsea equipment as soon as practicable after installation and prior to leaving WA-50-L.
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 interesting BIA for green turtles at Browse Island (20 km buffer, DEE 2017a) is 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, 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, vessels 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 INPEX Ichthys operational activities in WA-50-L to date.

If concurrent 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

EPBC Regulations 2000 – Part 8, Division 8.1 (Regulation 8.05) will be implemented with regards to vessel speeds and separation distances.

Relevant person consultation

No concerns have been raised regarding potential impacts and risks from the physical presence of vessels and potential for vessel strike associated with the petroleum activity.

Conservation management plans / threat abatement plans

Several conservation management plans have been consulted in the development of this EP (Appendix B). Actions identified in 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).

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 injury/ mortality of cetaceans, whale sharks or turtles resulting from interactions with subsea equipment or 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) <i>Interacting with cetaceans</i> : <ul style="list-style-type: none"> • Support vessels will not travel faster than 6 knots within 300 m of a cetacean (caution zone) and minimise noise. • 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). 	Records of event reports if vessel strike occurs.

	<ul style="list-style-type: none"> 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. 	
	<p>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.</p>	<p>Records of breaches of whale shark code of conduct are documented.</p>
	<p>Subsea equipment to be installed is designed with minimal lifting loops that may present an entanglement hazard to marine fauna.</p>	<p>Design records.</p>
	<p>Installation aids on equipment deployed subsea will be removed or covered.</p>	<p>ROV 'as left' survey records demonstrate all installation aids have been removed or covered with sandbags.</p>

7.5 Seabed disturbance

Table 7-12: Impact and risk evaluation – Seabed disturbance

Identify hazards and threats	
<p>As described in Section 3.3, the scope of this EP includes the installation, tie-in, pre-commissioning, mechanical completion and commissioning of five well jumpers and associated control systems at existing drill centres within WA-50-L. In addition, a geotechnical survey is also planned (Section 3.7.2) involving the collection of cores, PCPT testing, box core sampling and up to three geotechnical boreholes (each of approximately 15 m depth). The proposed activities have the potential to physically disturb the seabed in WA-50-L and such disturbance to benthic communities has the potential to result in reduced ecosystem productivity or diversity. Aside from physical disturbance, the proposed activities may also result in the localised generation of silt plumes that could affect surrounding benthic communities.</p> <p>Disturbance to the seabed in WA-50-L may occur during the activity either by:</p> <ul style="list-style-type: none"> • permanent placement of subsea infrastructure on the seabed (e.g. well jumpers, flying leads, mattresses, grout bags etc.) • temporary placement of some subsea infrastructure on the seabed prior to repositioning • temporary set-down of equipment on the seabed (e.g. ROV, tooling baskets etc.) • temporary deployment of a metocean wave rider buoy • temporary placement of subsea geotechnical survey equipment (e.g. coring/sampling systems, PCPT frames and box core sampling equipment etc.) <p>The physical footprint of the proposed installation activities will be limited to the existing drill centres which represents a previously disturbed environment. The use of the ROVs (2 – 3 m²), IMR related equipment e.g. leak detection systems (4 – 5 m²), ROV tooling baskets (2 -3 m²) and the clump weight for the metocean wave rider buoy (4 m²) may be temporarily positioned on the seabed during the installation activities. These items will be retrieved at the end of the installation activities.</p> <p>During the geotechnical survey where the equipment is landed/recovered and samples collected there may be some seabed disturbance, ranging from approximately 10 m² per borehole to 1m² per box core sample. No geotechnical equipment will be left on the seabed at the sampling locations with all equipment recovered back to the vessel at the end of the geotechnical survey.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by seabed disturbance are:</p> <ul style="list-style-type: none"> • benthic communities • fish (demersal fish community KEF and commercial species) • underwater cultural heritage. 	<p>Insignificant (F)</p>

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).

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).

The proposed activities may result in the mortality of sessile fauna within the footprint of the above described activities 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 temporary placed equipment including geotechnical survey equipment, the soft sediments will be left disturbed but benthic habitats would remain viable and are expected to recolonise through the recruitment of new colonists from planktonic larvae and adjacent undisturbed areas.

Displacement of sediments during equipment 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 2012). 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 2012). 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 the closest reef habitats and shoals to the licence area (Browse Island (26 km), Echuca Shoal (65 km) and Heywood Shoals (90 km) away).

The potential consequence on benthic communities is a localised impact from physical disturbance within the footprint of the proposed activities 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).

<p>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 4-5). 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).</p> <p>As described in Section 4.9.4, there are no known wrecks or artefacts within WA-50-L or the EMBA. 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. 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).</p>			
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 planned anchoring by vessels	Yes	Vessels will not anchor in the licence area but will use DP to maintain position unless in the case of an emergency. If available, vessels may use temporary moorings to reduce time spent on DP.
Substitution	None identified	N/A	N/A
Engineering	None identified	N/A	N/A

Procedures & administration	Implement an UCH 'unexpected finds protocol'	No	<p>Unexpected finds of suspected UCH can occur during near and offshore developments (DCCEEW 2024d). Such finds may impact UCH and therefore breach the <i>Underwater Cultural Heritage Act 2018</i>. 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.</p> <p>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.</p>
	Equipment temporarily positioned or wet-stored on the seabed to be removed at the end of the activity.	Yes	<p>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 activity.</p>
Identify the likelihood			
<p>The likelihood of impacting benthic communities located at the installation and geotechnical survey 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.</p> <p>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).</p> <p>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).</p>			
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		
<p>Legislative requirements</p> <p>There are no specific environmental guidelines/legislation regarding the environmental management of seabed sampling and installation activities with respect to impacts on benthic communities. 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 the Ichthys SPS in WA-50-L will be removed by INPEX.</p> <p>Relevant person consultation</p> <p>INPEX received feedback from Vocus Communications regarding the location of a submarine cable that services the Ichthys offshore facility present within WA-50-L. INPEX confirmed during consultation for this EP that there would be no interaction with the submarine cable from the proposed activities associated with this EP. No concerns have been raised regarding seabed disturbance.</p> <p>Conservation management plans / threat abatement plans</p> <p>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.</p> <p>ALARP summary</p> <p>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.</p> <p>Acceptability summary</p> <p>Based on the above assessment, the proposed controls are expected to effectively reduce the risk of impacts to acceptable levels because:</p> <ul style="list-style-type: none"> the activity demonstrates compliance with legislative requirements/industry standards the activity takes into account relevant person feedback 		

<ul style="list-style-type: none"> 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 installation and geotechnical survey locations.	No planned anchoring of vessels associated with the activity in WA-50-L.	Incident report.
	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 7-13: Impact and risk evaluation – Physical presence of vessels resulting in disruption to marine users

Identify hazards and threats	
<p>The physical presence of vessels 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. The vessels used for the proposed activities do not have an associated 500 m exclusion or petroleum safety zone. The potential, albeit temporary, interference with and/or exclusion of other users, within WA-50-L may result in a loss of revenue for commercial users including fisheries.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities with the potential to be impacted by physical presence of vessels in WA-50-L are:</p> <ul style="list-style-type: none"> • shipping • commercial, traditional (Indonesian) and recreational fisheries. <p>Other marine users in the vicinity of WA-50-L may be impacted by vessel presence 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.</p> <p>A review of AMSA’s vessel traffic data for the Browse Basin in June 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.</p> <p>Individual vessels may have to slightly alter their sailing routes to avoid vessels 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).</p>	<p>Insignificant (F)</p>

<p>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 and the relatively small spatial area occupied by vessels undertaking short-term activities (100 day and 30 days) in comparison to the entire extent of the fishing grounds available, the potential loss of navigable space in which a fishing operator could conduct their activities is considered to be insignificant (F).</p> <p>WA-50-P is situated within the MoU box for Indonesian traditional fishing (DSEWPaC 2012). 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).</p> <p>There is no evidence that recreational fishing 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 as a result of vessel physical presence in the licence area is considered to be of Insignificant consequence (F).</p>				
Identify existing design and safeguards/controls measures				
<ul style="list-style-type: none"> • Ongoing relevant person notifications/consultation with relevant persons as per Section 9.8.3 and Table 9-7. • Vessels fitted with lights, signals, AIS transponders and navigation equipment as required by the <i>Navigation Act 2012</i> 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 vessels	No	The use of vessels to undertake the activity cannot be eliminated. The geophysical survey scope may be undertaken using a USV or AUV if there are suitable vessels available at the time of the survey (Section 3.8.2). As an USV or AUV are both significantly smaller than traditional vessels they would present a lower potential for disruption to other marine users. Installation and geotechnical scopes require vessels with cranes that have sufficient lifting capability to safely deploy equipment to the seabed and therefore the use of vessels cannot be eliminated.	

Substitution	Alter timing to avoid peak fishing periods	No	The spatial extent occupied by vessels undertaking the proposed activities is of limited size 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 for the relatively short-term duration of the activities.
Engineering	None identified	N/A	N/A
Procedures & administration	None identified	N/A	N/A
Identify the likelihood			
<p>The vessels associated with the proposed 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).</p>			
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			
<p>Marine Safety Information (MSI) notifications will be issued via AMSA, while the Australian Hydrographic Office (AHO) will issue a Notice to Mariners. All vessels will be equipped with navigation equipment as required by the <i>Navigation Act 2012</i>. All vessels are required to comply with the <i>Navigation Act 2012</i>, and associated Marine Orders, which are consistent with the COLREGS requirements.</p>			

Relevant person consultation

During consultation the Australian Southern Bluefin Tuna Industry Association (ASBTIA) confirmed they would require further engagement should the activity involve the use of airguns. INPEX confirmed no airguns would be used during the activity. Tuna Australia (identified as a relevant person) also requested to be notified of the commencement of the activity; therefore, Table 9-6 includes a notification for licence holders in the fisheries that Tuna Australia represent.

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
- 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 <i>Navigation Act 2012</i> .	Records confirm that required navigation equipment is fitted to vessels to ensure compliance with the <i>Navigation Act 2012</i> .

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
- MEG
- 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 7-14. 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 7-14: 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 chemicals and hydrocarbon products on board	Inappropriate use /handling/ minor spills on board Failure of hydraulic hoses on equipment	Failure of tote tank estimated to be in the order of 1 m ³ Failure of hydraulic hoses estimated to be in the order of < 1 m ³	Various – may include grease, wax, hydraulic fluids	1	Accidental release overboard – Table 7-15
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	Various	1	Accidental release overboard – Table 7-15

Scenario		Basis of volume calculation	Type	Indicative incident level	Section addressed
Source	Threat				
		a full loss of contents			
Flushing	Detachment of downline during pressurisation/flushing while pre-commissioning	1.5 m ³ MEG to sea surface or subsea	MEG	1	
Chemical transfers	Spill during transfer	24 m ³ – based on losses from IBC during bulk transfer, released at sea surface	MEG/pre-commissioning fluids	1	Accidental release overboard – Table 7-15
Hydrocarbon transfers	Spill during bunkering	10 m ³ – based on hose failure during transfer	Group II – diesel	1	Accidental release overboard – Table 7-15
Emergency conditions (refer to Section 8)					
Loss of containment from SPS	Dropped object - rupture/damage	45.5 m ³ – based on the liquid phase (Brewster condensate) contained within the largest production flowline	Group I – Brewster condensate	2	Loss of containment from SPS - Section 8.3
Vessels	Collision	400 m ³ – based on capacity of largest single fuel tank (AMSA 2015)	Group II – diesel	2	Vessel collision – Section 8.2

7.7.1 Accidental release

Table 7-15: Impact and evaluation – loss of containment: accidental release overboard

Identify hazards and threats	
<p>Loss of containment events were identified (Table 7-14), including minor chemical spills on board (<1 m³); failure of hydraulic hoses (<1 m³); loss of tote tank during cargo transfer (5.5 m³); detachment of downline during flushing resulting in loss of MEG (1.5 m³); chemical spills (MEG/pre-commissioning fluids) during transfer (24 m³) and loss of hydrocarbon fuels during bunkering of vessels (10 m³).</p> <p>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 MEG, which is PLONOR, or Group II hydrocarbons which are more volatile and less persistent in the environment, any spills will rapidly disperse at the sea surface.</p> <p>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.</p>	
Potential consequence	Severity
<p>The particular values and sensitivities identified as having the potential to be impacted by an accidental release are:</p> <ul style="list-style-type: none"> • EPBC listed species • planktonic communities. <p>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 II hydrocarbons. Foreseeable loss of chemicals to the marine environment would be relatively small (<1 – 24 m³), and impacts would generally be of low consequence (Insignificant F). MEG is considered to pose little or no risk to the environment therefore, the focus of this assessment is based on the loss of diesel during bunkering.</p> <p>Given the anticipated volumes (worst case 10 m³ of diesel), 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 vessel 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.</p>	<p>Insignificant (F)</p>

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).

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).

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.

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).

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

<ul style="list-style-type: none"> Spill kits will be available on-board vessels Personnel 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 chemicals in accordance with Section 9.6.1 and Table 9-5 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 cargo transfers.	No	Cargo transfers cannot be eliminated, as this is the only practicable option for supplying larger construction and installation vessels in offshore locations.
	No bunkering.	No	Bunkering of fuel is a requirement during the activity as vessel tank capacities mean that supplies need to be replenished. Steaming time to the closest port facilities for bunkering is approximately 18 hours. This would generate additional environmental impacts in terms of air emissions. This would also result in significant delays to the schedule.
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.
	Dry break, breakaway couplings or similar technology will be installed and used on vessel downlines.	Yes	The use of dry break and breakaway couplings during pressurisation and flushing while pre-commissioning will reduce the potential volume of any spills resulting from the unplanned detachment of downlines.

Procedures administration &	Implement hydrocarbon 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 will occur in accordance with strict conditions for preventing spills to the marine environment. Offshore transfers of fuel will be conducted in accordance with the vessel contractor's transfer procedures.
	Hydraulic equipment on board 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.
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 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 vessels >400 GT have SOPEP (or SMPEP) compliant with Marine Order 91.	Premobilisation HSE inspection documentation.
	Spill kits will be available on-board vessels.	Inspection records confirm spill kits are available and stocked.

	<p>INPEX lifting standard and cargo transfer processes are implemented.</p>	<p>Lifting records. Training records of personnel involved in lifting and cargo transfer activities.</p>
	<p>Bunded areas or other secondary containment will be available and used for the storage and handling of hydrocarbons and chemicals (including waste products).</p>	<p>Inspection records confirm bunding or other secondary containment is available and used for the storage of hydrocarbons and chemicals (including waste products).</p>
	<p>Vessel downlines have dry break, breakaway couplings or similar technology installed and in use during pre-commissioning pressurisation and flushing operations.</p>	<p>Pre-deployment checklist.</p>
	<p>INPEX will verify the vessel contractors implement bunkering procedures for hydrocarbon transfers that will include as a minimum:</p> <ul style="list-style-type: none"> • completion of permit to work (PTWs) for all diesel transfers. • 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. • hydrocarbon bulk transfer hoses are certified and rated for hydrocarbons and pressure tested and maintained in a hose register. • 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. 	<p>Documentation that hydrocarbon bunkering procedures approved and are implemented, e.g. undertaken during daylight hours and in appropriate sea state, etc. Hose register. Completed and approved PTW records for all diesel transfers.</p>

	INPEX will verify vessel contractors implement a preventive maintenance system for hydraulic equipment to ensure equipment is maintained and operated within OEM specification.	Documentation of maintenance recorded in the preventive maintenance system.
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8 EMERGENCY CONDITIONS

An evaluation of potential spill sources and worst-case spill scenarios (WCSS) identified two potential emergency conditions related to the activity (Table 7-14).

A credible WCSS associated with the SPS could arise from a dropped object, specifically a well jumper. In the event of a worst case dropped object (well jumper) there is potential for damage (resulting in loss of containment) to the following drill centre assets:

- other well jumpers at the drill centre
- tie-in spools from the drill centre manifold to flowline end termination (FLET)/in-line tee (ILT)
- production flowlines.

Note that damage is not deemed credible to XTs, manifolds, FLET or ILT due to the dropped object protection plates installed on the top of these subsea structures.

On this basis, the emergency conditions applicable to the activities are summarised in Table 8-1.

Table 8-1: Potential emergency conditions

Scenario		Hydrocarbon type	Release location
Source	Threat		
Vessels	Collision	Group II – diesel	Surface
Rupture/damage to production flowline	Dropped object	Group I – condensate	Subsea

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 scenarios, vessel collision and dropped object resulting damage/rupture of production flowline (Table 8-1).

The hydrocarbon exposure thresholds adopted to conservatively identify the EMBA and EPEI are described in Table 8-2 so 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.	French-McCay 2002, 2003, 2009, 2016, 2018 ANZG 2018 AMSA 2015
	Entrained – 100 ppb		
	Dissolved – 50 ppb	As in-water hydrocarbons are not visible, thresholds used relate only to ecological impacts on socio-economic and cultural receptors (if any).	
	Shoreline – 10 g/m ²	Predicts potential for some socio-economic impact from low concentrations of oil accumulating on shorelines.	
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 ANZG 2018 AMSA 2015
	Entrained – 100 ppb		
	Dissolved – 50 ppb		
	Shoreline – 100 g/m ²		
Oil spill scientific monitoring – used to determine the planning area for scientific monitoring in the event of a spill, see INPEX <i>Browse Regional OPEP</i> 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 include the two WCSS and are the sum of 300 overlaid modelling runs from the release locations 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. The use of such a highly conservative method ensures that the EPBC Act Protected Matters database search includes all potential receptors that may be present within the EMBA, and are therefore considered in the risk assessment described in this section of the EP.

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 largest WCSS (vessel collision) may extend up to approximately 140 km (1 g/m^2 - visible surface sheen) or up to 23 km (above ecological impact threshold – 10 g/m^2) from the release location (RPS 2024a) noting that this would not be a continuous slick at the sea surface. Entrained oil concentrations at or greater than the impact threshold concentration (100 ppb) may travel up to approximately 120 km from the release location. Dissolved oil concentrations at or greater than the impact threshold concentration (50 ppb) may travel up to approximately 95 km from the release location in WA-50-L. Shoreline contact was predicted at two locations across all modelled seasons. The maximum accumulated concentrations on shorelines were predicted at Cartier Island (87 g/m^2) and Browse Island (37 g/m^2) with corresponding maximum accumulated volumes on shoreline of 3 m^3 and 2 m^3 respectively (refer to Table 8-4 for further details).

The oil spill modelling data presented in Section 8.3 and Table 8-7 for a loss of containment from the SPS scenario is significantly smaller than that reported for the vessel collision scenario.

The impacts and risks associated with the vessel collision and loss of containment scenarios are presented in Table 8-5 and Table 8-8 respectively.

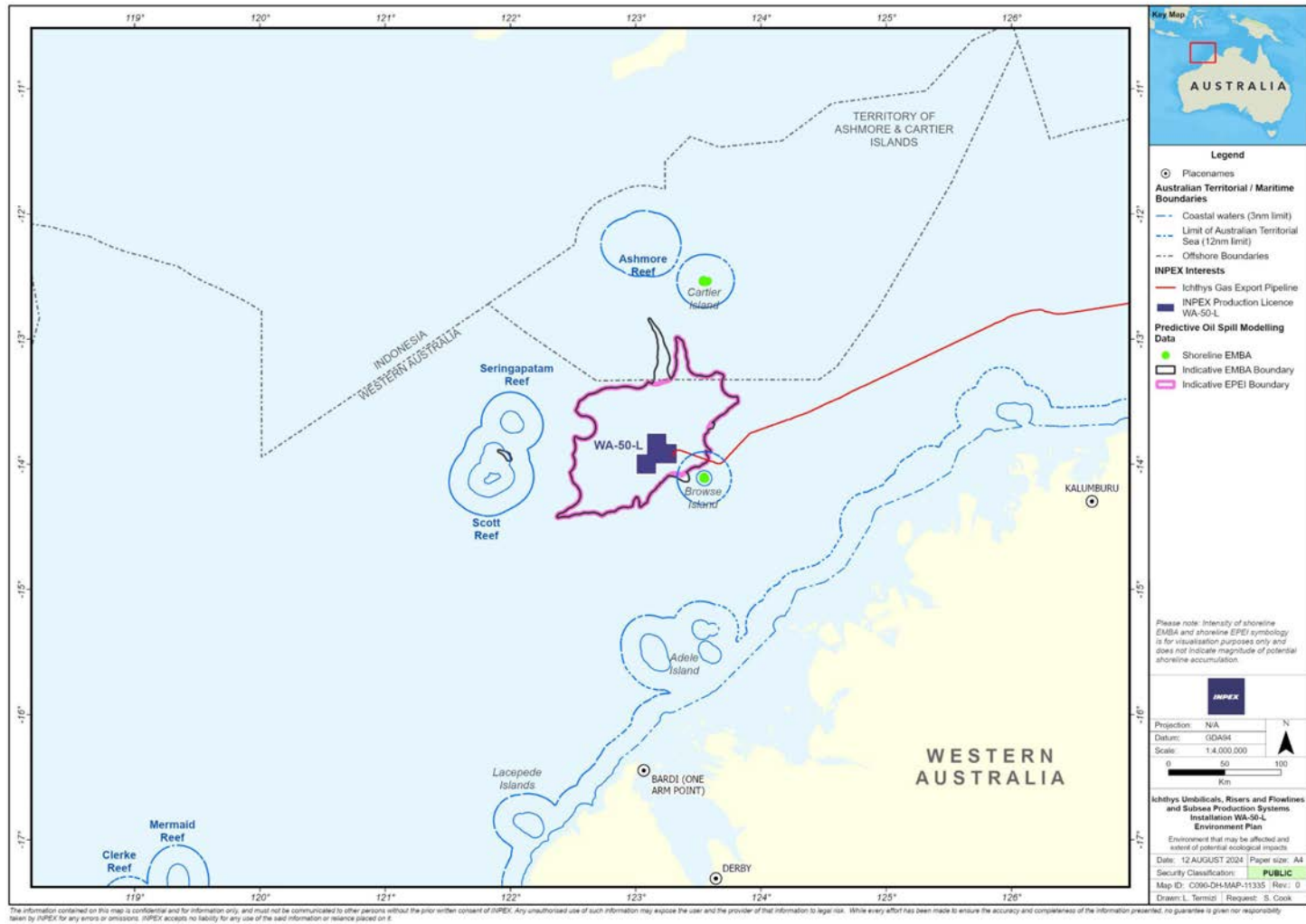


Figure 8-1: EMBA and EPEI from the WCSS

8.2 Vessel collision

8.2.1 Location

Spill modelling was undertaken for a surface release of marine gas oil (MGO) at a location adjacent approximately 15 km north west of the Ichthys Facility in WA-50-L (RPS 2024a). The release point provides indicative information only as an exact location for a vessel collision cannot be predicted.

8.2.2 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 was undertaken and modelling of a 400 m³ spill volume has been used (RPS 2024a). The spill modelled was for a release on to the sea surface over 6 hours, with spill trajectory and fate tracked for 28 days.

8.2.3 Hydrocarbon properties

Hydrocarbon properties associated with the Group II MGO used for the modelling study are presented in Table 8-3.

Table 8-3: 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	-

8.2.4 Modelling results

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 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 2024a).

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 2024a).

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 2024a).

Table 8-4: Vessel collision spill modelling results

Hydrocarbon exposure	Surface release of 400 m ³ MGO (RPS 2024a)
Surface	<p>The maximum distance of floating hydrocarbon, at concentrations greater than 1 g/m² (visible sheen), travelled by a single spill trajectory (out of 300 simulations) was approximately 140 km from the release location.</p> <p>The maximum distance travelled by a single spill trajectory (out of 300 simulations) for floating hydrocarbons at concentrations >10 g/m² (environmental impact threshold) were predicted to be approximately 23 km.</p>
Entrained	<p>The maximum distance of entrained hydrocarbon, at concentrations greater than 100 ppb, travelled by a single spill trajectory (out of 300 simulations) was approximately 120 km.</p> <p>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 20,406 ppb in winter.</p> <p>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.</p>
Dissolved	<p>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 95 km.</p> <p>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 348 ppb in winter.</p> <p>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.</p>
Shoreline	<p>Across all replicates no concentrations of oil on shoreline were predicted above the ecological impact threshold of 100 g/m² across all seasons.</p> <p>Maximum concentrations were predicted at Cartier Island (87 g/m²; summer) and Browse Island (37 g/m²; transitional).</p> <p>Minimum times for shorelines to be contacted was 63 hours at Browse Island (at >10 g/m² during summer) and 198 hours at Cartier Island (at >10 g/m² during summer).</p>

Hydrocarbon exposure	Surface release of 400 m ³ MGO (RPS 2024a)
	Worst-case accumulated volumes of oil along shorelines at Cartier Island was predicted to be 3 m ³ (summer) and 2 m ³ at Browse Island (transitional).

8.2.5 Impact and risk evaluation

Table 8-5: Impact and risk evaluation – Vessel collision resulting in a Group II (MGO) spill

Identify hazards and threats	
<p>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 8-4.</p>	
Potential consequence – surface hydrocarbons	Severity
<p>The values and sensitivities with the potential to be affected by surface hydrocarbon exposure from a release due to a vessel collision include:</p> <ul style="list-style-type: none"> commercial, recreational and traditional fisheries (within 140 km from the release location based on 1 g/m² visible sheen threshold in worst-case) EPBC-listed species (within 23 km from the release location based on 10 g/m² impact threshold) planktonic communities (within 23 km from the release location based on 10 g/m² impact threshold). <p>Commercial, recreational and traditional fisheries may be impacted by the presence of exclusion zones resulting in loss of access and the oiling of nets and lines. There are low levels of commercial and traditional fishing within WA-50-L and there is no evidence of any recreational fishing, likely because of the distance from land, lack of features of interest and deep waters (refer to Section 4.10.1). Any impacts to commercial and traditional fishing are expected to be localised to within 140 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 is considered to be Insignificant (F).</p> <p>There is only one marine fauna BIA predicted to be exposed to surface expressions above the 10 g/m² exposure threshold (within 23 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.</p> <p>Based on the predicted limited extent of the surface hydrocarbons (within 23 km where concentrations are >10 g/m², noting that the spill would not represent a continuous surface expression) and the rapid evaporation of volatile components (present at the sea surface for less than a few days) any impacts to EPBC-listed species are expected to be on a local scale, with a temporary impact (Insignificant F).</p>	Insignificant F

<p>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.</p>	
<p>Potential consequence – entrained/dissolved hydrocarbons</p>	<p>Severity</p>
<p>A surface release of MGO due to a vessel collision in WA-50-L could result in entrained hydrocarbons (>100 ppb) potentially extending up to approximately 120 km from the release location. Concentrations of dissolved aromatic hydrocarbons >50 ppb may extend up to approximately 95 km from the release location.</p> <p>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:</p> <ul style="list-style-type: none"> • commercial, traditional and recreational fisheries • KEFs, fish communities and whale shark BIA • planktonic communities • EPBC-listed species including marine mammals, turtles, marine avifauna. <p>Fishing grounds that overlap the area may potentially be exposed to entrained/dissolved hydrocarbons above impact thresholds. 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).</p> <p>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. There are no emergent sensitive receptors in the EMBA 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) are not predicted to be exposed to entrained or dissolved hydrocarbons above the impact thresholds (refer to Figure 4-2).</p>	<p>Minor (E)</p>

<p>The whale shark foraging BIA is located approximately 10 km from WA-50-L at the closest point and slightly overlaps a small portion of the eastern boundary of the EMBA (Figure 4-6). 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, based on the rapid evaporation of volatile components (present at the sea surface for less than a few days), the absence of 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 Insignificant (F).</p> <p>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. There are no coral reefs predicted to be exposed to entrained or dissolved hydrocarbons. 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 within the upper water column. Therefore, the consequence is considered to be Insignificant (F).</p> <p>EPBC-listed species including marine mammals, marine reptiles and marine avifauna within 120 km of the release location could be impacted through entrained and dissolved hydrocarbon exposure, primarily through ingestion during foraging activities (WA DoT 2018). The EPEI overlaps marine fauna BIAs that are predicted to be exposed to entrained and dissolved hydrocarbons above exposure thresholds. These include blue whale migration to the west of WA-50-L, the 20 km internesting buffer at Browse Island for green turtle and marine avifauna breeding BIAs at Ashmore Reef/Cartier Island. A range of other marine fauna may also be present within this area albeit on a transient basis. 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).</p>	
<p>Potential consequence – shoreline hydrocarbons</p>	<p>Severity</p>
<p>As summarised in Table 8-4, no concentrations of oil on shoreline were predicted above the ecological impact threshold of 100 g/m² across all seasons. Only Browse Island and Cartier Island were predicted to be contacted at concentrations of 37 g/m² and 87 g/m² respectively. Times to contact ranged from 63 hours (Browse Island) to 198 hours (Cartier Island) and worst-case volumes on shorelines predicted to be 2 m³ (Browse Island) and 3 m³ (Cartier Island).</p>	<p>Insignificant (F)</p>

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).

The particular values and sensitivities with the potential to be exposed to shoreline hydrocarbons are:

- benthic primary producer habitats/shoreline habitats (intertidal only)
- EPBC-listed species (BIAs - turtles and avifauna).

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). Given the limited locations, low volumes and expected weathering of any hydrocarbons accumulating on shorelines, any impacts to benthic and shoreline habitats from a vessel collision event are expected to be localised and short term with an Insignificant consequence (F).

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).

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.

Shoreline accumulations are predicted at Browse Island and Cartier Island, however at concentrations below impact thresholds across all seasons. Coupled with the time for oil to reach these shorelines resulting in a high degree for weathering, any impacts to marine turtles or marine avifauna are not of ecological significance (Insignificant F).

Identify existing design safeguards/controls

<ul style="list-style-type: none"> Vessels fitted with lights, signals, AIS transponders and navigation equipment as required by the <i>Navigation Act 2012</i>. 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	The use of vessels to undertake the activity cannot be eliminated. The geophysical survey scope may be undertaken using a USV if there are suitable vessels available at the time of the survey (Section 3.8.2). The fuel inventory of an USV is significantly less than that of traditional vessels (3.35 m ³ versus 400 m ³) and would result in a reduction in potential spill volume in the event of a collision. Installation and geotechnical scopes require vessels with cranes that have sufficient lifting capability to safely deploy equipment to the seabed and therefore the use of vessels cannot be eliminated.
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	Installation vessels used will have dynamic positioning equipment and have a backup DP system as a failsafe.	Yes	The use of DP vessels to undertake installation activities will reduce the potential for vessel collisions.
Procedures and administration	Vessels will not carry over 400 m ³ of MGO fuel in any single tank.	Yes	Vessels will be selected to ensure that no single fuel tank carries over 400 m ³ and maintain a spill risk less than assessed in this EP.
	Implement INPEX <i>Browse Regional OPEP</i> .	Yes	The INPEX <i>Browse Regional OPEP</i> defines the processes that will be used to maintain oil spill preparedness and implement effective response measures, in the event of a spill.

			<p>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.</p> <p>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 8-4 of this EP, are lower than the response planning thresholds, as presented in the BROPEP BOD/FCA Table 4-5.</p> <p>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.</p>
Identify the likelihood			
Likelihood	<p>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).</p> <p>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.</p> <p>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).</p> <p>If concurrent operations were to occur in WA-50-L, an increase in vessel traffic could be expected. However, given the distance between operating assets (vessels/facility) and the controls in place the likelihood of the consequence occurring is considered to be Highly Unlikely (5).</p>		
Residual risk	<p>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).</p>		
Residual risk summary			
Consequence	Likelihood	Residual risk	
Minor (E)	Highly Unlikely (5)	Low (9)	

Assess residual risk acceptability**Legislative requirements**

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.

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, AMSA) 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.

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 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.

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.	Vessels will be fitted with lights, signals, AIS transponders and navigation and communications equipment, as required by the <i>Navigation Act 2012</i> .	Records confirm that required navigation equipment is fitted to vessels to ensure compliance with the <i>Navigation Act 2012</i> .
	Only vessels using Group II/MGO/marine diesel will undertake activities described in this EP.	Vessel selection records.
	Installation vessels used will have dynamic positioning equipment and have a backup DP system as a failsafe.	Records confirm that vessels have DP equipment and fail-safe system in place.
	Vessels will not carry more than 400 m ³ of MGO fuel in any single tanks.	Vessel general arrangement/tank diagrams. Oil record books.
Refer to the INPEX <i>Browse Regional OPEP</i> for environmental performance outcomes, standards and measurement criteria related to mitigative controls.		

8.3 Loss of containment from SPS

As identified in Table 7-14, the worst-case scenario for a dropped object, which could result in a loss of containment, would be a well jumper potentially damaging any of the following drill centre assets:

- other well jumpers at the drill centre
- tie-in spools from the drill centre manifold to FLET/ILT
- production flowline.

Note that damage is not deemed credible to XTs, Manifold, FLET or ILT due to the dropped object protection plates that are installed on the top of these structures.

8.3.1 Location

Spill modelling (RPS 2024b) was undertaken for a subsea release of Brewster condensate from the largest production flowline in WA-50-L, at a location along Gathering System 3 (Figure 3-1).

8.3.2 Volume and duration

The volume of the largest production flowline in WA-50-L is 2,239 m³ which contains Ichthys well fluids, a mixture of condensate, natural gas and water. Within the flowline, the well fluids are approximately 90°C and therefore the condensate is in gaseous phase.

Should a rupture or damage to the flowline occur from a dropped object, gas (including condensate molecules) would be released into the ocean with gas lift resulting in a rapid rise of the plume towards the sea surface. Ambient temperature at the seabed in WA-50-L is approximately 16°C, therefore the released gas would rapidly expand as a result of the Joule–Thomson effect. This cooling effect would result in the condensate molecules becoming liquid phase and therefore able to entrain/dissolve into the water column as the plume rises. A portion of the condensate molecules would travel upwards through the water column and arrive on the surface as floating oil.

OLGA modelling (INPEX 2024b) was used to calculate the release rate resulting from a rupture/damage to the flowline. The modelling was undertaken using data from BDC-1D well fluids, known to contain the highest proportion of condensate liquid. The compositional analysis (gas to oil ratio) of the well fluids was also calculated at 1 second time intervals during the release. The outcome of the OLGA modelling confirmed the release rate would exponentially decrease over a duration of approximately 12 minutes, as the flowline depressurised to that of seabed ambient pressure.

The OLGA modelling outputs have been used as inputs to the RPS model (RPS 2024b), which calculated the partitioning of condensate molecules for the scenario and resulted in a volume of 45.5 m³ of Brewster condensate released at the seabed (249 m water depth). The model accounted for depressurisation of the flowline over 4 hours but with the greater proportion of the condensate discharging over the first 12 minutes (RPS 2024b).

The trajectory and fate of the Brewster condensate was modelled for an additional 14 days for further transport, dispersal and weathering following the end of the release.

8.3.3 Hydrocarbon properties

Hydrocarbon properties associated with the Group I Brewster condensate used for the modelling study (RPS 2024b) is presented in Table 8-6.

Table 8-6: Group I condensate properties

Hydrocarbon type	Density at 15 °C (g/cm ³)	Viscosity – centipoise (cP) – at 20 °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	0.20	0.01	-

8.3.4 Modelling results

Stochastic 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 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 10.8 m/s, gradually slowing and increasing plume diameter as more ambient seawater is entrained.

The terminal velocity of rising water and oil at the point of surfacing was calculated at approximately 4.5 m/s, setting up a circular displacement plume surrounding a central plume diameter of approximately 32 m. In the last 5 minutes when the discharge rate was lowest, the mixed plume was initially forecast to jet towards the trapping height with a vertical velocity of around 3.7 m/s before slowing to a terminal velocity of 0.1 m/s.

Calculation for oil release by the end of the discharge indicates that condensate droplets would reach a density trap around 80 m below sea level. This oil would represent a small proportion of the total release (< 5%). The rate of rise of the oil droplets over the remaining distance to surface will slow, dependent on the relative buoyancy and the size of the droplets – decreasing exponentially as droplet sizes decrease.

The relatively large size of the droplets indicates that droplets would tend to rise to the surface beyond the energetic mixing zone under calm sea conditions, forming sheens and slicks. More energetic sea conditions would result in a high proportion remaining entrained in the wave mixed zone.

Table 8-7: Loss of containment from production flowline stochastic modelling results summary

Hydrocarbon exposure	Subsea release of 45.5 m ³ of Brewster Condensate over 12 minutes (RPS 2024b)
Surface	<p>The maximum distance of floating hydrocarbons on the sea surface, at concentrations greater than 1 g/m² (visible sheen), travelled by a single spill trajectory (out of 300 simulations) was 30 km.</p> <p>At a concentration of >10 g/m² (ecological impact threshold), the maximum distance travelled by a single spill trajectory (out of 300 simulations) was 4 km.</p>

Hydrocarbon exposure	Subsea release of 45.5 m ³ of Brewster Condensate over 12 minutes (RPS 2024b)
Entrained	<p>The maximum distance of entrained hydrocarbon, at concentrations greater than 100 ppb, travelled by a single spill trajectory (out of 300 simulations) was approximately 20 km. Outside of 20 km from the release location, no receptors were exposed to concentrations of entrained oil >100 ppb.</p> <p>The only receptors predicted to be exposed to entrained oil concentrations above the 100 ppb threshold are the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery. Where worst-case instantaneous entrained oil concentrations were predicted at as 1,164 ppb in summer.</p> <p>Cross-sectional transects of maximum entrained oil concentrations indicate that concentrations >100 ppb could extend to approximately 20 m in depth.</p>
Dissolved	No receptors are predicted to receive contact by dissolved aromatic hydrocarbon concentrations ≥ 10 ppb under all modelled conditions.
Shoreline	No shoreline contact or accumulations >10 g/m ² were predicted at any location during any season.

8.3.5 Impact and risk evaluation

Table 8-8: Impact and evaluation – Loss of containment from the SPS

Identify hazards and threats	
<p>A subsea release of Group I hydrocarbons from a loss of containment from the SPS scenario (dropped well jumper resulting in damage or rupture of a production flowline), has the potential to result in changes to water quality through surface and entrained hydrocarbon exposure. Hydrocarbon exposure thresholds are described in</p> <p>Table 8-2. The results of the predictive oil spill modelling for this scenario are presented in Table 8-7.</p>	
Potential consequence – surface hydrocarbons	Severity
<p>The particular values and sensitivities with the potential to be exposed to surface hydrocarbon may include:</p> <ul style="list-style-type: none"> • Commercial and traditional fisheries (within approximately 30 km from the release location based on 1 g/m² visible sheen threshold) • EPBC-listed species (within approximately 4 km from the release location based on 10 g/m² impact threshold). • planktonic communities (within approximately 4 km from the release location based on 10 g/m² impact threshold). <p>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 2024b). This will reduce the duration of any surface expression and potential for impacts to marine fauna at the sea surface.</p> <p>Commercial and traditional fisheries may be impacted by the presence of exclusion zones resulting in loss of access and the oiling of nets and lines. There are low levels of commercial and traditional fishing within WA-50-L and there is no evidence of any recreational fishing, likely because of the distance from land, lack of features of interest and deep waters (refer to Section 4.10.1). Any impacts to commercial and traditional fishing are expected to be localised to within 30 km of the release location and temporary in nature given the expected evaporation, weathering and rapid dispersion of condensate at the sea surface. Therefore, the consequence rating is considered to be Insignificant (F).</p> <p>There are no known BIAs or aggregation areas for any marine fauna species within WA-50-L or within the area predicted to be exposed to surface hydrocarbons above the 10 g/m² impact threshold (4 km of the release location). However, individuals associated with the 20 km green turtle internesting buffer at Browse Island and the whale shark foraging BIA located approximately 10 km south-east of WA-50-L, may transit through this area in low numbers. Potential impacts to marine fauna from surface hydrocarbon exposure is described in Table 8-5. Based on the predicted limited extent of the surface hydrocarbons (within 4 km) and short-term presence at the sea surface due to rapid evaporation of volatile components, any impacts to EPBC-listed species are expected to be on a local scale, with a temporary impact (Insignificant F).</p>	Insignificant (F)

<p>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 oil 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 subsection below.</p>	
<p>Potential consequence – entrained hydrocarbons</p>	<p>Severity</p>
<p>A subsea release of condensate from damage/rupture of a production flowline in WA-50-L could result in entrained hydrocarbons (>100 ppb) potentially extending up to 20 km from the release location. No concentrations of dissolved aromatic hydrocarbons >50 ppb were predicted.</p> <p>The values and sensitivities with the potential to be affected by entrained and dissolved aromatic hydrocarbon exposure include:</p> <ul style="list-style-type: none"> • commercial and traditional fisheries • Fish communities, BIA - whale shark foraging • planktonic communities • EPBC-listed species (BIAs - marine mammals, turtles and avifauna). <p>The values and sensitivities associated with commercial and traditional and recreational fisheries (seafood quality and employment) could be impacted due to exposure to entrained/dissolved oil. Potential impacts to fish communities are described in Table 8-5.</p> <p>Following a subsea release, the plume of gas/condensate will rise through the water column and become entrained in the upper layers of the water column (top 20 m). Worst-case predicted concentrations of entrained oil are predicted for receptors that overlap WA-50-L namely the North-West Slope Trawl Fishery, Southern Bluefin Tuna Fishery, Western Skipjack Fishery and Western Tuna and Billfish Fishery. There are no emergent sensitive receptors predicted to be exposed to entrained hydrocarbons above the impact thresholds (within 20 km from release location).</p> <p>A whale shark foraging BIA is located approximately 10 km from WA-50-L at its closest point and therefore, any whale sharks present in the BIA may be exposed to entrained hydrocarbons (as described in Table 8-5). The consequence of entrained/dissolved hydrocarbons on fisheries (commercial and traditional), fish communities and whale shark populations is considered to be Insignificant (F).</p> <p>Fish eggs and larvae, for example southern bluefin tuna or other species that spawn in surface waters, may potentially be exposed to entrained hydrocarbons within the upper water column. Eggs, larval and juvenile stages more susceptible than adults as described in Table 8-5. In the event of a subsea condensate release, impacts on plankton are expected to be highly localised, with short-term impacts, due to the limited exposure within the upper water column). Therefore, the consequence is considered to be Insignificant (F).</p>	<p>Insignificant (F)</p>

Transient EPBC-listed species including marine mammals, marine reptiles and marine avifauna could be impacted through entrained hydrocarbon exposure, primarily through ingestion during foraging activities (WA DoT 2018). No marine fauna BIAs are predicted to be exposed to entrained hydrocarbons above the impact threshold. Any exposure to entrained hydrocarbons would be spatially and temporally limited in extent and as such, impacts to EPBC-listed species are considered to be Insignificant (F).			
Potential consequence – shoreline hydrocarbons		Severity	
No shoreline exposure or accumulation was predicted at any location during any season.		N/A	
Identify existing design and safeguards/controls measures			
<ul style="list-style-type: none"> • Subsea isolation valves (SSIVs) and emergency shutdown valves (ESDVs) are installed and tested. • INPEX lifting standard implemented for all lifting operations. • Dropped object protection plates installed on top of XTs, manifolds, FLETs and ILTs. • Implement INPEX <i>Browse Regional OPEP</i>. 			
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	Install dropped object protection plates on production flowlines	No	The retrospective installation of dropped object protection along all production flowlines is not a reasonable consideration for the proposed installation activities. This is due to the controls in place regarding the flowline design/construction specification and also associated lifting and isolation controls. The cost of retrospectively installing dropped object protection is grossly disproportionate to any environmental gain.

Procedures administration &	Safe handling zone implemented	Yes	When working near operational subsea infrastructure in WA-50-L to avoid potential for lifted objects to be dropped resulting in damage to the SPS, all infrastructure (well jumpers) will be overboarded and deployed to the seabed >85 m from the SPS and then positioned into place for installation. This reduces the potential distance and therefore energy of a dropped object.
	Isolation philosophy implemented	Yes	During lifting operations the manifold and spools are MEG flushed to remove hydrocarbons and the SPS isolated from the production flowlines in accordance with <i>Ichthys Operations Subsea Isolation Philosophy</i> . Flushing the system ensures that any LOC from the upstream side of FLET/ILT isolation is limited to MEG, rather than hydrocarbons. For lifts >100t the production flowlines are also depressurised to 3 mpa prior to, and during, the lifting operations to minimise any potential volume associated with a LOC event.
Identify the likelihood			
With the above-described controls in place to manage potential dropped objects the likelihood of this consequence occurring is considered Unlikely (4).			
Residual risk summary			
Based on the worst-case consequence for all hydrocarbon exposure mechanisms (surface/entrained/dissolved/shoreline) Insignificant (F) and a likelihood of Unlikely (4) the residual risk is ranked as Low (9).			
Consequence	Likelihood	Residual risk	
Insignificant (F)	Unlikely (4)	Low (9)	
Assess residual risk acceptability			
<p>Legislative requirements</p> <p>The SPS has been designed, constructed and is operated in accordance with the relevant Australian standards and codes of practice. The implementation of the proposed controls to prevent dropped objects resulting in damage to the SPS (such as INPEX's lifting standard, safe handling zone, isolation philosophy) are compliant with relevant Australian standards and good industry practice.</p> <p>Relevant person consultation</p>			

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.

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

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 loss of containment from the SPS resulting from a dropped object.	SSIVs and ESDVs are installed and tested.	SSIV and ESDV integrity test records.
	INPEX lifting standard implemented for all lifting operations.	Lifting records
	Dropped object protection plates installed on top of XTs, manifolds, FLETs and ILTs.	As-built records Subsea asset register

	Safe handling zone implemented to reduce potential for damage from dropped objects during installation activities.	Lifting records
	SPS isolated from the production flowlines in accordance with <i>Ichthys Operations Subsea Isolation Philosophy</i> to reduce potential for loss of hydrocarbons during lifting operations.	Isolation packs and process isolation certificates
Refer to the INPEX <i>Browse Regional OPEP</i> 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.

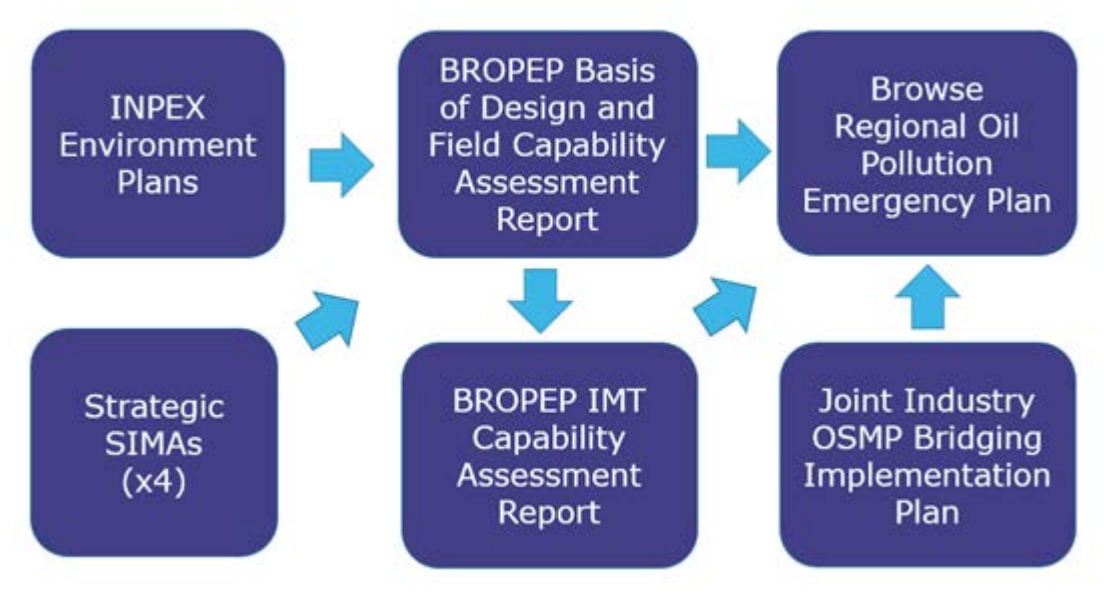


Figure 8-2: Browse Regional OPEP document structure

Table 8-9: Browse Regional OPEP documentation overview

Document title	Document number	Purpose
INPEX Environment Plans	N/A	<p>All INPEX EPs contain a detailed activity description and activity-specific oil spill scenarios. Specifically, INPEX EPs include the following:</p> <ul style="list-style-type: none"> • a description of the activity-specific spill scenarios (including the potential release rates, volumes, locations, hydrocarbon types, etc.) • activity-specific oil spill modelling (used to inform environmental risk assessments) • an assessment of oil spills risks/impacts on environmental values and sensitivities • evaluations of controls to prevent oil pollution from the specific activity. • 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.

Document title	Document number	Purpose
Strategic Spill Impact Mitigation Assessments (SIMAs): <ul style="list-style-type: none"> • Condensate spill – instantaneous surface release • Marine gas oil/diesel spill – instantaneous surface release • Intermediate fuel oil/heavy fuel oil (HFO) spill – instantaneous surface release • Condensate/gas well or pipeline blowout – long duration subsea release. 	X060-AH-LIS-60031 X060-AH-LIS-60032 X060-AH-LIS-60033 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. 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. 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.
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.

Document title	Document number	Purpose
		The BROPEP outlines the EPOs and EPSs related to the implementation of response strategies.
INPEX Australia Operational and Scientific Monitoring Bridging Implementation Plan (OSM BIP)	0075-AH-REP-70004	<p>Under the Joint Industry Operational and Scientific Monitoring (OSM) Framework, INPEX has developed the required Bridging Implementation Plan (BIP).</p> <p>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.</p>

An assessment of the WCSS defined in this EP (vessel collision scenario) has been conducted against the INPEX *Browse Regional OPEP BOD*, within the ALARP evaluation 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.

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.



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 Vice President (VP) Development Projects (Onshore)	Ensures overall compliance with the INPEX BMS HSE requirements including environmental performance outcomes and standards.
INPEX Construction Manager (Onshore)	Ensures relevant INPEX BMS HSE requirements, including environmental performance outcomes and standards are communicated to contractors. Ensures activities are undertaken in accordance with this EP. 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. Ensures availability of resources required to ensure that commitments in this EP are met. Ensures corrective actions raised from environmental audits are tracked and closed out.

Key role	Responsibilities
Company representative (Offshore) site	<p>Ensures contractors perform operations in a manner consistent with the performance outcomes and environmental management procedures detailed in this EP.</p> <p>Ensures the implementation of the INPEX Health, Safety, Security, Environment and Quality Policy, through application of this EP.</p> <p>Ensures the vessel master, contractor's offshore construction manager and all crews adhere to the requirements of this EP.</p> <p>Alerts the INPEX construction manager to any changes in activities that could have a negative impact on environmental performance.</p> <p>Responsible to highlight any interfacing or integration activities.</p> <p>Ensures any simultaneous operations are conducted in accordance with CPF offshore installation manager/field manager requirements.</p>
INPEX HSE Manager/ Environment Advisor/ HSE Advisor	<p>Ensures that environmental audits are undertaken.</p> <p>Ensures that vessels masters have been provided copies of personnel responsibilities as set out in this EP.</p> <p>Ensures that any changes to the petroleum activity that may affect EP mitigation and management measures are captured via the management of change process.</p> <p>Ensures reporting of environmental incidents meets external reporting requirements and INPEX incident reporting requirements.</p>
Vessel Masters (Offshore)	<p>Conduct vessel operations in accordance with this EP.</p> <p>Implement the vessel's SOPEP/SMPEP in an emergency.</p> <p>Implements relevant performance standards stated within this EP.</p> <p>Ensure that environmental incidents or breaches of performance outcomes, standards or criteria on vessels, are reported.</p>
Survey Party Chief	<p>Implements survey activities and records data.</p>
Support role	Responsibilities
All crew (Offshore)	<p>Work in accordance with vessel HSE systems and procedures.</p> <p>Comply with EP requirements as applicable to assigned role.</p> <p>Report any hazardous condition, near miss, unsafe act, accident or environmental incident immediately to supervisors.</p> <p>Attend HSE meetings and training when required.</p>

9.3.2 Organisation

Figure 9-3 illustrates the organisational structure for onshore and offshore during the proposed activities in WA-50-L.

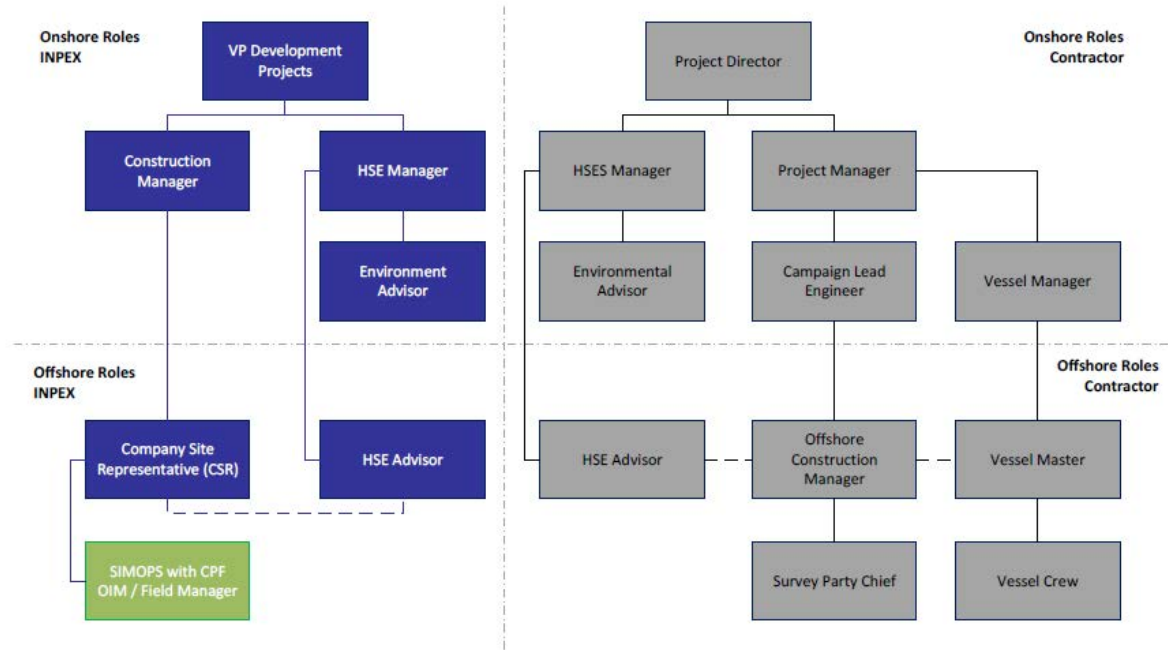


Figure 9-3: Organisational structure

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.
INPEX Australia Offshore Environment Plan Support Vessel Induction	All personnel working onboard vessels.	Overview of the management controls for emissions, discharges and wastes from vessels (which are consistent throughout INPEX EPs) including: <ul style="list-style-type: none"> environmental values and sensitivities

Induction/training course	Target audience	EP relevant content
		<ul style="list-style-type: none"> environmental aspects/risk from offshore activities controls to manage emissions, discharges and wastes 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

The purpose of the INPEX *Chemical Assessment and Approval Procedure* is to establish and communicate the process for the assessment and approval of chemicals for use on INPEX sites or facilities. The procedure has been developed to ensure compliance with relevant Australian legislation and to assess chemicals based on toxicity, bioaccumulation and biodegradation potential. By implementing the procedure, exposure to chemicals by personnel and/or the environment resulting from INPEX activities are assessed and controlled. This procedure promotes the use of chemicals that present low health and/or environmental hazard levels.

All operational chemicals discharged into the marine environment have to undergo an environmental assessment. The assessment considers the following:

- chemical's toxicity, bioaccumulation, and biodegradation potentials
- discharge concentration

- frequency of discharge
- maximum credible volume of chemical anticipated to be discharged in 24 hours
- if the chemical is listed on the Australian Inventory of Chemical Substances (AICS)
- if the chemical contains ozone-depleting substances or synthetic GHGs
- if the chemical or component of the chemical is registered on either the OSPAR priority action or possible concerns lists.

As part of the above assessment, a chemical assessment tool is used (Table 9-4) to determine the chemicals’ inherent environmental hazard potential which can be determined by considering toxicity in conjunction with bioaccumulation and biodegradation potentials. Chemicals falling within the “Green” range are considered to present a low inherent hazard potential.

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.

Category 3 chemicals in the *INPEX Chemical Assessment and Approval Procedure*, are considered to present a low environmental hazard if they meet all of the following criteria:

- they are listed on AICS
- they do not contain ozone-depleting substances or synthetic greenhouse gases for which a license is required
- they are not registered on either the OSPAR priority action or possible concerns lists
- they are in the “green” range (Table 9-4)
- the maximum credible discharge volume is less than 10 m³ a day.

Chemicals regarded as Category 3 are considered to present inherently low potential environmental harm, and therefore are regarded as ALARP and acceptable and do not require further environmental assessment.

Category 1 chemicals, with regards to liquid effluent discharges, are chemicals which are not listed on the AICS and therefore cannot be used in Australia. As such, the use of Category 1 chemicals is not permitted by INPEX. Category 1 chemicals are not acceptable but may be ALARP. Should a Category 1 chemical be required, the chemical vendor must have the chemical listed on AICS before INPEX considers its use. Once a Category 1 chemical is listed on AICS, it is reclassified as a Category 2 or 3 depending on its characteristics and maximum daily discharge volumes.

Category 2 chemicals are those which are neither, Category 1 or Category 3 chemicals. Category 2 chemicals are required to undergo an additional environmental assessment to ensure they are ALARP and acceptable. The additional environmental assessment incorporates five criteria.

1. Potential environmental consequence of the discharge:
 - the potential environmental hazard and impact pathways based on the chemical's fate, toxicity, bioaccumulation and biodegradation potential (chemical characteristics provided by the chemical vendor)
 - comparison of the proposed chemical discharge concentration against the Safety Data Sheet (SDS) toxicity value and adjusted No Effect Concentration (NEC) to obtain the severity of the potential hazard
 - use of the SDS toxicity data and adjusted NEC to predict distances for the chemical to reach threshold dilutions (if not already reached at the point of discharge)
2. Potential likelihood of the negative environmental consequence occurring:
 - Whether the chemical will be spent (i.e. partially/completely used in the process) before discharge, neutralised and or have no potential to reach the marine environment (e.g. does not partition with the water during processing) and the likelihood of the identified environmental consequences being realised.
3. Risk level (using the INPEX risk matrix in Figure 6-1) based on the consequence and likelihood determined above
4. Alternative chemicals:
 - the identification of viable alternative options
 - identification of the reasons why the alternatives were not selected (such as environmental characteristics, fate, volume and concentration of discharges, overall efficacy, practicality of use/storage, compatibility with other chemicals, health and safety risks, and costs)
5. Alternative techniques:
 - identification of other non-chemical (engineering) solutions considered
 - identification of the reasons why other alternative techniques were not selected (such as environmental costs/benefits, practicality of implementation, track record – proven and/or efficient technology, health and safety risks, and costs).

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 Construction Manager (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). 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: <ul style="list-style-type: none"> the article is in Australian waters; and the article is of suspected archaeological character. 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

Stakeholder	Information supplied	Frequency
Southern bluefin tuna, Western skipjack tuna and western tuna and billfish fishery licence holders	Notification of commencement of activity will include details of: <ul style="list-style-type: none"> the location expected start date and duration IMO vessel numbers and call signs vessel radio and satellite phone communication details The notification of completion will confirm the date of completion and 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 required, 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.¹) 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.

¹ Available online at <https://www.inpex.com.au/media/skqfbqax/web-rap-inpex-january-2023-december-2025-spreads-5-1.pdf>

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
- 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) are:

- the introduction of IMS.

In accordance with NOPSEMA guidance (NOPSEMA 2024f), 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 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 vessels prior to activities commencing.

During the activity campaigns, ongoing operational compliance against relevant EPO/EPs will be assessed and maintained through the implementation of 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).

10 REFERENCES

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INPEX

**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
<p>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:</p> <p>a) was submitted to NOPSEMA after 27 February 2014; and</p> <p>b) either:</p> <p>i. is in force under the OPGGS Environment Regulations; or</p> <p>ii. has ended in accordance with Regulation 25A of the OPGGS Environment Regulations¹</p>	<p>This EP includes the elements of relevant conditions, as cross-referenced below.</p>
<p>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.</p>	<p>This EP</p>
<p>1. Oil Spill Contingency Plan</p> <p>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:</p>	<p>This EP</p>
<p>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;</p>	<p>Section 8.1, Section 8.2 and Section 8.3 Table 8-4, Table 8-5, Table 8-7 and Table 8-8.</p>

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. 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 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

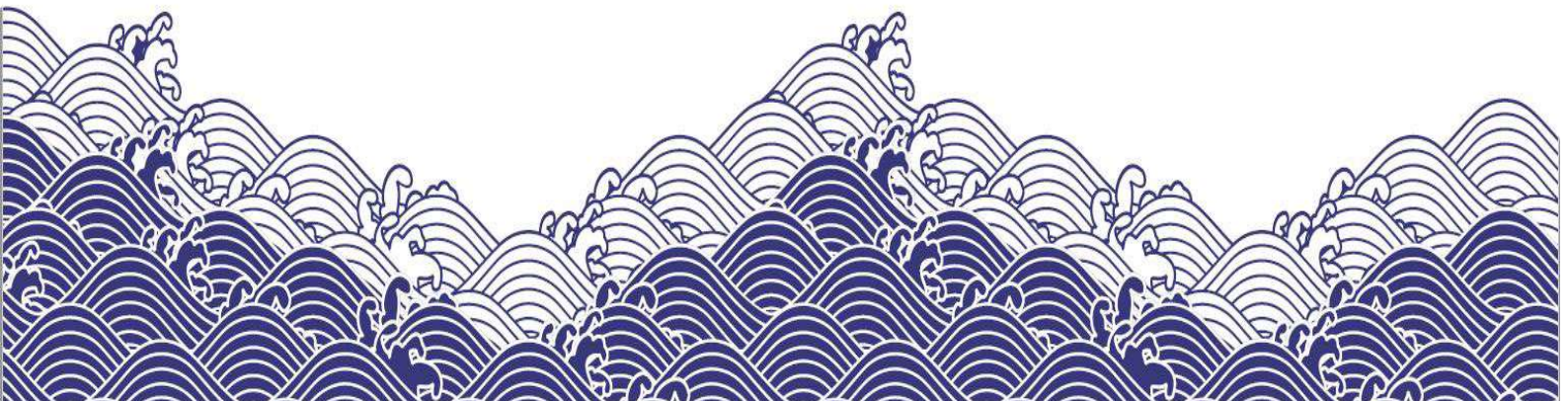
Relevant EPBC 2008/4208 Ministerial Conditions	Location in Environment Plan submission
b) A description of the studies that will be undertaken to determine the operational response, potential extent of impacts, ecosystem consequences and potential environmental reparations required as a result of the 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.
<p>7. Offshore Waste Management Plan</p> <p>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:</p>	

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.
<p>8. Liquid Discharge Management Plan</p> <p>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:</p>	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**



APPENDIX B: EPBC ACT PROTECTED MATTERS REPORTS, SPECIES RISK EVALUATION AND CULTURAL HERITAGE REPORTS

B1: WA-50-L

B2: EMBA/EPEI

B3: Species risk evaluation

B4: Cultural heritage reports

NB: The EPBC Act Protected Matters Database Search Tool (<https://pmst.awe.gov.au>) relies on a 32 km grid square for data across marine regions. Therefore, a 32 km buffer is essentially applied to the boundaries of WA-50-L, the EPEI and the EMBA shapefiles used in the searches, which is highly conservative with regard to the potential for species that may potentially use or pass through these areas. In relation to key ecological features, marine parks and other environmental sensitivities such as biologically important areas, the grid square sizing (32 km) may result in the reporting of false overlap of features that are within the same grid square even if they don't actually overlap.



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 24-Oct-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	2
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	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 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 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 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 Common Noddy [825]		Species or species habitat may occur within area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	In feature area
Fregata minor 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 White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area	In feature area
Migratory Marine Species			
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat may occur within area	In feature area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat 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	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
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In feature area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area	In feature area
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

Scientific Name	Threatened Category	Presence Text	Buffer Status
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
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area	In feature area
Isurus paucus Longfin Mako [82947]		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
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat may occur within area	In feature area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Physeter macrocephalus 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 Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area	
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area	In feature area	
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 overfly marine area	In feature area	
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area	
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area	
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In feature area	
Fregata ariel 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 Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to 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
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat likely to occur within area	In feature area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Species or species habitat may occur within area	In feature area
Fish			
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area	In feature area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area	In feature area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area	In feature area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area	In feature area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In feature area
Corythoichthys flavofasciatus 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 Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area	In feature area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area	In feature area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area	In feature area
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area	In feature area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area	In feature area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area	In feature area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In feature area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area	In feature area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area	In feature area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In feature area
Halicampus spinirostris 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 Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area	In feature area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In feature area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area	In feature area
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area	In feature area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In feature area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In feature area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area	In feature area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area	In feature area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In feature area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area	In feature area
Solenostomus cyanopterus 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 Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In feature area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area	In feature area
Reptile			
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area	In feature area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area	In feature area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area	In feature area
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
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area	In feature area
Eretmochelys imbricata 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 Cogger's Sea Snake [25925]		Species or species habitat may occur within area	In feature area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area	In feature area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area	In feature area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area	In feature area
Hydrophis macdowelli as Hydrophis mcdowelli 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 Olive-headed Sea Snake [93512]		Species or species habitat may occur within area	In feature area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area	In feature area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area	In feature area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area	In feature area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may 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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Natator depressus 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 Sei Whale [34]	Vulnerable	Species or species habitat 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	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
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
Kogia breviceps 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 Dwarf Sperm Whale [85043]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area	In feature area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area	In feature area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area	In feature area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In feature area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area	In feature area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area	In feature area
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area	In feature area
Tursiops aduncus 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.

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Department of Climate Change, Energy, the Environment and Water

GPO Box 3090

Canberra ACT 2601 Australia

+61 2 6274 1111



Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 24-Oct-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the [Administrative Guidelines on Significance](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	4
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	26
Listed Migratory Species:	41

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:	1
Listed Marine Species:	74
Whales and Other Cetaceans:	25
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:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	54
Key Ecological Features (Marine):	3
Biologically Important Areas:	14
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
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 known 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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area	In feature area
Phaethon lepturus fulvus 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 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	Foraging, feeding or related behaviour 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
REPTILE			
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area	In feature area
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat known to occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat 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 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

Scientific Name	Threatened Category	Presence Text	Buffer Status
Sphyrna lewini 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 Common Noddy [825]		Species or species habitat likely to occur within area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat known to occur within area	In feature area
Sternula albifrons Little Tern [82849]		Congregation or aggregation known to occur within area	In feature area
Sula sula Red-footed Booby [1023]		Breeding known to occur within area	In feature area
Migratory Marine Species			
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat may occur within area	In feature area
Balaenoptera borealis 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 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	In feature area to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Isurus oxyrinchus Shortfin Mako, Mako Shark [79073]		Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Isurus paucus Longfin Mako [82947]		Species or species habitat likely to occur within area	In feature area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat known to occur within area	In feature area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat likely to occur within area	In feature area
Natator depressus Flatback Turtle [59257]	Vulnerable	Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may 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

Scientific Name	Threatened Category	Presence Text	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
Migratory Terrestrial Species			
Cecropis daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area	In feature area
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known 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
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

Commonwealth Heritage Places			[Resource Information]
Name	State	Status	Buffer Status
Natural			
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			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area	In feature area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Foraging, feeding or related behaviour known 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 overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Cecropis daurica as Hirundo daurica Red-rumped Swallow [80610]		Species or species habitat may occur within area overfly marine area	In feature area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area	In feature area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Hirundo rustica Barn Swallow [662]		Species or species habitat known to occur within area overfly marine area	In feature area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine 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
Phaethon lepturus White-tailed Tropicbird [1014]		Species or species habitat known to occur within area	In feature area
Phaethon lepturus fulvus Christmas Island White-tailed Tropicbird, Golden Bosunbird [26021]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Sternula albifrons as Sterna albifrons Little Tern [82849]		Congregation or aggregation known to occur within area	In feature area
Sula sula Red-footed Booby [1023]		Breeding known to occur within area	In feature area
Fish			
Bhanotia fasciolata Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat may occur within area	In feature area
Campichthys tricarinatus Three-keel Pipefish [66192]		Species or species habitat may occur within area	In feature area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		Species or species habitat may occur within area	In feature area
Choeroichthys suillus Pig-snouted Pipefish [66198]		Species or species habitat may occur within area	In feature area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area	In feature area
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area	In feature area
Corythoichthys intestinalis Australian Messmate Pipefish, Banded Pipefish [66202]		Species or species habitat may occur within area	In feature area
Corythoichthys schultzi Schultz's Pipefish [66205]		Species or species habitat may occur within area	In feature area
Cosmocampus banneri Roughridge Pipefish [66206]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]		Species or species habitat may occur within area	In feature area
Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area	In feature area
Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area	In feature area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area	In feature area
Halicampus brocki Brock's Pipefish [66219]		Species or species habitat may occur within area	In feature area
Halicampus dunckeri Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area	In feature area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area	In feature area
Halicampus spinostris Spiny-snout Pipefish [66225]		Species or species habitat may occur within area	In feature area
Haliichthys taeniophorus Ribbioned Pipehorse, Ribbioned Seadragon [66226]		Species or species habitat may occur within area	In feature area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area	In feature area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area	In feature area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area	In feature area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area	In feature area
Hippocampus spinosissimus Hedgehog Seahorse [66239]		Species or species habitat may occur within area	In feature area
Micrognathus micronotopterus Tidepool Pipefish [66255]		Species or species habitat may occur within area	In feature area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area	In feature area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area	In feature area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area	In feature area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area	In feature area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area	In feature area

Reptile

Scientific Name	Threatened Category	Presence Text	Buffer Status
Aipysurus apraefrontalis Short-nosed Sea Snake, Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Aipysurus duboisii Dubois' Sea Snake, Dubois' Seasnake, Reef Shallows Sea Snake [1116]		Species or species habitat may occur within area	In feature area
Aipysurus foliosquama Leaf-scaled Sea Snake, Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area	In feature area
Aipysurus fuscus Dusky Sea Snake [1119]	Endangered	Species or species habitat known to occur within area	In feature area
Aipysurus laevis Olive Sea Snake, Olive-brown Sea Snake [1120]		Species or species habitat may occur within area	In feature area
Aipysurus mosaicus as Aipysurus eydouxii Mosaic Sea Snake [87261]		Species or species habitat may occur within area	In feature area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Emydocephalus annulatus Eastern Turtle-headed Sea Snake [1125]		Species or species habitat may occur within area	In feature area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Hydrophis coggeri Cogger's Sea Snake [25925]		Species or species habitat may occur within area	In feature area
Hydrophis elegans Elegant Sea Snake, Bar-bellied Sea Snake [1104]		Species or species habitat may occur within area	In feature area
Hydrophis hardwickii as Lapemis hardwickii Spine-bellied Sea Snake [93516]		Species or species habitat may occur within area	In feature area
Hydrophis kingii as Disteira kingii Spectacled Sea Snake [93511]		Species or species habitat may occur within area	In feature area
Hydrophis macdowelli as Hydrophis mcdowelli 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 Olive-headed Sea Snake [93512]		Species or species habitat may occur within area	In feature area
Hydrophis ornatus Spotted Sea Snake, Ornate Reef Sea Snake [1111]		Species or species habitat may occur within area	In feature area
Hydrophis peronii as Acalyptophis peronii Horned Sea Snake [93509]		Species or species habitat may occur within area	In feature area
Hydrophis platura as Pelamis platurus Yellow-bellied Sea Snake [93746]		Species or species habitat may occur within area	In feature area
Hydrophis stokesii as Astrotia stokesii Stokes' Sea Snake [93510]		Species or species habitat may occur within area	In feature area
Lepidochelys olivacea 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	Species or species habitat 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
Kogia breviceps 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 Dwarf Sperm Whale [85043]		Species or species habitat may occur within area	In feature area
Lagenodelphis hosei Fraser's Dolphin, Sarawak Dolphin [41]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Mesoplodon densirostris Blainville's Beaked Whale, Dense-beaked Whale [74]		Species or species habitat may occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area	In feature area
Peponocephala electra Melon-headed Whale [47]		Species or species habitat may occur within area	In feature area
Physeter macrocephalus Sperm Whale [59]		Species or species habitat may occur within area	In feature area
Pseudorca crassidens False Killer Whale [48]		Species or species habitat likely to occur within area	In feature area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area	In feature area
Stenella coeruleoalba Striped Dolphin, Euphrosyne Dolphin [52]		Species or species habitat may occur within area	In feature area
Stenella longirostris Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area	In feature area

Current Scientific Name	Status	Type of Presence	Buffer Status
Steno bredanensis Rough-toothed Dolphin [30]		Species or species habitat may occur within area	In feature area
Tursiops aduncus 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) 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

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Scott Reef	Nature Reserve	WA	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	

Controlled action				
2-D seismic survey Scott Reef	2000/125	Controlled Action	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
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
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
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
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
Kaleidoscope exploration well	2001/182	Not Controlled Action	Completed	In feature area
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
2 geotechnical surveys - preliminary and final	2006/2886	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)				
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
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
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
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
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	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action (particular manner)				
		Manner)		
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
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 Manner)	Post-Approval	In feature area
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
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
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

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Not controlled action (particular manner)				
Schild MC3D Marine Seismic Survey	2012/6373	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
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
Torosa-5 Apraisal Well, WA-30-R	2008/4430	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
Westralia SPAN Marine Seismic Survey, WA & NT	2012/6463	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Referral decision				
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
Continental Slope Demersal Fish Communities	North-west	In feature area
Serिंगapatam 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
Marine Turtles			
Chelonia mydas			
Green Turtle [1765]	Internesting	Known to occur	In feature area
Chelonia mydas			
Green Turtle [1765]	Internesting buffer	Known to occur	In feature area
Chelonia mydas			
Green Turtle [1765]	Nesting	Known to occur	In feature area
Eretmochelys imbricata			
Hawksbill Turtle [1766]	Internesting buffer	Known to occur	In feature area
Eretmochelys imbricata			
Hawksbill Turtle [1766]	Nesting	Known to occur	In feature area
Seabirds			
Ardeanna pacifica			
Wedge-tailed Shearwater [84292]	Breeding	Known to occur	In feature area
Fregata ariel			
Lesser Frigatebird [1012]	Breeding	Known to occur	In feature area
Fregata minor			
Greater Frigatebird [1013]	Breeding	Known to occur	In feature area
Phaethon lepturus			
White-tailed Tropicbird [1014]	Breeding	Known to occur	In feature area
Sternula albifrons sinensis			
Little Tern [82850]	Resting	Known to occur	In feature area
Sula sula			
Red-footed Booby [1023]	Breeding	Known to occur	In feature area

Sharks

Scientific Name	Behaviour	Presence	Buffer Status
Rhincodon typus Whale Shark [66680]	Foraging	Known to occur	In feature area
Whales			
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Known to occur	In feature area
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 are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [-Office of Environment and Heritage, New South Wales](#)
- [-Department of Environment and Primary Industries, Victoria](#)
- [-Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [-Department of Environment, Water and Natural Resources, South Australia](#)
- [-Department of Land and Resource Management, Northern Territory](#)
- [-Department of Environmental and Heritage Protection, Queensland](#)
- [-Department of Parks and Wildlife, Western Australia](#)
- [-Environment and Planning Directorate, ACT](#)
- [-Birdlife Australia](#)
- [-Australian Bird and Bat Banding Scheme](#)
- [-Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [-Museum Victoria](#)
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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	<p>Whale shark management. 2013. Wildlife management program no. 57. Department of Parks and Wildlife. State of Western Australia.</p> <p>Threatened Species Scientific Committee. 2015. Approved Conservation Advice for <i>Rhincodon typus</i> (whale shark). Commonwealth of Australia.</p> <p>Department of Sustainability, Environment, Water, Population and Communities. 2013. Recovery Plan for the White Shark (<i>Carcharodon carcharias</i>). Department of Sustainability, Environment, Water, Population and Communities.</p> <p>Threatened Species Scientific Committee. 2014. Approved Conservation Advice for <i>Glyphis garricki</i> (northern river shark). Commonwealth of Australia.</p> <p>Threatened Species Scientific Committee. 2008. Approved Conservation Advice for <i>Pristis zijsron</i> (green sawfish). Commonwealth of Australia.</p> <p>Department of the Environment. 2015. Sawfish and River Sharks - Multispecies Recovery Plan. Commonwealth of Australia.</p> <p>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.</p> <p>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.</p>	<ul style="list-style-type: none"> • Waste / marine debris • Noise and vibration • Introduced Marine Species • Vessel strike • Benthic habitat degradation / seabed disturbance • Emissions and discharges • Oil spill 	<ul style="list-style-type: none"> • Identify populations and areas of high conservation priority (sawfishes). • Ensure there is no anthropogenic disturbance / implement measures to reduce adverse impacts of habitat degradation and/or modification (northern river shark). • 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. • Review and assess the potential threat of introduced species, pathogens and pollutants. • 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. • Contribute to the long-term prevention of the incidence of harmful marine debris. 	<ul style="list-style-type: none"> • EP Section 7.2 – Waste management • EP Section 7.3 - Noise and vibration • EP Section 7.4.1 - Introduction of invasive marine species • EP Section 7.4.2 - Interaction with marine fauna • EP Section 7.5 - Seabed disturbance • EP Section 7.1.3 - Routine discharges • EP Section 8 - Emergency conditions (oil spills).
EPBC-listed marine reptiles	<p>Department of the Environment and Energy. 2017. Recovery Plan for Marine Turtles in Australia, Commonwealth of Australia 2017.</p> <p>Threatened Species Scientific Committee. 2011. Commonwealth Conservation Advice on <i>Aipysurus apraefrontalis</i> (Short-nosed Seasnake). Commonwealth of Australia.</p> <p>Threatened Species Scientific Committee. 2011. Commonwealth Conservation Advice on <i>Aipysurus foliosquama</i> (Leaf-scaled Seasnake). Commonwealth of Australia.</p> <p>Department of Climate Change, Energy, the Environment and Water. 2024. Conservation Advice for <i>Aipysurus fuscus</i> (dusky sea snake). Canberra: Department of Climate Change, Energy, the Environment and Water.</p> <p>Department of Environment and Energy. 2018. Threat abatement plan for the impacts of marine debris on</p>	<ul style="list-style-type: none"> • Waste / marine debris • Noise and vibration • Introduced Marine Species • Vessel strike • Benthic habitat degradation / seabed disturbance • Emissions and discharges • Oil spill • Light emissions 	<ul style="list-style-type: none"> • Manage artificial light from onshore and offshore sources to ensure biologically important behaviours of nesting adults and dispersing hatchlings can continue. • 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. • Identify the cumulative impact on turtles from multiple sources of onshore and offshore light pollution. • Support retrofitting of lighting at coastal communities and industrial developments, including imposing restrictions around nesting seasons. • Manage anthropogenic activities to ensure marine turtles are not displaced from identified habitat critical for survival. • Contribute to the reduction in the source of marine debris. 	<ul style="list-style-type: none"> • EP Section 7.1.1 - Light emissions • EP Section 7.2 – Waste management • EP Section 7.3 - Noise and vibration • EP Section 7.4.1 - Introduction of invasive marine species • EP Section 7.4.2 - Interaction with marine fauna • EP Section 7.5 - Seabed disturbance • EP Section 7.1.3 - Routine discharges • 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
	<p>the vertebrate wildlife of Australia's coasts and oceans. Commonwealth of Australia.</p> <p>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.</p> <p>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.</p> <p>Department of the Environment and Energy. 2017. National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Fauna. Commonwealth of Australia, Canberra, ACT.</p>		<ul style="list-style-type: none"> • 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. • Implement best practices to minimise impacts to turtle health and habitats from chemical discharges. • Identify populations and areas of high conservation priority and prevent extinction (sea snakes). • Ensure there is no anthropogenic disturbance / implement measures to reduce adverse impacts of habitat degradation and/or modification (sea snakes). • Ensure there is an effective strategy and adequate local resources and knowledge in place to rapidly respond to a large unintentional oil spill from gas and oil projects in the Browse Basin including prioritising local storage of green dispersants (seasnakes). • Increased reporting of vessel collision (a requirement of the EPBC Act). • 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	<p>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.</p> <p>Department of the Environment. 2015. Wildlife conservation plan for migratory shorebirds. Commonwealth of Australia.</p> <p>Department of the Environment. 2015. Draft referral guideline for 14 birds listed as migratory under the EPBC Act. Commonwealth of Australia.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012.</p>	<ul style="list-style-type: none"> • Waste / marine debris • Introduced Marine Species • Introduced Terrestrial Pests (rodents) • Benthic habitat degradation / seabed disturbance • Emissions and discharges • Oil spill • Light emissions 	<ul style="list-style-type: none"> • Reduce risk of rodents gaining access to key vessels at key ports • Contribute to the long-term prevention of the incidence of harmful marine debris • Identify threats to important (migratory shorebird) habitat and develop conservation measures for managing them. • 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 • Best practice waste management should be implemented. 	<ul style="list-style-type: none"> • EP Section 7.1.1 - Light emissions • EP Section 7.1.2 - Atmospheric emissions • EP Section 7.1.3 - Routine discharges • EP Section 7.2. – Waste management • EP Section 7.4.1 - Introduction of invasive marine species • 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
	<p>Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.</p> <p>Department of Climate Change, Energy, the Environment and Water. 2024. Conservation Advice for <i>Calidris canutus</i> (red knot). Department of Climate Change, Energy, the Environment and Water. Canberra, ACT.</p> <p>Department of Climate Change, Energy, the Environment and Water. 2023. Conservation Advice for <i>Calidris ferruginea</i> (curlew sandpiper). Department of Climate Change, Energy, the Environment and Water. Canberra, ACT.</p> <p>Threatened Species Scientific Committee. 2020. Conservation Advice for the Abbott's Booby - <i>Papasula abbotti</i>. Department of Agriculture, Water and Environment.</p> <p>Department of Climate Change, Energy, the Environment and Water. 2023. Conservation Advice for <i>Numerius madagascariensis</i> (far eastern curlew). Commonwealth of Australia.</p> <p>Department of the Environment. 2014. Conservation Advice <i>Phaethon lepturus fulvus</i> white-tailed tropicbird (Christmas Island) Commonwealth of Australia.</p> <p>Department of Climate Change, Energy, the Environment and Water. 2023. Conservation Advice for <i>Phaethon rubricauda westralis</i> (Indian Ocean red-tailed tropicbird). Canberra, ACT.</p> <p>Threatened Species Scientific Committee. 2015. Approved Conservation Advice for <i>Anous tenuirostris melanops</i> (Australian lesser noddy). Commonwealth of Australia.</p> <p>Department of Climate Change, Energy, the Environment and Water. 2024. <i>Conservation Advice for Calidris acuminata (sharp-tailed sandpiper)</i></p> <p>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.</p> <p>Australian Government. Wildlife Conservation Plan for Seabirds, Commonwealth of Australia 2020.</p>			
EPBC-listed cetaceans	<p>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.</p>	<ul style="list-style-type: none"> • Waste / marine debris • Noise and vibration • Introduced Marine Species • Vessel strike • Benthic habitat degradation / seabed disturbance 	<ul style="list-style-type: none"> • Ensure all vessel strike incidents are reported in the National Ship Strike Database. • 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. 	<ul style="list-style-type: none"> • EP Section 7.1.3 - Routine discharges • EP Section 7.2 – Waste Management • EP Section 7.3 - Noise and Vibration • EP Section 7.4.1 - Introduction of invasive marine species

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
	<p>Threatened Species Scientific Committee. 2015. <i>Balaenoptera borealis</i> (Sei Whale) Conservation Advice. Commonwealth of Australia.</p> <p>Threatened Species Scientific Committee. 2022. Listing Advice for <i>Megaptera novaeangliae</i> (humpback whale). Commonwealth of Australia.</p> <p>Threatened Species Scientific Committee. 2015. Approved Conservation Advice for <i>Balaenoptera physalus</i> — Fin Whale. Commonwealth of Australia-</p> <p>EPBC Act Regulations 2000. Part 8 Interacting with cetaceans and whale watching. Division 8.1 Interacting with cetaceans. Commonwealth of Australia.</p> <p>Department of Environment and Energy, 2017. Australian National Guidelines for Whale and Dolphin Watching 2017. Commonwealth of Australia.</p> <p>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.</p> <p>Department of Sustainability, Environment, Water, Population and Communities (DSEWPac). 2012. Marine bioregional plan for the North-west Marine Region. DSEWPac, Canberra, ACT.</p> <p>Department of the Environment and Energy. 2017. National Strategy for Reducing Vessel Strike on Cetaceans and other Marine Fauna. Commonwealth of Australia, Canberra, ACT.</p>	<ul style="list-style-type: none"> • Emissions and discharges • Oil spill 	<ul style="list-style-type: none"> • 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). • 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. • 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. • Contribute to the long-term prevention of the incidence of harmful marine debris. • 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. • Increased reporting of vessel collision (a requirement of the EPBC Act). • Reduce risk of collision with cetaceans such as maintaining look out, consider reducing vessel speed and course alterations away from sightings. 	<ul style="list-style-type: none"> • EP Section 7.4.2 - Interaction with marine fauna • EP Section 7.5 - Seabed disturbance • EP Section 8 - Emergency conditions (oil spills).

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Aboriginal Cultural Heritage Inquiry System

List of Aboriginal Cultural Heritage (ACH) Register

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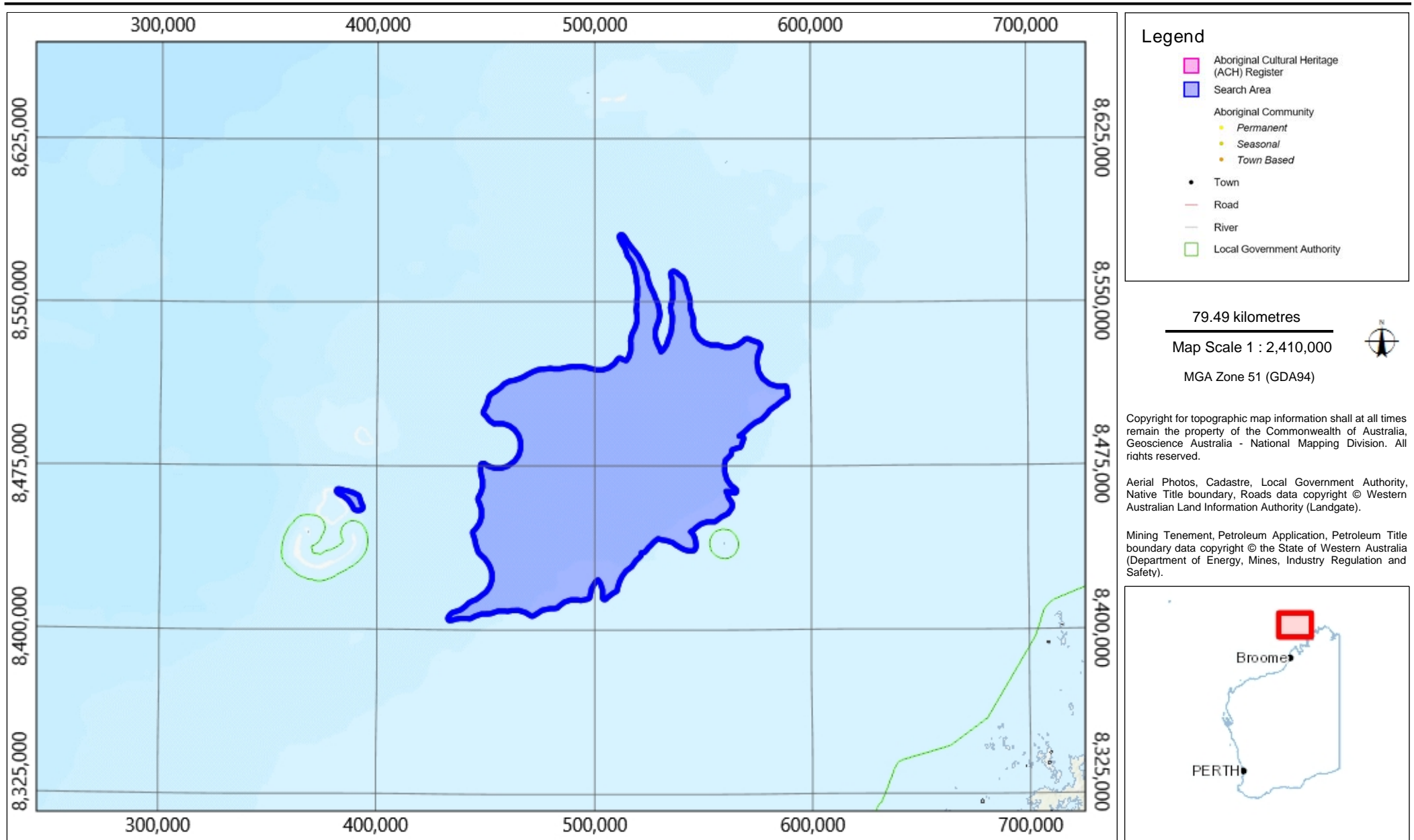
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Map of Aboriginal Cultural Heritage (ACH) Register



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
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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. 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.

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Abbreviation/Acronym/Terms	Meaning
Appeal Decision	<i>Santos NA Barossa Pty Ltd v Tipakalippa [2022] FCAFC 193</i>
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	<i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i>
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>

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
<p>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</p>	<ul style="list-style-type: none"> • The process provides a genuine opportunity for relevant persons to be heard and provide feedback. • The process includes mechanisms for titleholders to receive information from relevant persons that they might not have otherwise received. • 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}. • 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}.
<p>The consultation process must be capable of practicable and reasonable discharge</p>	<ul style="list-style-type: none"> • 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 workable⁵. • 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 community⁶. • 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 time⁷.

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
<p>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</p>	<ul style="list-style-type: none"> • 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 activities⁸. • 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.
<p>Relevant person participation in the consultation process is voluntary</p>	<ul style="list-style-type: none"> • Relevant persons are not obligated to respond to a titleholder’s request to participate in the consultation process^{4,3}. • 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 person³.

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: (a) ecosystems and their constituent parts, including people and communities; and (b) natural and physical resources; and (c) the qualities and characteristics of locations, places and areas; and (d) the heritage value of places; 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. 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	<p>Values within an EP are broadly defined as:</p> <ul style="list-style-type: none"> • Natural values—habitats, species and ecological communities within the EMBA. • 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. • Heritage values—non-Indigenous heritage within the EMBA that has aesthetic, historic, scientific or social significance. • 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.

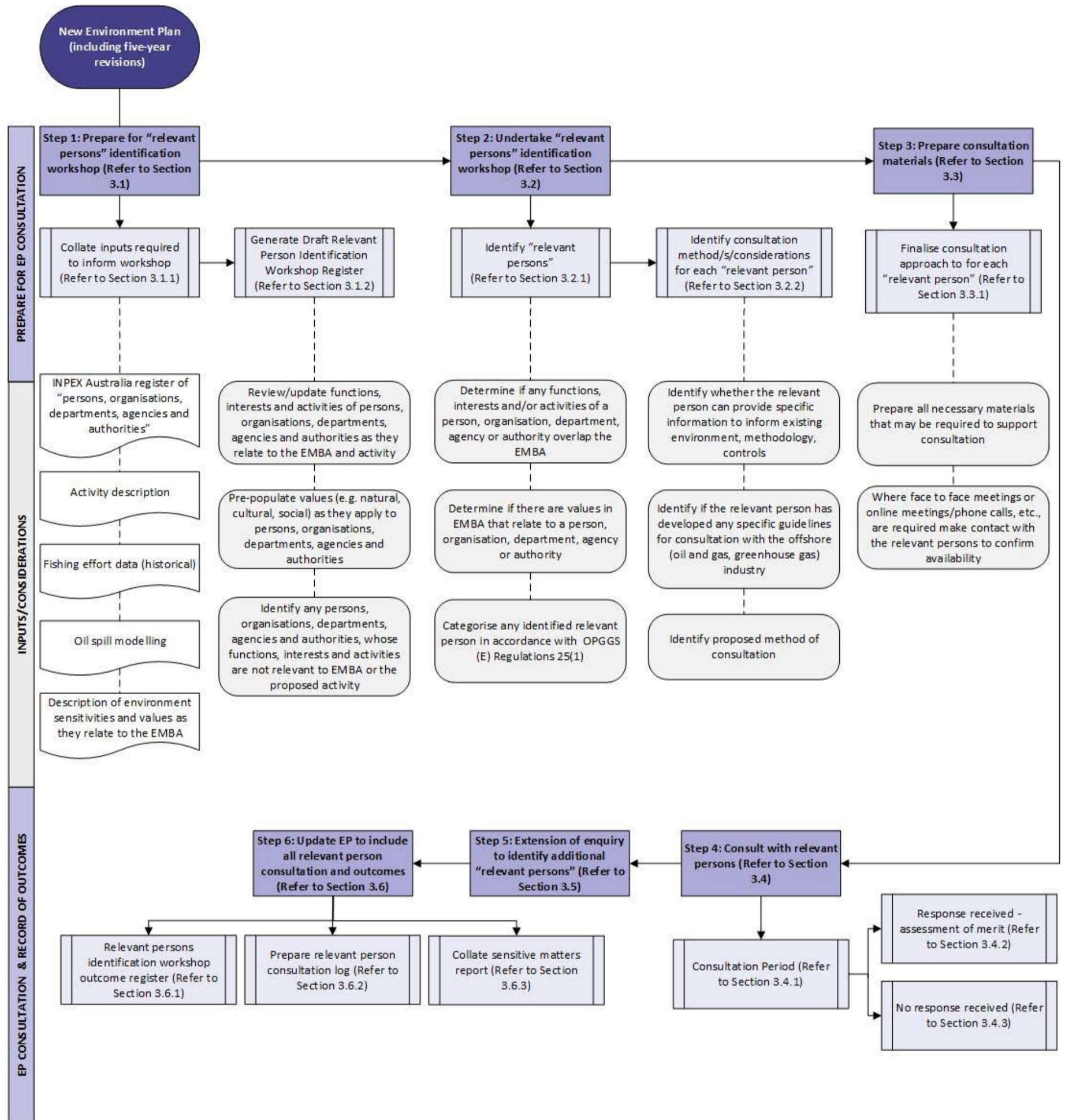


Figure 3-1: Overall approach to relevant person determination and consultation

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.



The information contained on this map is confidential and for information only, and must not be communicated to other persons without the prior written consent of INPEX. Any unauthorised use of such information may expose the user and the provider of that information to legal risk. While every effort has been made to ensure the accuracy and completeness of the information presented, no guarantee is given or responsibility taken by INPEX for any errors or omissions. INPEX accepts no liability for any use of the said information or reliance placed on it.

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	<p>The following data sources were used to determine potentially relevant Government departments, agencies and authorities :</p> <ul style="list-style-type: none"> • http://www.directory.gov.au/departments-and-agencies • https://www.wa.gov.au/agency • https://nt.gov.au/about-government/government-agencies • 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)	<p>The following data sources were used to determine potentially relevant LGAs:</p> <ul style="list-style-type: none"> • Find your council NT.GOV.AU • WA Online Local Government Directory WALGA WALGA • 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	<p>The following data sources were used to determine potentially relevant Indigenous peoples and community organisations:</p> <ul style="list-style-type: none"> • Relevant data previously obtained by INPEX. • Input from internal and external technical SMEs. • National Native Title Tribunal Register of Native Title Claims and Determinations http://www.nntt.gov.au/Pages/Home-Page.aspx. • Prescribed Body Corporate website https://www.nativetitle.org.au. • Aboriginal and Torres Strait Islander peoples ranger groups https://www.countryneedspeople.org.au/what_are_indigenous_rangers • Values of marine parks Australian Marine Parks (parksaustralia.gov.au) • Joint management in the Kimberley - Google My Maps • 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	<p>The following data sources were used to determine potentially relevant commercial and recreational fishers and associated organisations:</p> <ul style="list-style-type: none"> • Use of Fishery GIS layers to determine overlapping Commonwealth, State and Territory fishery management areas. • Request to Department of Primary Industries and Regional Development – Fisheries Branch for licence holder details. • Request to Department of Industry, Tourism and Trade - Fisheries Division for licence holder details. • Request to the Australian Fishery Management Authority (AFMA) for licence holder details. • AFMA list of fishing industry associations (Petroleum industry consultation with the commercial fishing industry Australian Fisheries Management Authority (afma.gov.au)). • 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	<p>The following data sources were used to determine potentially relevant Chambers of Commerce's, fishing charters and tourism operators:</p> <ul style="list-style-type: none"> • Operator data previously obtained by INPEX • 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	<p>The following data sources were used to determine potentially relevant oil and gas or greenhouse gas titleholders:</p> <ul style="list-style-type: none"> • NOPTA title search and use of interactive map (https://public.neats.nopta.gov.au/Map). • 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)	<p>The following data source was used to determine potentially relevant environmental organisations:</p> <ul style="list-style-type: none"> • 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 EMBA's 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 EP¹⁰. 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	<p>Government agencies and authorities defined under subregulation 25(1) (a), are deemed relevant where their functions or activities overlap the EMBA.</p> <p>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.</p>
Local Government Authorities (LGAs)	<p>Only LGAs with coastal boundaries and where shoreline contact is predicted are deemed relevant.</p> <p>Consideration is given to whether an LGA is located in an area of INPEX’s long-term areas of operational presence.</p>
Aboriginal and Torres Strait Islander peoples, Traditional Owners and Site Custodians, Native Title Representative Bodies, Prescribed Body Corporates and other relevant Indigenous community organisations	<p>PBCs/Native Title Representative Bodies/Organisations representing Aboriginal people who are not associated with coastal areas are excluded.</p> <p>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.</p> <p>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.</p>
Commercial fishing (licence holders, fisheries, associations/councils) and recreational fishing associations	<p>Only those commercial fisheries with fishery management areas that overlap the EMBA are considered relevant persons.</p> <p>Only recreational fishing associations with activities that overlap the EMBA are considered relevant persons.</p>

Person, organisation, department, agency or authority	Factors considered
Businesses	<p>Only businesses reliant on marine or coastal environments were considered relevant if they overlapped areas of shoreline contact or EMBA.</p> <p>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).</p> <p>Consideration is given to whether a business is located in an area of INPEX's long-term areas of operational presence.</p>
Oil and gas or greenhouse gas titleholders	<p>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.</p>
Environmental organisations (non-government)	<p>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.</p> <p>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.</p>

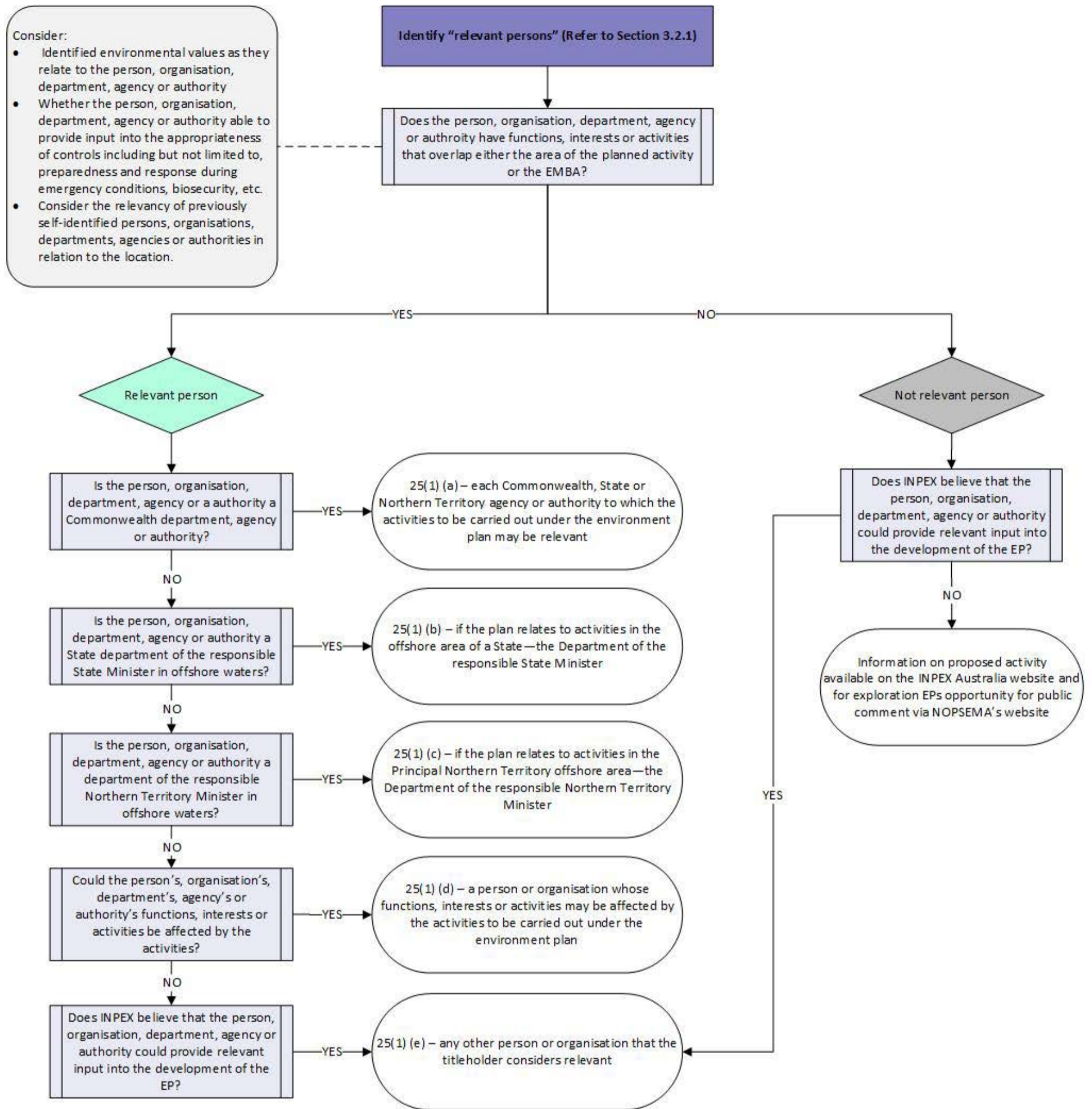


Figure 3-3: Determination of relevant persons

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: <ul style="list-style-type: none"> 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. 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. 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). 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. 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. 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). 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.

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 ascertainable¹¹, 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.

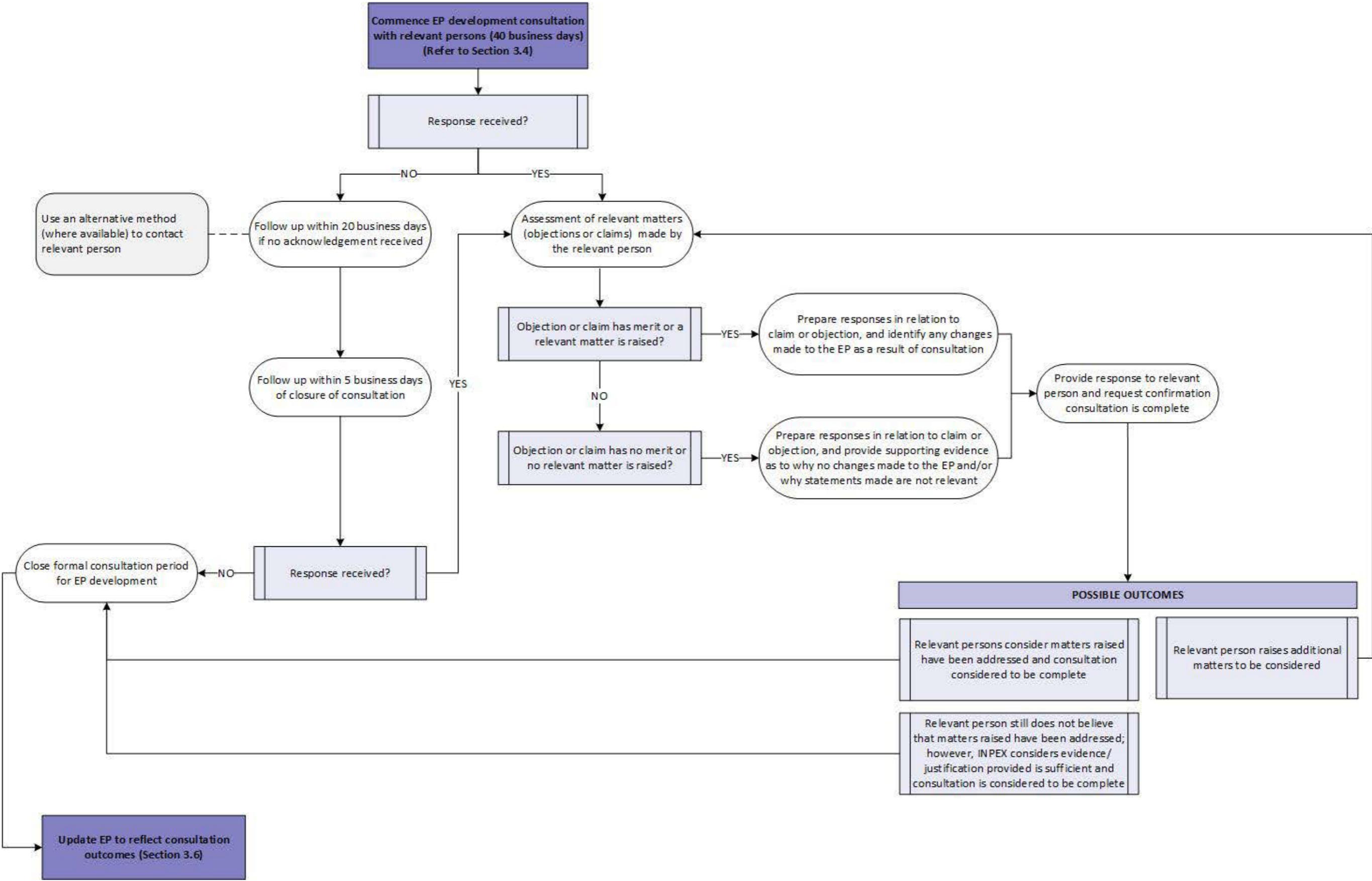


Figure 3-4: Consultation with relevant persons

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.

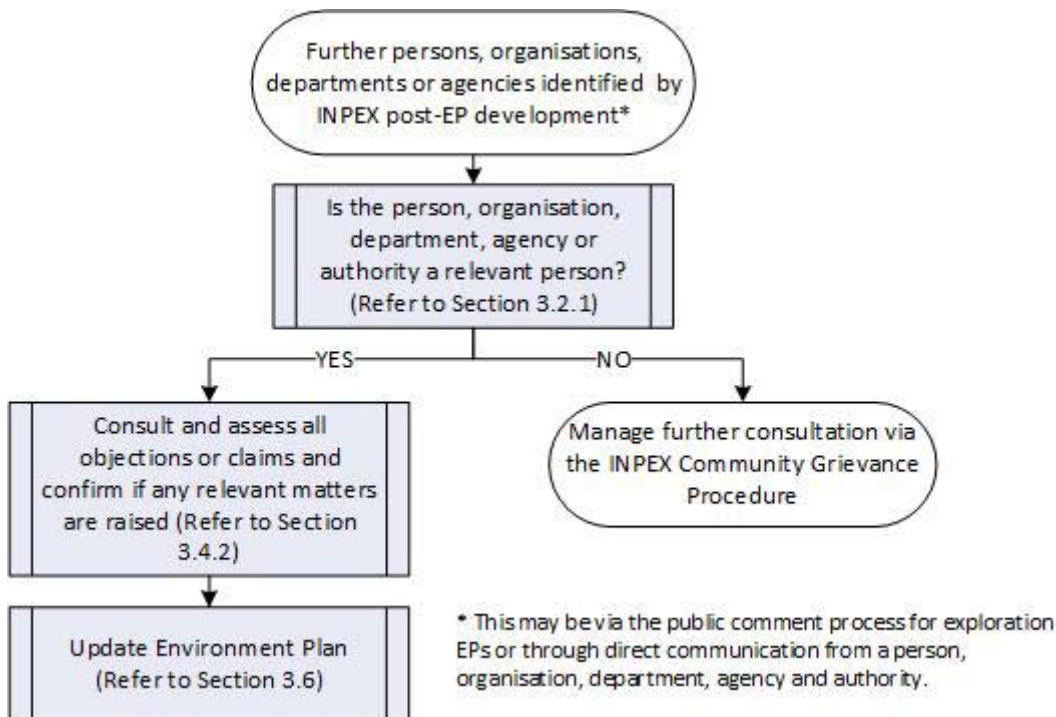


Figure 4-1: Ongoing consultation post-EP development

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:

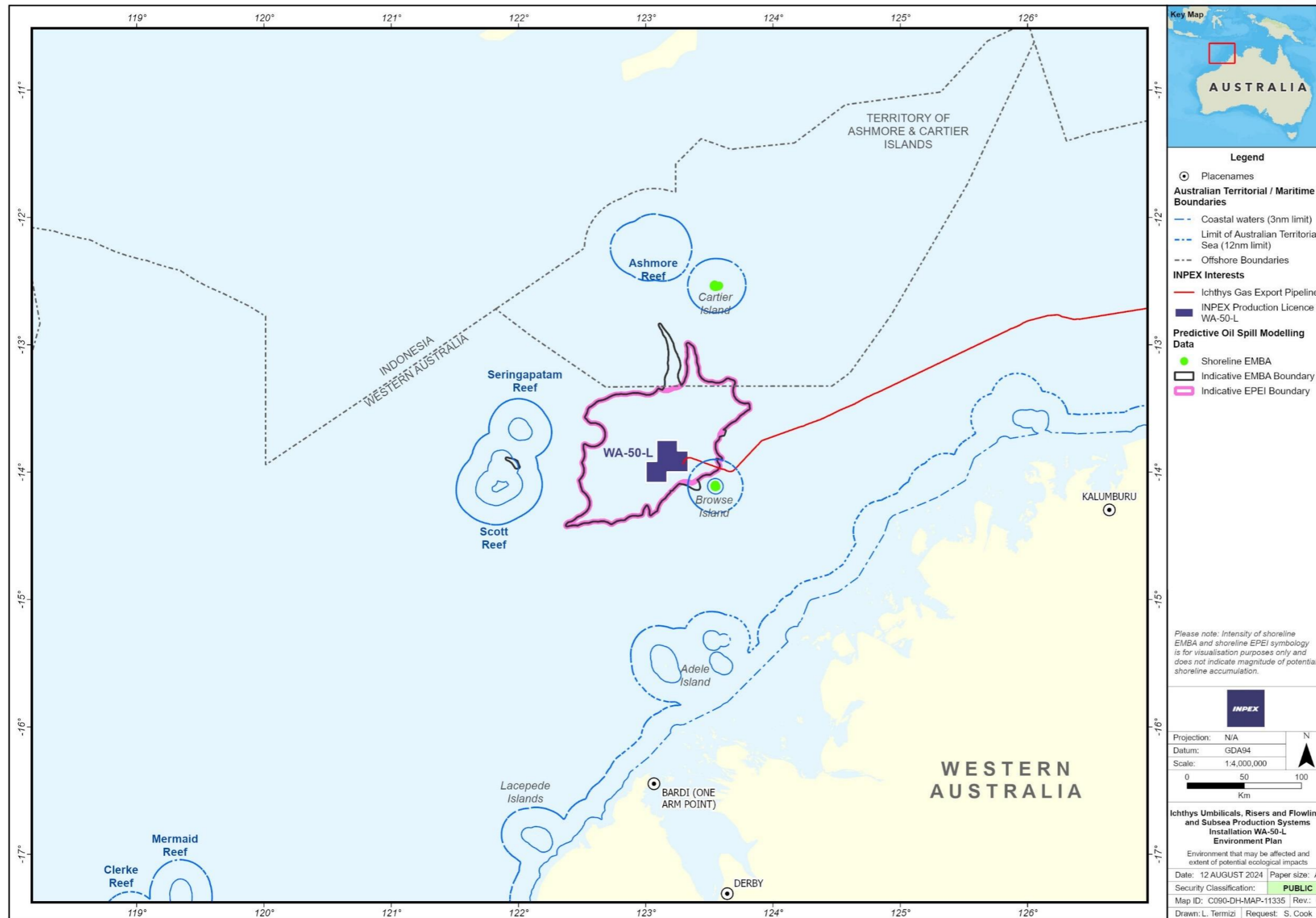
- Annual review of all entities in the register
- Ad-hoc review of register in instances including, but not limited to, the following:
 - change in structure of Government departments, agencies or authorities
 - change in person or organisation contact details
 - notifications received from any entity, 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

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. 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. 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). 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 agency.	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.	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 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 <i>Navigation Act 2012</i> (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.	Commonwealth fisheries and fish habitat.	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. 87 g/m2 max concentration of shoreline contact present at Cartier Island MP.	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	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 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).	25(1)(a)	Manage WA habitats within the EMBA(e.g. Browse Island).	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 Petroleum Joint Authority.	Department of a responsible Minister who is a member of the Offshore Petroleum 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 Western Australia.	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)
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.	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
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 activities is unknown. It is possible business activities may extend to offshore waters. Possible overlap with EMBA which is ~380 km from Broome at closest point. To be conservative INPEX has chosen to engage.	No	Category 2
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 permit area	Potential economic impacts (loss of revenue) if infrastructure is damaged by planned activities.	25(1)(d)	Vocus cables may traverse permit area where planned activities will occur.	No	Category 1
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-P, with reportedly low negligible trawl-fishing in the Ichthys field.	25(1)(d)	Fishing management area overlaps the EMA and permit area. Fishing effort may occur over the permit area.	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)
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 in the EMBA, 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. Fishing effort based around Port Lincoln in South Australia. No fishing effort overlapping WA-50-L. Spawning grounds do slightly overlap WA-50-L.	25(1)(d)	Fishing management area overlaps the EMA and permit area. Fishing effort may occur over the permit area.	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 EMA and permit area. Fishing effort may occur over the permit area.	Category 1	Level C
Fishing - Commercial	Commonwealth	Western Tuna and Billfish Fishery - Licence holders (59 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 Australia. Fishing occurs in both the Australian Fishing Zone and adjacent high seas. 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	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 et al. 2023) with no fishing occurring near WA-50-L.	25(1)(d)	Fishing management area overlaps the EMA and permit area. Fishing effort may occur over the permit area.	Category 1	Level C
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 permit area or EMBA.	Represents Western Tuna and Billfish Fishery and Western Skipjack Industry, whose fishing management areas may overlap with the permit area or EMBA.	25(1)(d)	Represents Western Tuna and Billfish Fishery and Western Skipjack Industry, whose fishing management areas may overlap with the permit 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. 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 fishing by Indonesian fishers within the MOU box is 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	Most traditional fishing occurs in areas of Scott and Seringapatam reefs, Browse Island and Ashmore and Cartier islands. Target species includes trepang, trochus, abalone, sponges and reef fish.	25(1)(d)	Traditional fishers that may operate in the EMBA which is in the MOU box. Shoreline contact concentrations >10 g/m ² will occur at Browse Island, and Cartier island. 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	N/A	N/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)
				without the use of compressed air breathing equipment or any other fishing equipment with motors or engines.			make contact with them in a manner which is considered to be both reasonable and workable		
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 Fishery were consulted on the proposed URF 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

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	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	
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 - Kimberley 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	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	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 - 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
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	

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	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 (Newman et al. 2023).	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. 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. 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
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 the EMBA	Displacement of other marine users	25(1)(d)	Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit within the EMBA	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	May have petroleum or GHG activities or interests occurring within the EMBA	Displacement of other marine users	25(1)(d)	Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit within the EMBA	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	May have petroleum or GHG activities or interests occurring within the EMBA	Displacement of other marine users	25(1)(d)	Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit within the EMBA	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 the EMBA	Displacement of other marine users	25(1)(d)	Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit within the EMBA	Category 2	Level C
Oil & Gas - Titleholder	Western Australia	Shell Australia P/L	Titleholder of WA-44-L, WA-534-P	May have petroleum or GHG activities or interests occurring within the EMBA	Displacement of other marine users	25(1)(d)	Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit within the EMBA	Category 2	Level C
Oil & Gas - Titleholder	Western Australia	Woodside Browse P/L	Titleholder of permit WA-30-R	May have petroleum or GHG activities or interests occurring within the EMBA	Displacement of other marine users	25(1)(d)	Do not overlap area of planned activities but titleholder of offshore petroleum or GHG permit within the EMBA	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 the	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)
				offshore activity covered by the EP.					
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. (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 (category & consultation strategy level 2B), 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. WAFIC's 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 URF activities in WA-50-L.

Appendix C.3 – Consultation materials

Table of contents

Publication/platform (link to subsection)	Method	Dates
EP summary website	Dedicated website	7 October 2024
INPEX Australia Website	Online post/advertisement	7 October 2024
Proposed Ichthys URF and SPS Installation EP Information Sheet		7 October 2024
The West Australian	Newspaper advertisement	24 October 2024 14 November 2024
Broome Advertiser	Newspaper advertisement	10 October 2024 7 November 2024
Kimberley Echo	Newspaper advertisement	17 October 2024 14 November 2024
INPEX Australia LinkedIn	Social advertisement/post media	9 October 2024
INPEX Australia Facebook	Social advertisement/post media	11 – 25 October 2024 8 - 22 November 2024
INPEX Australia Instagram	Social advertisement/post media	11 – 25 October 2024 8 - 22 November 2024

EP summary website

<https://anz.planengage.com/ichthysurf/page/Home>

Ichthys Umbilicals Risers Flowlines and Subsea Production System Installation Environment Plan

Feedback 🔍 ⚙️

- Home Page
- What is an Environment Plan?
- EP consultation requirements
- Background
- Overview of activities
- Location
- Schedule, timing and duration
- Methodology
- Environmental values and sensitivities
- Risk assessment process
- Outcomes of the risk assessment process
- Oil spill response
- Definitions
- Useful links
- Feedback and

What is an Environment Plan?

The *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGS Act) and associated regulations provides the legal framework for the exploration and recovery of petroleum and greenhouse gas activities in **Commonwealth waters** which are administered by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA).

The purpose of an Environment Plan (EP) is for the titleholder of an offshore petroleum or greenhouse gas permit, to document their case for why their **Petroleum Activity** or **Greenhouse Gas Activity** meets the objects of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2023 (OPGGS Environment Regulations).

An EP is a document submitted to NOPSEMA for assessment prior to the commencement of an activity, which contains information on:

- description of the activity
- description of the existing environment (natural, cultural and social)
- environmental risk assessment
- environmental management measures and commitments
- details of the titleholder and other information specified the OPGGS Environment Regulations.

The OPGGS Environment Regulations require a titleholder to have an accepted EP in place prior to undertaking any offshore **Petroleum Activity** or **Greenhouse Gas Activity**, and require that the titleholder undertakes the activity in accordance with the EP.

EP consultation requirements

When developing or revising an EP titleholders must identify and consult with **Relevant Persons** in accordance with the OPGGS Environment Regulation 25.

The purpose of this website is to offer an opportunity for people to learn more about INPEX's proposed offshore activities and provide comments and feedback if they feel their **Functions, Activities** or **Interests** may be affected by the activity. This will assist INPEX in identifying further relevant persons as defined by the OPGGS Environment Regulations.

PROVIDE FEEDBACK

INPEX Australia Website

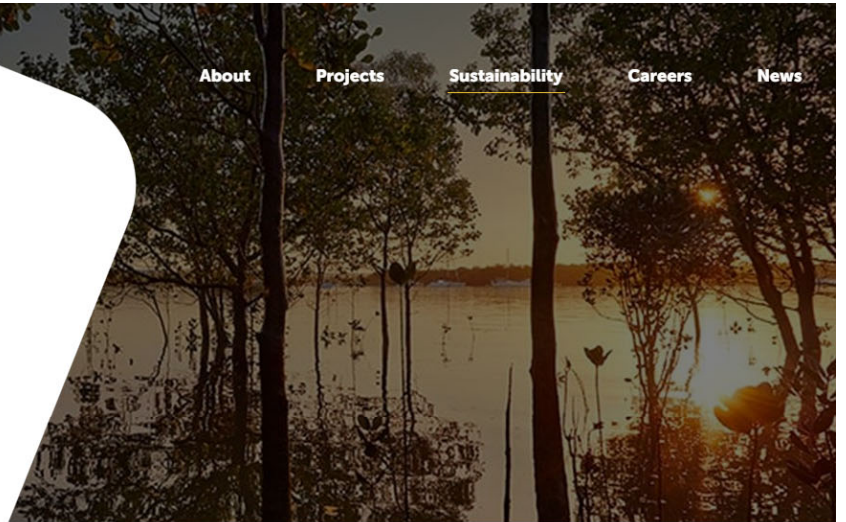
<https://www.inpex.com.au/sustainability/environment/>



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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.

/ Environment Plans

Currently open for consultation:

Ichthys Umbilicals Risers Flowlines and Subsea Production System Installation (revision) Environment Plan

Between 2020-2024 INPEX has continued to develop the Ichthys Field, including undertaking URF and SPS installation activities under the Ichthys URF and SPS installation environment plan (EP) accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and valid until April 2025. INPEX is now preparing an EP revision to complete outstanding activities not yet completed and undertake pre-engineering survey activities for future planned activities in WA-50-L.

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. [Home Page - Ichthys URF \(planengage.com\)](#)

Proposed Ichthys URF and SPS Installation EP Information Sheet



Proposed Ichthys Umbilicals, Risers and Flowlines and Subsea Production System Installation EP revision

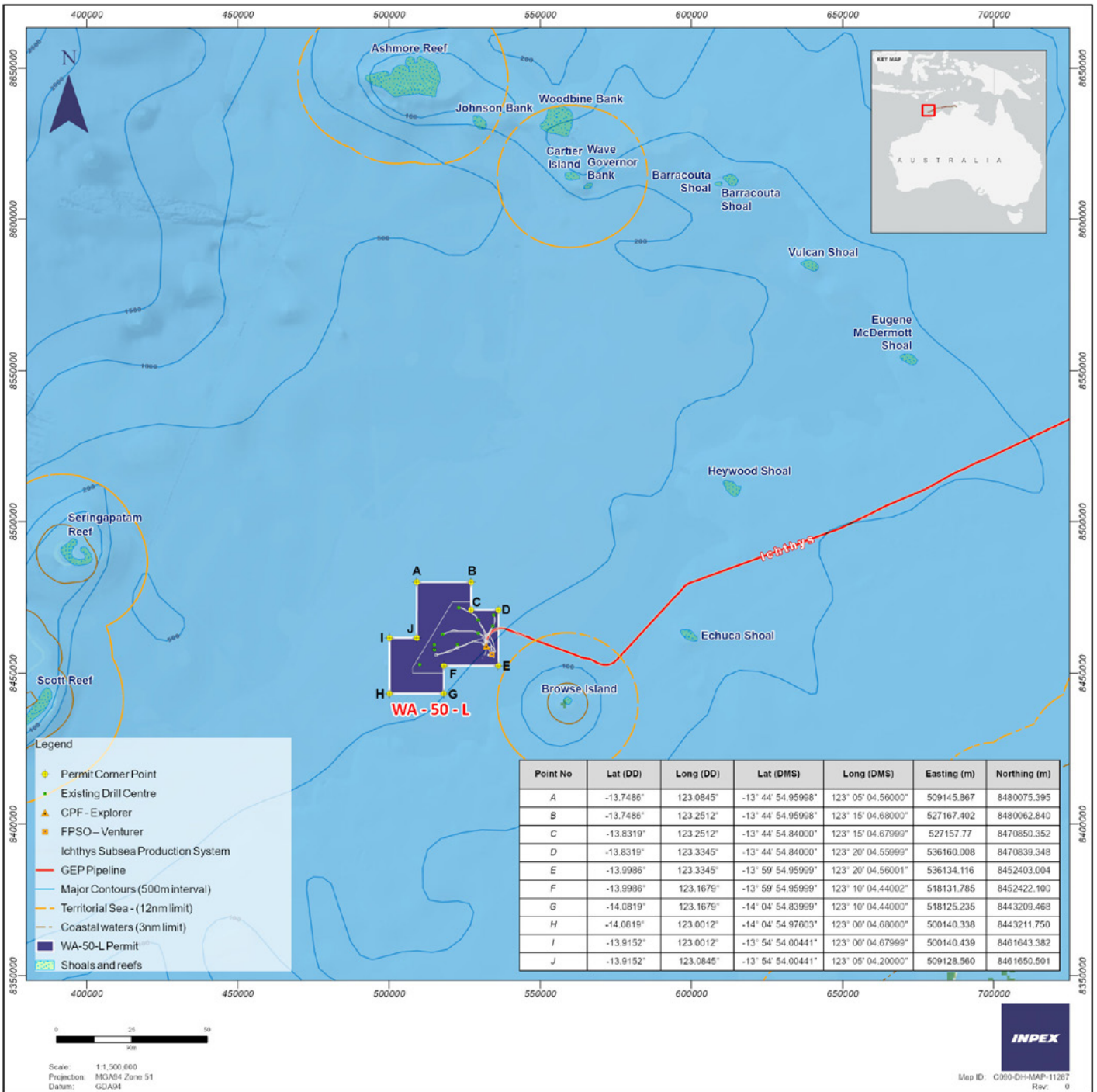


Figure 1: Location and coordinates of production licence, WA-50-L in the Browse Basin

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 (WA). 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.

The Ichthys LNG offshore facilities were constructed, installed and commissioned from 2014 through 2018 with the assets commencing production in July 2018.

The existing facilities consist of a subsea production system (SPS) (e.g. drill centres, manifolds, subsea control systems, umbilicals, risers and flowlines (URF), and the gas export riser base), which connect the

production wells to the Central Processing Platform (CPF Ichthys Explorer) and Floating Production Storage Offtake (FPSO Venturer) facility.

Between 2020-2024 INPEX has continued to develop the Ichthys Field, including undertaking URF and SPS installation activities under the Ichthys URF and SPS installation environment plan (EP) accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) and valid until April 2025. INPEX is now preparing an EP revision to complete outstanding activities not yet completed and undertake pre-engineering survey activities for future planned activities in WA-50-L.

The scope of this EP revision includes:

- Ongoing installation, tie-in, pre-commissioning, mechanical completion and commissioning of well jumpers and associated control systems at existing drill centres in WA-50-L, as part of a continuation of the activities described in the Ichthys URF and SPS installation EP that have not yet been completed due to delays. The proposed installation activities are expected to last for approximately 100 days.
- Geophysical and geotechnical surveying of the seabed within WA-50-L for future URF and SPS installation activities lasting approximately 30 days.

The URF activity, comprising of installation and survey activities, will be subject to regulation by NOPSEMA - the national regulatory body for health and safety, well integrity and environmental management for all offshore petroleum and greenhouse gas storage activities. The EP and an Oil Pollution Emergency Plan (OPEP) will describe all the potential environmental impacts and risks associated with the URF activity, and how they will be managed to meet the requirements of the Commonwealth Offshore Petroleum and Greenhouse Gas Storage Act 2006.

Location

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

Schedule

The installation and survey activities are both currently scheduled to be undertaken mid-2025 and will last for approximately 100 days and 30 days respectively, with operations conducted 24 hours per day. The duration of this EP is for 24 months from acceptance of this EP by NOPSEMA to allow for any delays to project schedule.



Overview of activity description

Table 1: Summary of proposed activities

Summary of activity	
Petroleum production licence area	WA-50-L
Basin	Browse
Activity location	Wholly located within Commonwealth waters approximately 390 kilometres north of Derby, Western Australia in the Northwest Marine Region (NWMR) of the Timor Sea.
Water depth	Ranges from 235–275 metres at Lowest Astronomical Tide
Vessels	Offshore construction, installation, support, survey vessels and remotely operated vehicles and autonomous underwater vehicles.
Activities	<p>Ongoing installation, tie-in, pre-commissioning, mechanical completion and commissioning of well jumpers and associated control systems at WA-50-L drill centres.</p> <p>Geophysical surveying within WA-50-L including the use of multi-beam echo-sounder, side-scan sonar and sub-bottom profiling.</p> <p>Geotechnical surveying within WA-50-L including collection of seabed samples (box core), piston coring/sampling, penetration testing and geotechnical boreholes.</p>
Duration of the EP	24 months from the date this EP is accepted by NOPSEMA.

Environment

Environmentally sensitive areas, including distances to production licence area WA-50-L, within the environment that may be affected (EMBA) are described in Table 2 and shown in Figure 2. In addition to these, the environmental values that may be impacted by the proposed activities include:

- Benthic and shoreline habitats at Browse Island and Cartier Island.
- 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.
- Socio-economic receptors such as commercial fisheries.

Table 2: Environmental sensitivities in the EMBA

Key Ecological Features	Distance from WA-50-L
Continental slope demersal fish communities	Overlaps WA-50-L
Ancient coastline at 125 metres depth contour	20 kilometres south
Ashmore Reef and Cartier Island and surrounding Commonwealth waters	130 kilometres north
Seringapatam Reef and Commonwealth waters in the Scott Reef complex	100 kilometres west
Marine parks/nature reserves (Commonwealth and State)	
Browse Island Nature Reserve	26 kilometres south-east
Scott Reef Nature Reserve	125 kilometres west
Cartier Island Australian Marine Park	130 kilometres north
Coral reefs	
Browse Island	26 kilometres south-east
Cartier Island	130 kilometres north
Scott Reef	125 kilometres west

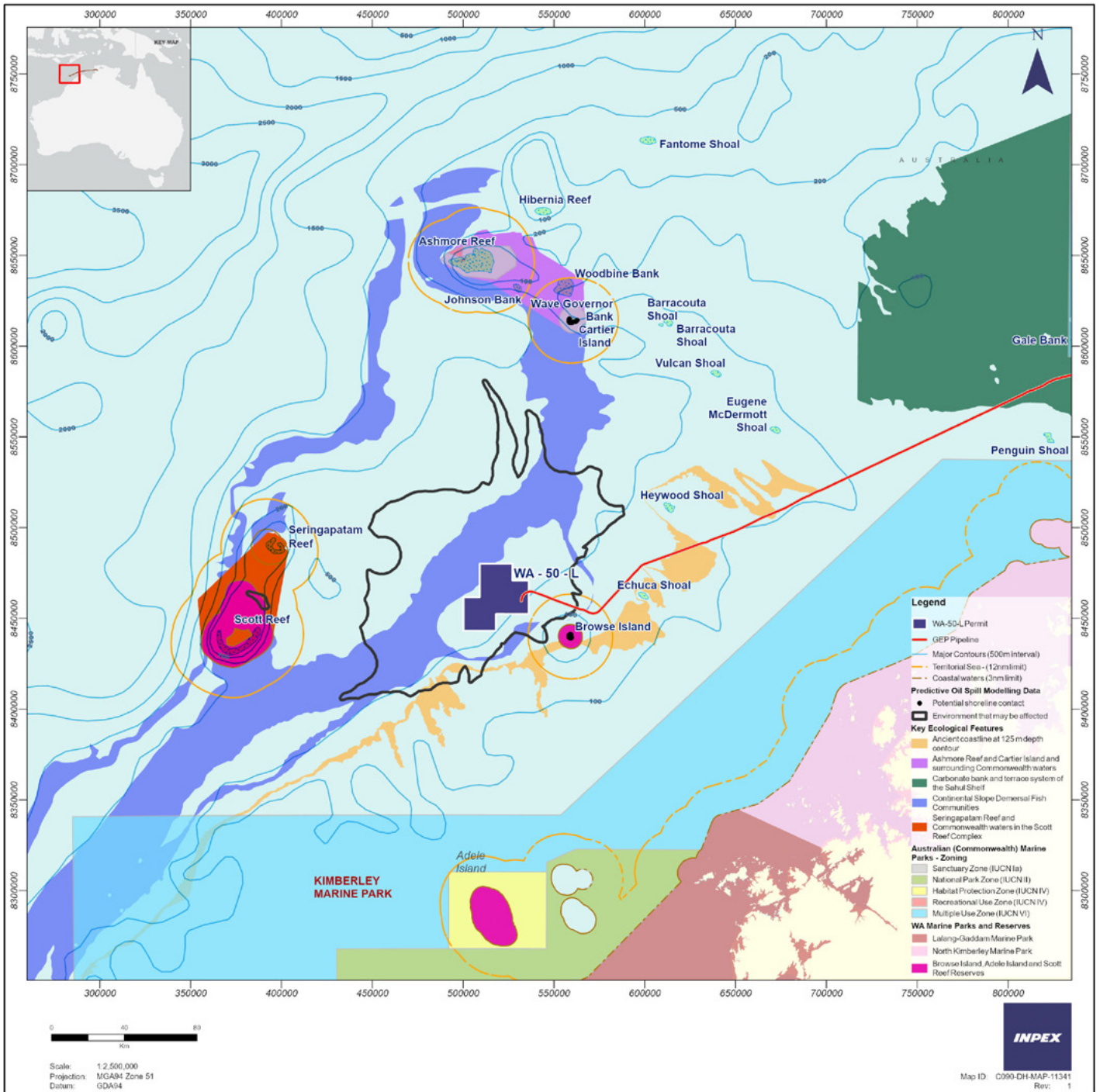


Figure 2: Environmental sensitivities in the EMBA (Key Ecological Features, marine parks and reserves, banks and shoals)

Environmental management of key aspects

Aspect	Potential impacts	Proposed controls
<p>Light emissions - Sources of artificial light include vessel navigational and deck lighting.</p>	<p>Light emissions generated from 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 26 kilometres away).</p> <p>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 vessels. Any impacts are expected to be insignificant.</p> <p>WA-50-L does not overlap any important bird habitats and the closest breeding/resting areas are over 50 kilometres from the proposed activity.</p>	<p>Vessel personnel will receive an induction/training to inform them of the requirements to minimise external artificial lighting.</p> <p>Premobilisation review and planning of vessel lighting to be undertaken prior to activities commencing.</p> <p>Lighting is directed to working areas (rather than overboard) to minimise light spill to the ocean.</p> <p>Reduce light spill from internal light sources by using blinds on windows.</p>
<p>Air and GHG emissions</p>	<p>Atmospheric emissions will be generated through the use of combustion engines, compressors, steam generators and ODS containing equipment on board the vessels.</p> <p>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.</p> <p>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.</p> <p>Chronic exposures are not considered plausible given that marine avifauna would move away (i.e. continue migration or undertake foraging activities elsewhere).</p> <p>WA-50-L does not overlap any important bird habitats and the closest breeding/resting areas are over 50 kilometres away from the proposed activity.</p>	<p>Vessels will:</p> <ul style="list-style-type: none"> 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 comply with ODS and energy efficiency requirements of Marine Order 97. <p>Vessel contractors have a preventative maintenance system to ensure diesel powered, power generation equipment is maintained.</p> <p>Measurement and monitoring of emissions data to enable legislative reporting requirements under the <i>National Greenhouse and Energy Reporting Act 2007</i> to be met for the petroleum activity.</p>
<p>Waste – inappropriate waste handling and disposal</p>	<p>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.</p> <p>Unsecured or incorrectly stored waste may be windblown or displaced into the ocean where it has the potential to negatively affect marine ecosystems.</p> <p>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.</p> <p>Certain types of waste can cause injury to marine fauna through entanglement or may affect the health of marine species that ingest waste materials.</p>	<p>Premobilisation HSE inspection of vessels and waste contractors confirm capability for the correct storage, labelling and handling of wastes.</p> <p>Waste management awareness materials communicated to site personnel.</p> <p>Garbage management plans will be maintained and implemented on vessels in accordance with Marine Order 95.</p> <p>Loss of equipment or materials lost to sea will be reported.</p>

Aspect	Potential impacts	Proposed controls
Underwater noise emissions	<p>Noise emissions from the use of underwater acoustic survey equipment and from the operation of vessels may be audible to marine fauna (cetaceans, turtles and whale sharks) and fish species targeted by commercial fisheries.</p> <p>There are no known marine fauna aggregation areas that would result in sedentary behaviour in WA-50-L.</p> <p>Marine fauna with the potential to be exposed to increased noise levels are transient in nature and have the ability to avoid the area. Any potential impacts are likely to be localised and temporary given the short duration of the survey activities (30 days).</p> <p>Commercially important fish species may be exposed to increased noise levels; however, any impacts would be localised to individuals and would not result in any detrimental impacts in stock levels.</p>	<p>Vessel contractors will comply with relevant requirements of the EPBC Regulations 2000 – Part 8 Division 8.1 (Regulation 8.05 Interacting with cetaceans) including:</p> <ul style="list-style-type: none"> • vessels will not travel faster than 6 knots within 300 m of a cetacean or turtle (caution zone) and minimise noise. • vessels will not approach closer than 50 m to a dolphin or turtle and/or 100 metres for a whale (with the exception of bow riding). • if a cetacean shows signs of being disturbed, vessels will immediately withdraw from the caution zone at a constant speed of less than 6 knots.
Biosecurity (invasive marine species)	<p>Benthic communities the closest of which is Browse Island, and fisheries all have the potential to be impacted by 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.</p> <p>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.</p>	<p>Vessels will</p> <ul style="list-style-type: none"> • complete biofouling risk assessment and implement any associated biofouling reduction and management measures. • comply with the Australian Ballast Water Requirements • have an approved ballast water management plan and valid ballast water management certificate, unless an exemption applies or is obtained. • have a biofouling management plan in accordance with the Biosecurity Amendment (Biofouling Management) Regulations 2021 and the Australian biofouling management requirements.
Displacement of other marine users	<p>Other marine users in the vicinity of WA-50-L may be impacted by the presence of the 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.</p> <p>The worst-case consequence from a loss of access to an area could result in economic losses and/or potential reduction in employment levels.</p>	<p>Stakeholder consultation with relevant stakeholders.</p> <p>Vessels fitted with lights, signals and navigation equipment as required by the <i>Navigation Act 2012</i>.</p>
Vessel collision	<p>Potential for exposure to floating oil at the sea surface and within the water column.</p> <p>Potential accumulation on shorelines; however, not exceeding concentrations that may result in ecological impact.</p> <p>Marine mammals, marine reptiles and marine avifauna could be impacted through direct hydrocarbon exposure in the water column or at the sea surface. They may also be indirectly impacted through ingestion during foraging activities.</p> <p>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.</p>	<p>Marine vessels > 400 tonne will carry shipboard oil pollution emergency plan.</p> <p>All vessels fitted with lights, signals and navigation equipment as required by the <i>Navigation Act 2012</i>.</p> <p>All vessels will use only marine diesel fuel and the maximum volume of fuel contained in any tank will not exceed 400 m³.</p> <p>Installation vessels used will have dynamic positioning equipment and have a backup DP system as a failsafe.</p>

Further information

Image: Fugro

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 at the top of your screen. Tap on the link when it appears.

Via website

<https://anz.planengage.com/ichthysurf/page/Home>

Alternatively, you can request further information by calling 1800 705 010.

Comments and enquiries

INPEX welcomes your feedback on the proposed Ichthys URF activities.

You can provide comment about the proposed Ichthys URF activities in the following ways:

Via email

Contact: INPEX Environment Plan Consultation Team
Subject: Proposed Ichthys URF EP Revision
E-mail: urfconsultation@inpex.com.au

Via website

www.inpex.com.au

Via phone

Call 1800 705 010 regarding proposed Ichthys URF EP revision.

How is your feedback used?

Your feedback assists 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.

To ensure transparency and in accordance with regulatory requirements, INPEX provides NOPSEMA with full copies of all feedback within the EP submission, together with INPEX's initial correspondence and responses to 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 formal stakeholder engagement 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

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The West Australian



Environment plan consultation: *Opportunity for relevant persons to provide feedback*

INPEX Australia has worked sustainably and responsibly for more than a decade in the Browse Basin, around 230 km offshore from Western Australia. INPEX has continued to develop the Ichthys Field, including undertaking umbilicals, risers and flowlines (URF) and subsea production system (SPS) installation activities under the Ichthys URF and SPS installation environment plan. This environment plan is now undergoing a 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 offshore Western Australia.

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 northwest 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 QR to the right. For more information on INPEX visit inpx.com.au





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Environment plan consultation: *Opportunity for relevant persons to provide feedback*

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We welcome your feedback to help guide and inform the development of proposed Environment Plans.

For more information contact 1800 705 010 or visit <https://bit.ly/3XQTNh>

INPEX

**We are revising
Environment Plans
(EPs) for our
offshore activities**

▶ 0:17 1x 🔊 🗉

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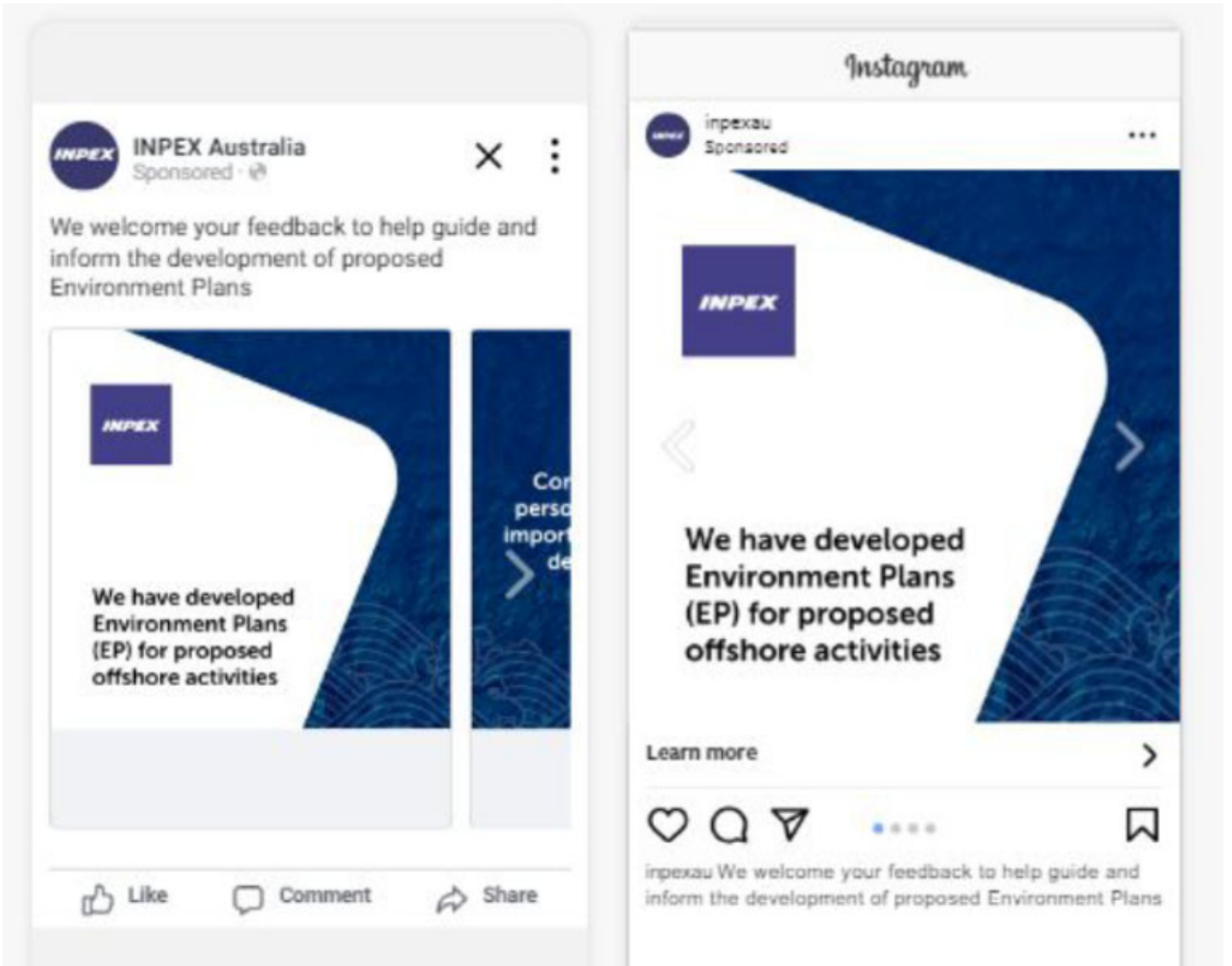
We are revising
Environment Plans
(EPs) for our
offshore activities

Consultation with relevant
persons is an important part of
this process,
and your feedback is key to the
effective development
of our EPs

To learn more about this
process and to provide
feedback, please visit
our website

INPEX

Delivering energy,
sustainably and responsibly



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	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	4/11/2024	Email	NA	Out of office.	General correspondence	
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
Commonwealth	Australian Maritime Safety Authority (AMSA) - Nautical Advice	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	4/11/2024	Email	NA	AMSA confirms that the information provided has been received. AMSA provides instructions on the Maritime Safety Information and notification requirements for the planned activity area.	Relevant matter - relevant person has provided or requested information relevant to the activity and/or their functions, interest or activities.	Section 9.8.3 (Table 9-6) of the EP has been updated to include the required maritime safety information notifications and associated timeframes requested by AMSA (nautical advice).
		NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
Commonwealth	Australian Communications and Media Authority	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	7/10/2024	Email	NA	ACMA responds to INPEX confirming that they have received and reviewed the information and that based on it, the planned activities are not in the vicinity of any existing protection zones declared by the ACMA. ACMA recommends INPEX consult with the owner of a nearby submarine cable infrastructure. ACMA confirms no further consultation is required from INPEX under this EP.	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.
		23/10/2024	NA	Email	NA	INPEX confirms receipt of ACMA's email and notes that is already speaking to the owner of a nearby submarine cable, as suggested by ACMA. INPEX confirms that as ACMA has noted they do not require any further consultation under this EP, consultation will now be 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. 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	
Commonwealth	Australian Fisheries Management Authority (AFMA)	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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	29/11/2024	Email	NA	AFMA confirms they have no feedback or comments to provide in relation to this EP.	General correspondence	

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
		NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
Commonwealth	Department of Climate Change, Energy, the Environment and Water - Underwater Cultural Heritage	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
Commonwealth	Australian Hydrographic Office (AHO)	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	8/11/2024	Email	NA	AHO informs INPEX that they have no comments or concerns in relation to the proposed activities.	General correspondence	
		26/11/2024	NA	Email	NA	INPEX thanks AHO for their response and confirms that it will notify AHO in the event of activities commencing in the area.	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. 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	
Commonwealth	Department of Agriculture, Fisheries and Forestry - biosecurity branch (Marine Pests, Vessels, aircraft and personnel)	7/10/2024	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. 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 2 December 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	7/10/2024	Email	NA	Automated response.	General correspondence	
		4/11/2024	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 07/10/2024 as per the Departments request. INPEX requests feedback from the Department by 28 May.	N/A - correspondence sent by INPEX	
		25/11/2024	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.	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
Commonwealth	Department of Agriculture, Fisheries and Forestry (DAFF) - fisheries branch	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	7/10/2024	Email	NA	Automated response.	General correspondence	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	

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
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
Commonwealth	Director of National Parks	7/10/2024	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 WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	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 2 December 2024, and thanks the DNP for their time.	N/A - correspondence sent by INPEX	
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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	1/12/2024	Email	NA	DNP emails INPEX, confirming that based on the information provided the planned activity does not overlap with any Australian Marine Parks. DNP confirms they do not require any further communication in relation to this activity unless details regarding the activity change and result in marine park overlap.	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.
		NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
		7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
Western Australia	Department of Biodiversity Conservation and Attractions (DBCA)	4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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	29/11/2024	Email	NA	The Department confirms it has undertaken a review of the consultation materials and provides comments relating to the baseline monitoring requirements of ecologically sensitive receptors and oil spill response preparedness. DBCA notes that it has previously received response from INPEX in relation to this advice, but would like to reiterate these comments.	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.
		NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
		16/10/2024	NA	Email	BROPEP WANT 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 URF EP revision.	N/A - correspondence sent by INPEX	
Western Australia	Department of Transport (WA DoT) – Marine Safety	18/11/2024	NA	Email	BROPEP WANT Control Agencies Consultation Report	INPEX follows up on previously provided consultation report.	N/A - correspondence sent by INPEX	
		NA	22/11/2024	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.
		NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	

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	
Western Australia	Department of Energy, Mines, Industry Regulation and Safety (DEMIRS)	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	7/10/2024	Email	NA	Automated response.	General correspondence		
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA		
Western Australia	Department of Primary Industries and Regional Development (DPIRD) - Fisheries Division - Commercial Fisheries & Biosecurity sections	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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		
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA		
Businesses	Western Australia	Reel Teaser Fishing Adventures	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	4/11/2024	Email	NA	Automated response.	General correspondence	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
	Western Australia		7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	10/10/2024	Email	NA	Vocus emails INPEX to reiterate the importance of certain submarine cable structure, as discussed during the course of previous EP consultation as well.	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 telecommunications cable that intersects the south eastern corner of WA-50-L and the feedback from Vocus Communications.

	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
	Western Australia	Vocus Communications	23/10/2024	NA	Email	NA	INPEX responds to Vocus, confirming that the information received during previous EP consultation in relation to the positioning of their submarine cable structure is applicable for the proposed activities under this EP. INPEX confirms that it continues to be aware of the location of this structure, and continue to conduct activities in a manner that will not compromise or interfere with the fibre optic cable. INPEX notes consultation closed for the purpose of this EP.	N/A - correspondence sent by INPEX	
			NA	25/10/2024	Email	NA	Vocus confirms that they are satisfied with the information provided and are happy for INPEX to close consultation for this EP.	General correspondence	
			NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
Oil and Gas Titleholders									
	Western Australia	Santos Browse P/L	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
	Western Australia	Santos Offshore P/L	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
	Western Australia	INPEX Browse E&P P/L	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	4/11/2024	Email	NA	INPEX Browse E&P P/L confirms they have no comments to make.	General correspondence	
			NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
			7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	

	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
	Western Australia	INPEX Ichthys P/L	4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
	Western Australia	Shell Australia P/L	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	7/10/2024	Email	NA	Out of office.	General correspondence	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
	Western Australia	Woodside Browse P/L	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
eNGOs	Western Australia	Conservation Council of WA (CCWA)	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	

	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
	Western Australia	The Wilderness Society (WA)	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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	27/11/2024	Email	NA	The Wilderness Society (WS) emails INPEX, requesting further information to be provided on how INPEX will install the URF and SPS systems to ensure they can be fully removed at the end of the life of the operation.	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.
			28/11/2024	NA	Email	NA	INPEX responds to WS with information on how subsea equipment and infrastructure is installed and maintained during operational life which will enable its safe removal at the end of field life in accordance with relevant legislation and regulations. INPEX provided details on the sections of the EP that describe maintenance and removal of infrastructure and that all subsea assets are tracked in a subsea assets register.	N/A - correspondence sent by INPEX	
			NA	28/11/2024	Email	NA	WS thanks INPEX for their response.	General correspondence	
			NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
Fishing Industry Associations									
	Commonwealth	Australian Southern Bluefin Tuna Industry Association	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	7/11/2024	Email	NA	ASBTIA informs INPEX that they remain a relevant person based on the location of the projects to a Commonwealth fishery. Based on this, ASBTIA should continue to be engaged on this Environment Plan, and should activities change to include air-guns ahead of any offshore activities, further engagement is required.	Objection or claim does not have merit	No changes were made to the EP as a result of this feedback as air-guns will not be used during the activity.
			18/11/2024	NA	Email	NA	INPEX confirms that it will consider ASBTIA for any future activities involving airguns (seismic survey). Consultation for the purposes of this EP is closed.	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. 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	
	Commonwealth	Commonwealth Fisheries Association (CFA)	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
			7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
			4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	

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
Commonwealth	Tuna Australia (Industry association)	25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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	28/11/2024	Email	NA	Tuna Australia emails INPEX, to confirm that based on previous consultation, they have no further comments or new concerns arising. Tuna Australia requests that they be updated when operations commence so that they can continue keeping their industry informed on new developments.	Relevant matter - relevant person has provided or requested information relevant to the activity and/ or their functions, interest or activities.	Table 9-6 of the EP includes the fisheries represented by Tuna Australia that will be notified of the commencement of the activity.
		28/11/2024	NA	Email	NA	INPEX confirms receipt of response and thanks Tuna Australia 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. 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	
Western Australia	Pearl Producers Association	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
		4/11/2024	NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
		25/11/2024	NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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.	NA	
Western Australia	Western Australian Fishing Industry Council (WAFIC)	9/10/2024	NA	Email	Table of State Managed commercial fisheries (WA DPIRD-managed), EP Factsheet	INPEX emails WAFIC to inform them of the upcoming consultation and submission of the URF and SPS revision EP. INPEX states that, in reviewing the current WAFIC guidance, it has identified fishery management areas that overlap the planned activity area of the EP. INPEX's initial assessment is that the Northern Demersal Scalefish Fishery (WA) is the only fishery area potentially impacted by the proposed activity. INPEX is seeking advice from WAFIC on their assessment, and would like to enter into the previously utilised fee for service arrangements to provide information to relevant license holders.	N/A - correspondence sent by INPEX	
		NA	10/10/2024	Email	NA	WAFIC agrees with INPEX's assessment and that the Northern Demersal Scalefish Fishery (NDSF) is a relevant person for the purposes of this consultation. WAFIC requests for INPEX to provide the consultation materials to be distributed to license holders.	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.
		16/10/2024	NA	Email	Draft email to NDSF License Holders	INPEX provides the consultation information to be distributed by WAFIC to NDSF license holders.		
		NA	16/10/2024	Email	NA	WAFIC confirms receipt of consultation information.	General correspondence	
		NA	21/10/2024	Email	Ichthys URF and SPS Factsheet	WAFIC issues out Consultation information on behalf of INPEX to NDSF License holders.	General correspondence	
		NA	21/10/2024	Email	NA	WAFIC emails INPEX to confirm that consultation information has been distributed to license holders, and that any potential feedback will be provided back to INPEX by 29 November.	General correspondence	
		22/10/2024	NA	Email	NA	INPEX thanks WAFIC for the confirmation and looks forward to receiving feedback at the end of November.	General correspondence	
		NA	29/11/2024	Email	NA	WAFIC informs INPEX that it did not receive any feedback from the industry regarding the proposed activities. WAFIC provides its own comments in relation to the proposed activities, and confirms that they have nothing further to add to the consultation.	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.
Western Australia	Recfishwest	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	10/10/2024	Email	NA	Recfishwest emails INPEX, confirming the information received has been reviewed, and noting that based on the details provided, Recfishwest believes it is unlikely that recreational fishing activities will be impacted.	Not a relevant matter	No changes were made to the EP as a result of this feedback.
		23/10/2024	NA	Email	NA	INPEX thanks Recfishwest for their response and confirms consultation closed for this EP.	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. 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	

	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
	Western Australia	Western Australian Game Fishing Association	7/10/2024	NA	Email	Factsheet, link to EP Summary website	Initial outgoing consultation email to new relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. 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 2 December 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	
4/11/2024			NA	Email	Factsheet, link to EP Summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
25/11/2024			NA	Email	Factsheet, link to EP Summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December. 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	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.	NA	

Column 1	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				
Fishing - Aquaculture															
Western Australia	Northern Demersal Scalefish Fishery - Area Licence holders	NA	NA	Complete	NA	NA	NA	NA	Consultation via WAFC 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 WAFC section of this consultation log.	N/A	N/A				
				NWST Fishery License Holder 1	Complete	7/10/2024	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 WA-50-L. 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 2 December 2024. INPEX advised that all correspondence received must be provided to NOSREMA, but that correspondence can be treated confidentially (not published publicly) if requested.	N/A - correspondence sent by INPEX				
					Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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				
					Complete	25/11/2024	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 2 December 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				
					Complete	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. Note: INPEX has consulted with the relevant industry body.	NA				
				NWST Fishery License Holder 2	Complete	7/10/2024	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 WA-50-L. 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 2 December 2024. INPEX advised that all correspondence received must be provided to NOSREMA, but that correspondence can be treated confidentially (not published publicly) if requested.	N/A - correspondence sent by INPEX				
					Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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				
					Complete	25/11/2024	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 2 December 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				
					Complete	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. Note: INPEX has consulted with the relevant industry body.	N/A				
				Commonwealth	North West Slope Trawl Fishery - License Holders	NA	NA	Complete	7/10/2024	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 WA-50-L. 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 2 December 2024. INPEX advised that all correspondence received must be provided to NOSREMA, but that correspondence can be treated confidentially (not published publicly) if requested.	N/A - correspondence sent by INPEX	
									7/10/2024	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 WA-50-L. 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 2 December 2024. INPEX advised that all correspondence received must be provided to NOSREMA, but that correspondence can be treated confidentially (not published publicly) if requested.	N/A - correspondence sent by INPEX	
									4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
25/11/2024	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 2 December 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	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. Note: INPEX has consulted with the relevant industry body.	NA						

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Commonwealth	Western Skipjack Fishery - License Holders	NWST Fishery License Holder 4	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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		WS Fishery License Holder 1	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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		WS Fishery License Holder 2	Complete	7/10/2024	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 WA-50-L. 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 2 December 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 1	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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 2	Complete	7/10/2024	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 WA-50-L. 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 2 December 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 3	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
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			WTB Fishery License Holder 4	Complete	25/11/2024	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 2 December 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 5	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	25/11/2024	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 2 December 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 7	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 8	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 12	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 13	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 15	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 17	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 18	Complete	25/11/2024	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 2 December 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 19	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 20	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 21	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 22	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 22	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 22	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 22	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 23	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 23	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 23	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 23	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 24	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 24	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 24	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 24	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	

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			WTB Fishery License Holder 25	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 27	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	Western Tuna and Billfish Fishery - Licence Holders	WTB Fishery License Holder 28	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 29	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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				25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA		
		WTB Fishery License Holder 30	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
				4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
				25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA		
						7/10/2024	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 WA-50-L. 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 2 December 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 31	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 32	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 33	Complete	7/10/2024	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 WA-50-L. 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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 34	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/11/2024	Email	NA	Relevant person informs INPEX that they are not relevant for this consultation.	NA	

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					NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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		
			WTB Fishery License Holder 35	Complete	7/10/2024	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 WA-50-L. 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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 36	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 40	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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	

Column1	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
			WTB Fishery License Holder 41	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 42	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 43	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	7/11/2024	Email	NA	Relevant person informs INPEX that they are not relevant for this consultation.	NA	
					NA	NA	NA	NA	Consultation in the course of preparation of the EP has been completed in accordance with the OPPGS (E) Regulations. 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	
			WTB Fishery License Holder 44	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
4/11/2024	NA	Email			Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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				
25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 45	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 45	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 45	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 45	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 46	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 46	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 46	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 46	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 47	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 47	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 47	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 47	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	

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			WTB Fishery License Holder 48	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 49	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 50	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 52	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 53	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	

Column1	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
			WTB Fishery License Holder 54	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 55	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 56	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 57	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	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 2 December 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			

Column1	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
					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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 58	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 58	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 58	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 58	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			WTB Fishery License Holder 59	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			WTB Fishery License Holder 59	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			WTB Fishery License Holder 59	Complete	25/11/2024	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 2 December 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	
			WTB Fishery License Holder 59	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 1	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			SBT Fishery License Holder 1	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 1	Complete	25/11/2024	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 2 December 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	
			SBT Fishery License Holder 1	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	

Column1	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
			SBT Fishery License Holder 2	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 3	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 4	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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 5	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 6	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 7	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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		
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		

Column1	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
			SBT Fishery License Holder 8	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 9	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 10	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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 11	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA		
			SBT Fishery License Holder 12	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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 13	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 14	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 15	Complete	7/10/2024	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 WA-50-L. 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 2 December 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 16	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 17	Complete	7/10/2024	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 WA-50-L. 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 2 December 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 18	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 19	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 21	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 22	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 23	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 24	Complete	25/11/2024	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 2 December 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 24	Complete	25/11/2024	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 2 December 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 25	Complete	7/10/2024	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 WA-50-L. 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 2 December 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 25	Complete	25/11/2024	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 2 December 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 26	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 27	Complete	7/10/2024	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 WA-50-L. 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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 28	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 29	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 31	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 33	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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 35	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 36	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 37	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 38	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	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 2 December 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			

Column1	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	
					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. Note: INPEX has consulted with the relevant industry body.	NA		
			SBT Fishery License Holder 39	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 40	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 41	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	

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Commonwealth	Southern Bluefin Tuna Fishery - License Holders	SBT Fishery License Holder 42	Complete	7/10/2024	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 WA-50-L. 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 2 December 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			
				4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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			
				25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA			
		SBT Fishery License Holder 43	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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				25/11/2024	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 2 December 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 44	Complete	7/10/2024	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 WA-50-L. 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 2 December 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			
				4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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			
				25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA			
						7/10/2024	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 WA-50-L. 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 2 December 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 45	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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 46	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 47	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
					7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 48	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 49	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 49	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 50	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 50	Complete	25/11/2024	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 2 December 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 51	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
SBT Fishery License Holder 51	Complete	25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA		
			SBT Fishery License Holder 52	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 53	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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 54	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	

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			SBT Fishery License Holder 55	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 56	Complete	7/10/2024	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 WA-50-L. 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 2 December 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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						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 57	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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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					7/10/2024	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 WA-50-L. 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 2 December 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 58	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 60	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 61	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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 62	Complete	25/11/2024	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 2 December 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 63	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 64	Complete	25/11/2024	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 2 December 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 65	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 66	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			SBT Fishery License Holder 66	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 66	Complete	25/11/2024	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 2 December 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	
			SBT Fishery License Holder 66	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 67	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			SBT Fishery License Holder 67	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 67	Complete	25/11/2024	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 2 December 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	
			SBT Fishery License Holder 67	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 68	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
			SBT Fishery License Holder 68	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
			SBT Fishery License Holder 68	Complete	25/11/2024	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 2 December 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	
			SBT Fishery License Holder 68	Complete	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. Note: INPEX has consulted with the relevant industry body.	NA	

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			SBT Fishery License Holder 69	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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 70	Complete	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 71	Complete	7/10/2024	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 WA-50-L. 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 2 December 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 72	Complete	4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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		
						25/11/2024	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 2 December 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 73	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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		
						4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
						25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
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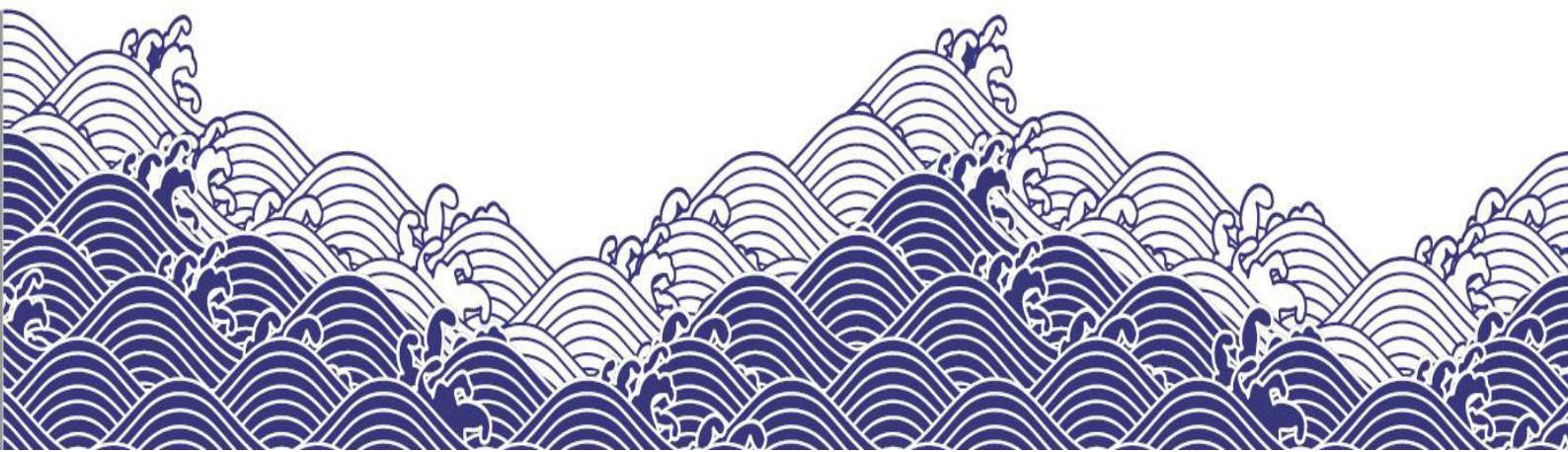
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			SBT Fishery License Holder 75	Complete	25/11/2024	NA	Email	Factsheet and link to EP summary website	Final follow up email to relevant persons seeking comment and feedback on proposed offshore activities in permit area WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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 76	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	
					25/11/2024	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 2 December 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. Note: INPEX has consulted with the relevant industry body.	NA	
			SBT Fishery License Holder 77	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	
					4/11/2024	NA	Email	Factsheet and link to EP summary website	Follow up email to relevant persons seeking comment and feedback on proposed offshore activities in WA-50-L. Provided link to EP website, factsheet and phone number, with feedback requested by 2 December 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	4/11/2024	Email	NA	Relevant person requests that INPEX consult with relevant industry body, who represent their interest.	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. 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	
			SBT Fishery License Holder 78	Complete	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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	7/10/2024	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 WA-50-L. 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 2 December 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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INPEX

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
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?	<p>Yes.</p> <p>The model calculations are analysed for distributions of oil mass in different states (floating, entrained, dissolved, stranded, evaporated) at each model time step.</p> <p>Typically, 15-minute time steps (or less) are used to maximise accuracy of the weathering and transport calculations.</p> <p>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’.</p> <p>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</p>

	<p>Environment that May Be Affected (EMBA) as defined in the NOPSEMA guideline (2019).</p> <p>A 10 ppb entrained threshold is <u>not</u> 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).</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p>
<p>(ii) Can you describe how the use of instantaneous thresholds in the model may affect the model outputs/geographical areas exposed above threshold?</p>	<p>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.</p> <p>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</p>

	<p>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.</p> <p>Species vary by sensitivity and different oils vary in terms of the toxic components present.</p> <p>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.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>Further clarification can be provided.</p>
<p>(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?</p>	<p>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).</p> <p>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.</p> <p>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.</p>

	<p>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.</p> <p>Further clarification can be provided.</p>
<p>c) 10 g/m² shoreline contact threshold:</p>	
<p>(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?</p>	<p>Accumulation of oil onto shorelines is calculated as the mass of oil per unit of shoreline area.</p> <p>The coastline at mean sea level is subdivided into fixed, rectangular, grid cells of a defined area described by fixed length and width.</p> <p>For example:</p> <ul style="list-style-type: none"> • 1 km long x 10 m wide (10,000 m² area per cell) for blowouts. • 400 m long x 10 m wide (4,000 m² area per cell) for diesel spills. <p>Owing to the grid scale applied, the coastline shape must be simplified in areas of small-scale complexity.</p> <p>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.</p> <p>The more complex the coastline the larger the degree of conservatism.</p> <p>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.</p> <p>Any subsequent oil patches that contact that coastline cell will add to the tally in that coastline cell over time.</p> <p>The maximum possible load at any time will be capped at the carrying capacity set for shoreline cells (40 m³ over 10,000 m² for low viscosity oils (condensates and diesel, etc.).</p> <p>Any excess oil will be re-floated and may then accumulate on other coastline cells.</p> <p>Evaporation and degradation are calculated for stranded oil to reduce the tally of oil in a coastline cell over time.</p>

	<p>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.</p> <p>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 m²) as the most conservative calculation for the amount of oil that might be present, for clean-up and other considerations.</p> <p>The peak concentration calculated for each shoreline cell among all replicate simulations is compared to thresholds of relevance.</p> <p>Any shoreline cell with peak mass per area > minimum threshold (e.g., 10 g/m²) during any replicate simulation will be included in the EMBA polygon.</p> <p>Note that:</p> <ol style="list-style-type: none"> 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. 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. 3. No differential is made between oil on the surface and oil that has entered the substrate. <p>Further clarification can be provided.</p>
<p>(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?</p>	<p>The model does not account for wetting and drying of the intertidal zone.</p> <p>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.</p> <p>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).</p> <p>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.</p> <p>In reality, concentrations of oil would likely vary with the tide in areas with very large tidal ranges and low slope,</p>

	<p>and we have applied a fixed width as an assumed average.</p> <p>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.</p> <p>This assumes oil accumulations would migrate up and down, occupying the same width of the shoreline as the tide varied.</p> <p>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/m³).</p> <p>Noting that the model domain must cover areas of hundreds of thousands of km² for a blowout scenario, the fixed coastline assumptions represent necessary simplifications requiring a conservative approach.</p> <p>Further clarification can be provided.</p>
<p>(iii) Can you confirm if the model continues to calculate oil weathering of stranded oil on a shoreline, specifically evaporation and melting point?</p>	<p>Yes.</p> <p>As stated above (part i), oil weathering continues to apply to oil classed as stranded.</p> <p>Loss of oil mass from coastline cells can occur through three processes:</p> <ol style="list-style-type: none"> 1. Evaporation. 2. Degradation (representing microbial action and photo-oxidation). 3. Re-floating (if the carrying capacity of the coastline cell is exceeded). <p>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.</p> <p>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.</p> <p>Calculations for variable rates of evaporation, by sub-components, continues for stranded oil until only the non-evaporating residues (boiling point >380 °C) remain.</p> <p>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.</p>

	<p>Calculations for evaporation are, therefore, conservative if evaporating components remain in the stranded oil.</p> <p>If only residues strand, no loss of oil through evaporation will be calculated on shorelines.</p> <p>Degradation is applied to the total mass (regardless of composition) at a fixed rate.</p> <p>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.</p> <p>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).</p>
<p>(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?</p>	<p>Degradation rates do not account for substrate temperature.</p> <p>This will be conservative in settings with high average substrate temperatures because degradation rates do increase at higher temperatures.</p> <p>The same ambient temperature and prevailing wind speeds are used for both floating and stranded oil for calculating evaporation rates.</p> <p>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.</p> <p>This would not be conservative if only residues arrive at coastline cells.</p> <p>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.</p> <p>Further clarification can be provided.</p>

1.1 Supplementary Scope

<p>(a) Can you confirm if there are any other factors which may affect conservatisms within the model?</p>	<p>See addendum.</p>
<p>(b) if Yes, can you please explain these additional factors.</p>	<p>See addendum.</p>

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 conservatism 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 pathways 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/m² 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