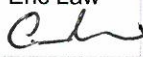







PRE-RESERVOIR DRILLING CAMPAIGN WA-50-L Environment Plan Summary

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1 INTRODUCTION

INPEX Ichthys Pty Ltd. (INPEX), as titleholder on behalf of its joint venture partners, is conducting a pre-reservoir drilling campaign associated with the associated with the Ichthys Liquefied Natural Gas (LNG) Project. The Project will consist of the drilling and well suspension of up to 20 wells (grouped in five drill centres) within petroleum production licence WA-50-L.

The drilling campaign will be conducted in accordance with the INPEX *Pre-Reservoir Drilling Campaign WA-50-L Environment Plan* (EP) that has been prepared to comply with the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009 (OPGGS (E) Regulations). The EP has been accepted by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) under Regulation 10A of the OPGGS (E) Regulations.

This document (EP Summary) provides an overview of the key elements of the EP and has been prepared to meet the requirements of Regulation 11(3) and 11(4) of the OPGGS (E) Regulations.

2 LOCATION AND TIMING OF THE ACTIVITY

The Project area is production licence WA-50-L, which is located in Commonwealth waters, approximately 230 km north-west of the Kimberley coastline, at its closest point (Figure 2-1). Water depths at the proposed well locations range between 235 m and 275 m at lowest astronomical tide (LAT). The closest major town is Derby, located approximately 390 km south of the southern boundary of the Project area.

Coordinates of the development well locations are provided in Table 2-1. Boundary coordinates for WA-50-L are shown in Figure 2-1.

The Project is scheduled to begin in the first quarter of 2015 and is anticipated to be approximately 12 months in duration.

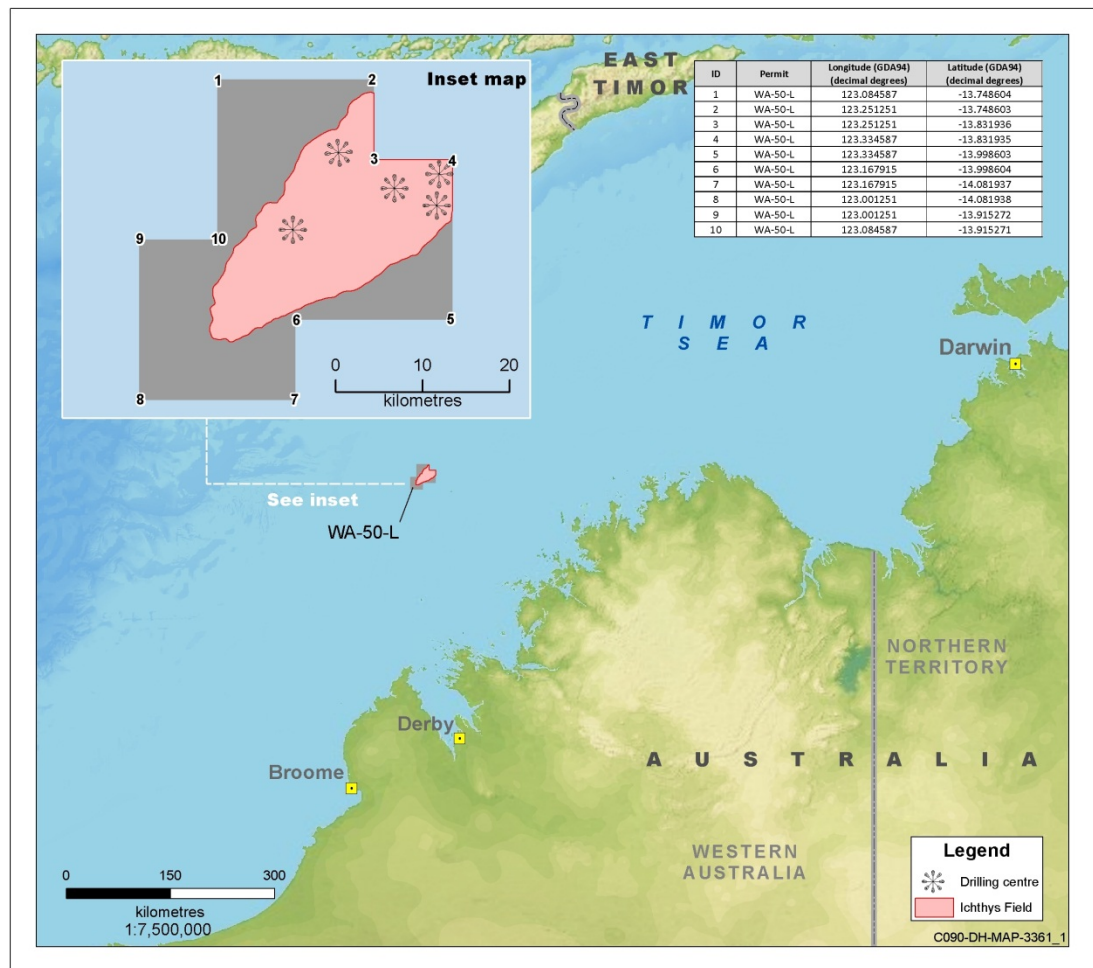


Figure 2-1: Location map of the Project

Table 2-1: Coordinates of proposed development well locations

Well name	Drill centre	Latitude GDA94*	Longitude GDA94*
BDC-1B-01	B_DC1B	13°50'48"S	123°19'13"E
BDC-1A-01	B_DC1A	13°51'43"S	123°16'23"E

Well name	Drill centre	Latitude GDA94*	Longitude GDA94*
BDC-1C-01	B_DC1C	13°52'45"S	123°19'05"E
BDC-4-01	B_DC4	13°54'17"S	123°09'54"E
BDC-1B-02	B_DC1B	13°50'50"S	123°19'14"E
BDC-1B-03	B_DC1B	13°50'48"S	123°19'13"E
BDC-1B-04	B_DC1B	13°50'50"S	123°19'13"E
BDC-1C-02	B_DC1C	13°51'41"S	123°16'22"E
BDC-1C-03	B_DC1C	13°51'41"S	123°16'22"E
BDC-1C-04	B_DC1C	13°51'43"S	123°16'23"E
BDC-1A-02	B_DC1A	13°52'46"S	123°19'03"E
BDC-1A-03	B_DC1A	13°52'45"S	123°19'04"E
BDC-1A-04	B_DC1A	13°52'47"S	123°19'03"E
BDC-4-02	B_DC4	13°49'29"S	123°12'49"E
BDC-4-03	B_DC4	13°49'28"S	123°12'47"E
BDC-4-04	B_DC4	13°49'29"S	123°12'47"E
BDC-5-01	B_DC5	13°49'29"S	123°12'49"E
BDC-5-02	B_DC5	13°50'48"S	123°19'13"E
BDC-5-03	B_DC5	13°51'43"S	123°16'23"E
BDC-5-04	B_DC5	13°52'45"S	123°19'05"E

* The well locations are subject to possible change. The INPEX management-of-change process will be applied if a change in well location results in a new or increased environmental risk.

3 DESCRIPTION OF THE ACTIVITY

The Project will be undertaken to assist with the broader Ichthys Development Drilling Campaign that is being undertaken in accordance with the INPEX *Development Drilling Campaign WA-50-L Environment Plan (C020-AD-PLN-00004)*.

The Project will drill the initial (top-hole and mid-hole) sections of the wells, and will then suspend (i.e. plug) the wells and leave the area. The Project will not penetrate the hydrocarbon reservoir and will not undertake well-testing or completion.

The Development Drilling Campaign will drill the deeper sections of each of the wells drilled by this Project and will subsequently undertake well clean-up, testing and well completion.

The Project will be undertaken at the same time as the approved Development Drilling Campaign, which is scheduled to take three to four years, and will therefore result in two mobile offshore drilling units (MODUs) (and associated supply vessels) working in production licence area WA-50-L at the same time.

The wells will be drilled using a semi-submersible MODU which will be anchored to the seabed using eight anchors. The MODU will be supported by two anchor handling supply vessels (AHSVs) and one platform supply vessel (PSV). A 500 m exclusion zone will be maintained around the MODU to control activities and reduce the risk of marine vessel collisions.

Pre-reservoir drilling of each well will include the following steps:

- 1) Drilling of top hole sections of the well using seawater and high viscosity sweeps
- 2) Cementing of steel casings into the hole
- 3) Installation and use of a riserless fluid return system (after setting of the 508 mm casing) during use of water based muds (WBM)
- 4) Suspension of the well for re-entry at a later date by the Development Drilling Campaign or installation of blowout preventer (BOP) for drilling the subsequent 311 mm hole section
- 5) If the 311 mm hole is drilled as part of the Project, a 244 mm production casing will be cemented in place and the well will be suspended for re-entry at a later date. If drilled, the 311 mm section will be drilled using synthetic based muds (SBM).

As outlined above, the wells will be drilled using WBM in the upper sections of wells and an SBM system in the lower sections.

4 DESCRIPTION OF THE ENVIRONMENT

4.1 Physical environment

The Project area lies in the Timor Province bioregion, located within the broader North West Marine Region. The climate in the Project area is monsoonal with two distinct seasons; summer (October to February) and winter (May to June). Air temperatures in the Project area remain warm throughout the year with means and maximums ranging from 26–30°C and 32–35°C respectively (RPS 2007).

Water depths in the Project area range from approximately from 235–275 m (INPEX 2010). The seabed within the drilling area is expected to be generally flat and devoid of any significant bathymetric features. Studies have indicated that seabed topography is relatively flat and featureless and the geology is generally homogeneous through the Browse Basin. In general, the seabed sediments in the Ichthys Field (in which WA-50-L is located) grade from soft featureless sandy silts in the north, to gravelly sand in the south (INPEX 2010). Sand forms a cover over the silt and is generally represented in the form of sand waves.

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 (Fugro 2005). The closest known submerged features to the Project area are Heywood and Echuca shoals which are located approximately 79 km to the east and 106 km to the north-east of the Project area (centre of permit area WA-50-L), at their closest points.

The primary ocean current is the Indonesian Throughflow, which drives cooler oceanic water southerly direction. Regional surface currents show a strong tidal influence with a net westward drift during the monsoon season and a net eastward drift during the dry season. Barotropic tidal currents predominantly flow in the cross-shelf direction at the shelf break and in the shelf direction when approaching the coast (McLoughlin et al. 1988).

4.2 Biological environment

The seabed at the Project area is well below the photic zone and consequently, no benthic macrophytes are expected to be present. Surveys in the Ichthys Field, in close proximity to the permit area, indicate that the sediments of the Project area are expected to range from bare substrate to soft sandy silts and support benthic invertebrate species dominated by polychaetes and crustaceans.

A search of the Commonwealth Protected Matters Database has identified 13 Threatened species and 106 listed Migratory/Marine species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) that may occur in low abundance within, or transit through, the Project area. These species include cetaceans, fish, dolphins, sea snakes, turtles, dugongs, seabirds and migratory shorebirds (Table 4-1).

No known critical habitats, including breeding grounds or sensitive habitat environments for any of the species outlined in Table 4-1, are known to exist within, or adjacent to, the Project area. No known migration pathways pass through the Project area, with the area also distant from cetacean and marine turtle aggregation areas.

There are no conservation areas within, or adjacent to the Project area. The nearest conservation area is the Cartier Island Commonwealth Marine Reserve, located approximately 122 km north of the Project area, at the closest point (Figure 4-1).

A search of the Department of the Environment (DoE) Conservation Values Atlas (Department of Environment, Sustainability, Water, Population and Communities (DSEWPaC) 2013) identified four key ecological features (KEFs) which occur near WA-50-L or within the potential adverse exposure zone based on the maximum credible hydrocarbon spill scenarios (which are highly unlikely to occur based on the control measures to be implemented). These KEFs include the following:

- Ashmore Reef and Cartier Island and surrounding Commonwealth waters (approximately 176 km and 159 km north of WA-50-L respectively)
- Seringapatam Reef (approximately 128 km west of WA-50-L) and Commonwealth waters in the Scott Reef complex (approximately 135 km west of WA-50-L)
- Continental slope demersal fish communities (approximately 12 km from the centre of WA-50-L)
- Ancient coastline at 125 m depth contour (approximately 35 km south-east of the centre of WA-50-L).

Table 4-1: EPBC Act listed species that may occur within or adjacent to the Project area

Scientific name	Common name	Threatened status	Migratory status	Listed marine species
Birds				
<i>Anous tenuirostris melanops</i>	Australian lesser noddy	Vulnerable	–	X
<i>Anous minutus</i>	Black noddy	–	–	X
<i>Anous stolidus</i>	Common noddy	–	X	X
<i>Calonectris leucomelas</i>	Streaked shearwater	–	X	X
<i>Fregata ariel</i>	Lesser frigatebird	–	X	X
<i>Fregata minor</i>	Great frigatebird	–	X	X
<i>Phaethon lepturus</i>	White-tailed tropicbird	–	X	X
<i>Phaethon rubicauda</i>	Red-tailed tropicbird	–	–	X
<i>Puffinus pacificus</i>	Wedge-tailed shearwater	–	X	X
<i>Sterna albifrons</i>	Little tern	–	X	X
<i>Thalasseus</i>	Lesser crested tern	–	X	X

Scientific name	Common name	Threatened status	Migratory status	Listed marine species
<i>bengalensis</i>				
<i>Hydroprogne caspia</i>	Caspian tern	–	X	X
<i>Sterna dougallii</i>	Roseate tern	–	X	X
<i>Sula dactylatra</i>	Masked booby	–	X	X
<i>Sula leucogaster</i>	Brown booby	–	X	X
<i>Sula sula</i>	Red-footed booby	–	X	X
<i>Ardea modesta</i>	Great egret	–	X (wetland species)	X
<i>Pandion cristatus</i>	Eastern osprey	–	–	X
Reptiles				
<i>Aipysurus apraefrontalis</i> (also named <i>Smithohydrophis apraefrontalis</i>)	Short-nosed seasnake	Critically Endangered	–	X
<i>Aipysurus foliosquama</i>	Leaf-scaled seasnake	Critically Endangered	–	X
<i>Caretta caretta</i>	Loggerhead turtle	Endangered	X	X
<i>Chelonia mydas</i>	Green turtle	Vulnerable	X	X
<i>Dermochelys coriacea</i>	Leatherback turtle	Endangered	X	X
<i>Eretmochelys imbricata</i>	Hawksbill turtle	Vulnerable	X	X
<i>Lepidochelys olivacea</i>	Olive ridley turtle	Endangered	X	X
<i>Natator depressus</i>	Flatback turtle	Vulnerable	X	X
<i>Crocodylus porosus</i>	Saltwater crocodile	–	X	X
Various seasnakes	Various seasnakes	–	–	19 listed (incl. two threatened species, as outlined above)
Mammals				

Scientific name	Common name	Threatened status	Migratory status	Listed marine species
<i>Balaenoptera musculus brevicauda</i>	Pygmy blue whale	Endangered	X	Cetacean
<i>Megaptera novaeangliae</i>	Humpback whale	Vulnerable	X	Cetacean
<i>Balaenoptera bonaerensis</i>	Antarctic minke whale	–	X	Cetacean
<i>Balaenoptera edeni</i>	Bryde's whale	–	X	Cetacean
<i>Feresa attenuata</i>	Pygmy killer whale	–	X	Cetacean
<i>Globicephala macrorhynchus</i>	Short-finned pilot whale	–	X	Cetacean
<i>Kogia breviceps</i>	Pygmy sperm whale	–	X	Cetacean
<i>Kogia sima</i>	Dwarf sperm whale	–	X	Cetacean
<i>Mesoplodon densirostris</i>	Dense-beaked whale	–	X	Cetacean
<i>Orcinus orca</i>	Killer whale	–	X	Cetacean
<i>Peponocephala electra</i>	Melon-headed whale	–	X	Cetacean
<i>Physeter macrocephalus</i>	Sperm whale	–	X	Cetacean
<i>Pseudorca crassidens</i>	False killer whale	–	X	Cetacean
<i>Ziphius cavirostris</i>	Cuvier's beaked whale	–	–	Cetacean
<i>Dugong dugon</i>	Dugong	–	X	X
<i>Delphinus delphis</i>	Common dolphin	–	X	Cetacean
<i>Grampus griseus</i>	Risso's dolphin	–	X	Cetacean
<i>Lagenodelphis hosei</i>	Fraser's dolphin	–	X	Cetacean
<i>Stenella attenuata</i>	Spotted dolphin, pantropical spotted dolphin	–	X	Cetacean
<i>Stenella</i>	Striped dolphin	–	X	Cetacean

Scientific name	Common name	Threatened status	Migratory status	Listed marine species
<i>coeruleoalba</i>				
<i>Stenella longirostris</i>	Long-snouted spinner dolphin	–	X	Cetacean
<i>Steno bredanensis</i>	Rough-toothed dolphin	–	X	Cetacean
<i>Tursiops aduncus</i>	Indo-Pacific bottlenose dolphin (Arafura/Timor seas populations)	–	X	Cetacean
<i>Tursiops truncatus</i> s. str.	Bottlenose dolphin	–	–	Cetacean
<i>Orcaella heinsohni</i>	Australian snubfin dolphin	–	X	Cetacean
Fish				
<i>Rhincodon typus</i>	Whale shark	Vulnerable	X	–
<i>Isurus oxyrinchus</i>	Shortfin mako	–	X	–
<i>Isurus paucus</i>	Longfin mako	–	X	–
Other				
<i>Carcharodon carcharias</i>	Great white shark	Vulnerable	X	–
<i>Manta birostris</i>	Giant manta ray	–	X	–
Various pipefish, pipehorse, seahorse	Various pipefish, pipehorse, seahorse	–	–	32 listed

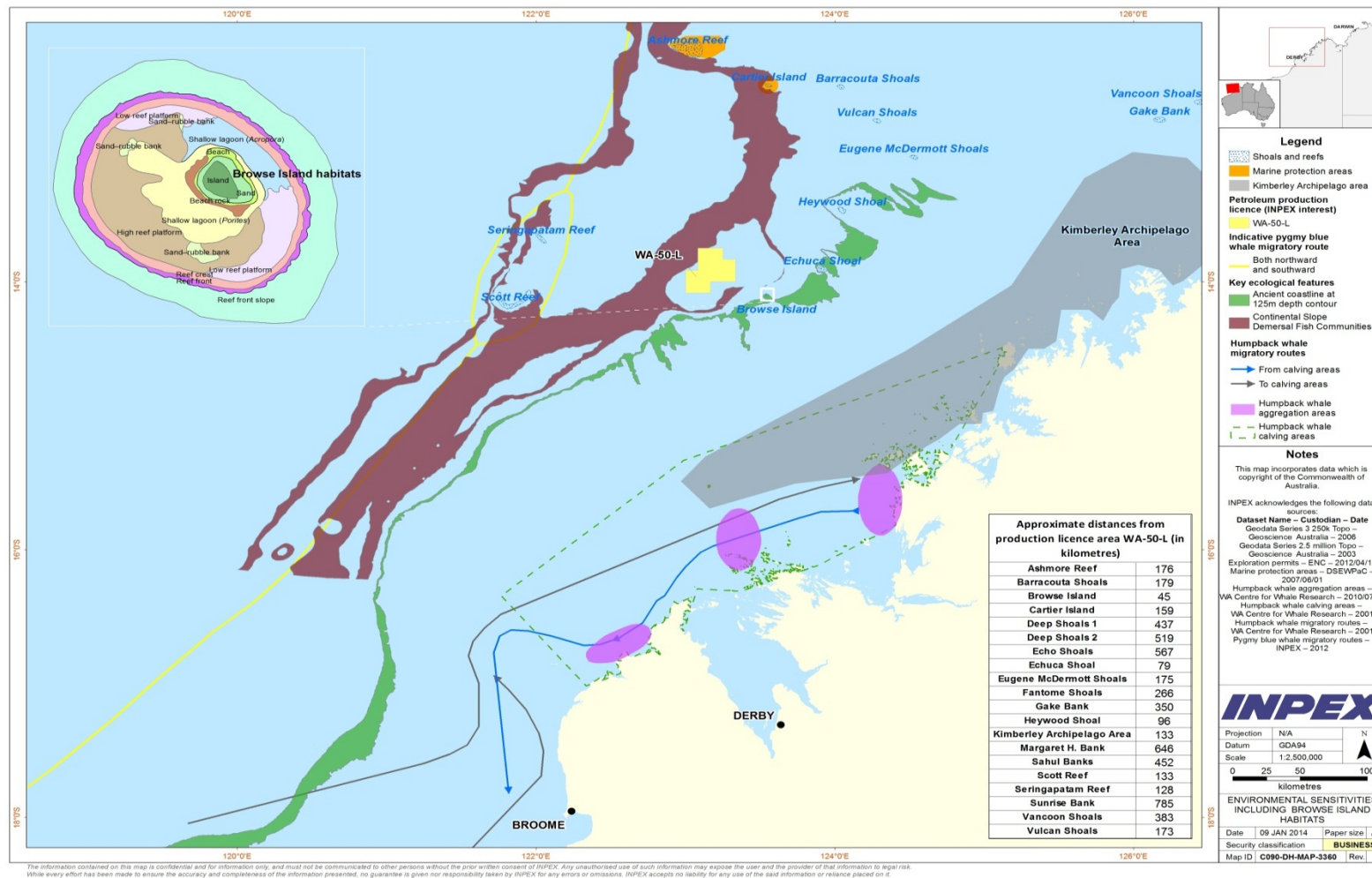


Figure 4-1: Environmental sensitivities including Browse Island habitats

4.3 Socio-economic environment

The Project area is not located in, or immediately adjacent to, any national heritage, world heritage, wetland of international importance, Commonwealth marine reserve, maritime heritage or indigenous heritage places.

Traditional Indonesian fishing, under the Memorandum of Understanding (MoU) signed by Indonesia and Australia in 1974, may occur in the Project area, however, the area traditionally fished does not directly overlap with WA-50-L.

Two Commonwealth-managed commercial fishery and three State-managed commercial fisheries overlap the Project area and include the:

- North West Slope Trawl Fishery (Commonwealth)
- Western Skipjack Tuna Fishery (Commonwealth)
- Northern Shark Fisheries, including the West Australian North Coast Shark Fishery and the Joint Authority Northern Shark Fishery (State)
- Mackerel Managed Fishery (State)
- Northern Demersal Scalefish Fishery (State).

While these fisheries overlap the Project area, no concerns were raised by the Australian Fisheries Management Authority (AFMA) or individual stakeholders during stakeholder consultation.

The Project area is located in deeper, offshore waters that are not expected to be accessed for tourism activities including recreational fishing and boating, and charter boat operations, which are typically centred around nearshore waters, islands and coastal areas.

Although there are no oil and gas production facilities currently in operation within the Browse Basin, the region is subject to considerable exploration activity. Shell is in the process of constructing a floating liquefied natural gas (FLNG) facility (Prelude) which will be located to the north east of the Project area within the Browse Basin. Additionally, the Browse Joint Venture proposes to commercialise three fields, Brecknock, Calliance and Torosa, as part of the Browse FLNG Development in the vicinity of Scott Reef.

The closest major commercial port to the Project area is Broome, approximately 450 km south-south-west of the Project area. No shipping routes traverse the Project area, with the main shipping channel located to the north-west.

The Royal Australian Air Force (RAAF) Base Curtin air to air weapons range training area is located approximately 100 km south-west of the Project area. Helicopter transfer of personnel between Broome and the Project area would always comply with any restrictions of movement in airspace. Helicopter transfer will be re-routed to avoid the restricted area when necessary and therefore, there will be no interaction with RAAF activities.

5 ENVIRONMENTAL IMPACTS AND RISKS

INPEX has a risk management process to verify that activities are undertaken such that risks are managed to 'as low as reasonably practicable' (ALARP) and acceptable levels. The risk assessment has been undertaken for all drilling activities, in accordance with the procedures outlined in the Australian and New Zealand Standards *AS/NZS ISO 31000:2009, Risk management—Principles and guidelines* and *HB 203:2012, Managing environment—Related risk*. The process is documented at various levels throughout the organisation and is supported by risk management standards, procedures and tools.

Key elements of the risk management process are as follows:

- **Identification of sources of risk/ hazard:** identifies the sources of risks (hazards) and their environmental and socio-economic impacts.
 - Identification of hazards – the identification of planned and credible unplanned interactions between aspects of the Project and environmental and socio economic receptors that represent a hazard with the potential to impact on the described environment.
 - Identification of impacts – the identification of adverse or beneficial changes to environmental and socio-economic receptors resulting from hazards (planned and credible unplanned interactions).
- **Risk analysis:** determines the level of risk (which is the product of the consequence and likelihood of an impact occurring) of an environmental impact. Inherent and residual risk analyses have been undertaken and are defined as:
 - Inherent risk – the analysis of pre-treatment (management or mitigation) risk levels demonstrates the risk of a particular impact should management or mitigation measures fail.
 - Residual risk – the analysis of post-treatment risk levels identifies all measures applied to reduce the risk to residual level.
- **Risk evaluation:** compares the level of risk found during the risk analysis process against acceptability and tolerability, and determines whether further management measures are required to reduce a risk to ALARP. The evaluation of risks has been undertaken in two stages to completely demonstrate that the environmental impacts and risks will be reduced to ALARP, these being:
 - Preliminary risk evaluation – the evaluation of planned risks (arising from planned hazards). If the preliminary risk evaluation identifies the need for a risk to be further evaluated (i.e. the risk is deemed unacceptable, intolerable and requires further management measures to be ALARP), the risk is further evaluated in the detailed risk evaluation.
 - Detailed risk evaluation – the detailed evaluation of planned risks requiring further investigation and unplanned risks (arising from unplanned hazards). The detailed risk evaluation further analyses the impacts associated with a risk, additional management measures required for the risk to be ALARP and provides a description of acceptability.

Table 5-1 provides a summary of the risks assessed for the Project.

Table 5-1: Preliminary and detailed risk evaluation of Project risks

Sources of risk (hazard)	Preliminary risk evaluation	Detailed risk evaluation
Physical presence		
Physical presence of MODU, supply vessels and helicopters	✓	
Anchoring of MODU	✓	
Introduction of invasive marine species (IMS)		✓
Interference and/or collision with marine fauna		✓
Accidental loss of equipment overboard from MODU	✓	
Well abandonment	✓	
Waste management		
Non-hazardous waste	✓	
Hazardous waste	✓	
Discharges to the marine environment: planned		
Cooling water	✓	
Treated sewage, grey-water and putrescible waste	✓	
Deck drainage and bilge	✓	
Disposal of drilling fluids and cuttings	✓	✓
Cementing fluids and additives	✓	
Blowout preventer control fluids	✓	
Brine discharge from reverse osmosis (RO) plant onboard the MODU	✓	
Discharges to the marine environment: unplanned		
Spill of marine diesel/SBM during transfer operations		✓
Vessel collision resulting in a marine diesel spill		✓
Emissions: planned		
Atmospheric emissions	✓	

Sources of risk (hazard)	Preliminary risk evaluation	Detailed risk evaluation
Light emissions	✓	
Noise emissions: general drilling operations	✓	
Sound generation: VSP		✓
Ozone depleting substances (ODS)	✓	
Emissions: unplanned		
Unplanned venting of gas during drilling		✓
Implementation strategy administration		
Failure to employ implementation strategy and performance outcomes, standards and measurement criteria		✓
Poor environmental awareness		✓
Failure to undertake scheduled audits, inspections, monitoring and review of environmental performance		✓

5.1 Control Measures

The key environmental risks and control measures to be applied to the Project are provided in Appendix A. These are consistent with INPEX's corporate and Project-specific objectives, standards and measurement criteria. All control measures associated with the hazards will be used to reduce environmental risk to ALARP and all risks will be of an acceptable level.

6 ONGOING MONITORING OF ENVIRONMENTAL PERFORMANCE

The Project will be managed in compliance with the INPEX *Pre-Reservoir Drilling Campaign WA-50-L EP* accepted by NOPSEMA under the Environment Regulations, other relevant environmental legislation and the INPEX Environment Policy.

The implementation strategy is the key mechanism of monitoring environmental performance throughout the life of the Project, with a particular focus on determining that environmental performance outcomes and standards in the EP are being met.

The implementation strategy will be undertaken in accordance with the INPEX Health Safety and Environment – Management System, which provides a foundation of standards, procedures and tools that support the implementation of the EP in accordance with Regulation 14 of the OPGGS (E) Regulations.

The key components of implementation of the EP are:

- **Policy:** provides a statement of INPEX's Environment Policy which sets the framework for the INPEX Health Safety and Environment Management System (HSE-MS) under which the Project will be managed to ensure that the environmental impacts and risks of the Project area continuously reduced to ALARP.
- **Plan:** specific INPEX standards and guidelines to be used to ensure the Project will be managed such that risks are ALARP.
- **Do:** details roles and responsibilities, training and competency measures, INPEX emergency response framework including incident management, references to the INPEX Oil Pollution and Emergency Plan (OPEP) (D020-AD-PLN-10072) and contractor Shipboard Oil Pollution Emergency Plan (SOPEP), cyclone response and emergency response training which in turn provides for the maintenance for the INPEX OPEP and contractor SOPEP, and provides details on INPEX document control procedures.
- **Check:** monitoring, audit and management of non-conformance of INPEX environmental performance and the implementation strategy.
- **Act:** management review of the Project's environmental performance and the implementation strategy.

At a high level, monitoring of environmental performance is evaluated through the following:

- annual environmental performance report which is submitted to NOPSEMA for assessment to confirm compliance with the environmental performance objectives, standards and measurement criteria outlined in the EP
- formal INPEX annual management review to (among other matters) verify the implementation, adequacy and effectiveness of the EP
- internal INPEX monthly and quarterly performance reports which include review of HSE incidents, performance against key performance indicator targets (including environmental metrics) and review of outstanding actions as a result of audits or incident investigations
- emissions and discharges monitoring data.

6.1 Environment Plan Revision

Any revisions of the EP will be conducted in accordance with Regulation 17 of the OPGGS (E) Regulations and submitted to NOPSEMA for approval. Revision of the EP will occur if there is a change, or proposed change, of circumstances or operations, for example the introduction of a new significant environmental impact/risk or increase in an existing environmental impact/risk.

7 RESPONSE ARRANGEMENTS IN THE OIL POLLUTION EMERGENCY PLAN

The INPEX *Pre-reservoir Drilling OPEP* (D020-AD-PLN-10072) details the spill response activities and arrangements, and provides a framework for response to any accidental hydrocarbon discharge from the MODU and supply vessels engaged in the pre-reservoir drilling campaign within licence area WA-50-L. Contractors (MODU and vessel) are required to comply with this OPEP. Contractors are also required to maintain emergency response plans and trained personnel as appropriate to their scope of work. INPEX will manage its contractors to verify effective spill response strategies are implemented safely.

INPEX have existing contracts in place with Australian Marine Oil Spill Centre (AMOSOC), Oil Spill Response Limited (OSRL) and RPS Asia Pacific Applied Science Associates (RPS APASA) for the supply of spill response resources, personnel and oil spill trajectory modelling (OSTM). INPEX has also entered into a MoU with the Australian Maritime Safety Authority (AMSA) which details each party's understanding of their respective roles and responsibilities when responding to marine pollution incidents, including provision of aerial response services and cost recovery.

The OPEP for the Project provides:

- protocols for response escalation and the interfacing of this OPEP with federal and state plans – most notably for vessel based spills and the interface with the National Plan for Maritime Environmental Emergencies (AMSA 2014)
- guidance and direction to the site emergency response team (ERT), incident management team (IMT) and crisis management team (CMT) in relation to all aspects of the response activities
- descriptions of the specific roles and responsibilities for spill response support roles for contractors' ERTs, INPEX IMT and CMT personnel in the event of a marine hydrocarbon spill
- an outline of the proposed schedule for the testing of spill response arrangements (i.e. exercises, drills and audits)
- an outline of the primary and secondary response strategies, including detailed response action plans which provide practical "action based" resource guides for implementation of response strategies in the event of a spill. The response actions plans outline the specific actions and outcomes, resources required and suppliers, and persons/ organisations responsible for implementing the response. Refer to Section 7.1 for further details.
- for effective operational and scientific monitoring in response to an oil spill event, if required based on the nature and scale of the spill. Plans contained in the Operational and Scientific Monitoring Program (OSMP) will be implemented as part of the response strategies detailed in Section 7.1.

7.1 Primary and secondary response strategies

Primary response strategies

The primary response strategies considered ALARP and acceptable (depending on the tier of spill) for the credible spill scenarios that could occur as a result of the Project are:

- *Monitoring and evaluation:*
 - Overarching outcome: Spills monitored and evaluated (based on the adverse exposure zone) throughout the course of the spill until there are no visible signs of pollution at the sea surface.
 - The following techniques will be used to deliver the response strategy, as appropriate to the tier of spill: vessel surveillance, OSTM, tracking buoy deployment and subsequent tracking, aerial and satellite spill surveillance, satellite imagery analysis and operational monitoring program surveys.
- *Pre-contact wildlife response*
 - Overarching outcome: Protect wildlife from hydrocarbon impact.
 - The following hazing practices to exclude wildlife from the spill area may be adopted depending on nature of the spill threat and wildlife affected - artificial visual, auditory threat stimuli or exclusion devices.

Secondary response strategies

Secondary response strategies are provided to present options to reflect required flexibility for response planning in actual spill circumstances. These secondary response strategies may be enacted in the unlikely event that results of modelling an incident indicate that the behaviour and fate of a spill is significantly different to the modelled credible spill scenarios presented in this OPEP. Secondary responses would also only be implemented if they satisfy all conditions of the secondary response strategy decision making process and may be activated in conjunction with the primary response strategies (as appropriate).

Secondary response strategies which may be implemented include:

- protect and deflect
- post-contact wildlife response
- containment and recovery.

8 CONSULTATION

INPEX has been a member of the Australian business community since 1986 and during this time has engaged with stakeholders on a regular basis for a broad range of activities. As such, INPEX has utilised well-developed stakeholder engagement procedures in order to consult in an appropriate manner with a variety of stakeholders relevant to the Project. The engagement planning process included the following tasks:

- convene stakeholder identification and classification workshop
- compile list of stakeholders
- rate stakeholder levels of interest and expectations
- rate stakeholder levels of influence
- determine appropriate method of stakeholder engagement
- finalise and approve stakeholder register.

INPEX has utilised this process to engage with 'relevant' stakeholders that have an interest in or the potential to be affected by the Project, as consistent with Regulation 11A of the OPGGS (E) Regulations. Stakeholder groups that were identified as 'relevant' during this process are presented in Table 8-1 and include:

- Commonwealth, state/territory and local government departments and agencies
- Ministers of relevant portfolios
- National Native Title Tribunal and relevant Aboriginal and Torres Strait Islander land councils and prescribed bodies corporate
- commercial fishing industry associations and individual operators (permit or licence holders/lessees) in fisheries potentially impacted by our activities
- recreational fishing associations
- environmental, heritage and marine research groups
- Aboriginal and Torres Strait Islander communities (Traditional Owners) in areas potentially impact by our activities
- oil and gas industry peers
- business groups.

Table 8-1: Relevant Stakeholders identified for the Project

Organisation	Relevance
AMSA	Authority, Commonwealth, Regulator
Department of Transport (DoT)	Authority, Western Australia, state/local authority
AMOSC	Business, Australia, Service provider
OSRL	Business, Australia, Service provider

Organisation	Relevance
Department of the Environment (DoE). (Formerly DSEWPaC)	Authority, Commonwealth, Regulator
Australian Institute of Marine Science (on behalf of Western Australian Institute of Marine Science (WAMSI))	Business, Australia, Service provider
Asia Pacific Applied Science Associates (APASA)	Business, Australia, Service provider
Minister for Environment	Authority, Australia, Elected officials
Department of Industry (Formerly the Department of Resources, Energy and Tourism (DRET))	Authority, Commonwealth, Regulator
Minister for Industry (Formerly Resources and Energy; Tourism)	Authority, Australia, Elected officials
Minister for Energy	Authority, Australia, Elected officials
Broome Port Authority (BPA)	Authority, Western Australia – Broome, state/local authority
Department of Parks and Wildlife (DPaW) (Formerly Department of Environment and Conservation (DEC) – Includes Marine Parks and Reserves Authority)	Authority, Western Australia, Regulator
Department of Environment Regulation (DER)	Authority, Western Australia, Regulator
Department of Mines and Petroleum (DMP)	Authority, Western Australia, state/local authority
Shire of Derby/West Kimberley (SDWK)	Authority, Western Australia, state/local authority
Shire of Wyndham/East Kimberley	Authority, Western Australia, state/local authority
Office of Minister for Mines and Petroleum	Authority, Western Australia, Elected official
Department of Agriculture (DoA) - Biosecurity (Formerly the Department of Agriculture, Fisheries and Forestry (DAFF))	Authority, Commonwealth, Central authority
ConocoPhillips Australia Pty Ltd	Business, Northern Territory, Oil and gas industry-neighbours
ENI Australia BV	Business, Northern Territory, Oil and gas industry-neighbours

Organisation	Relevance
Shire of Broome	Authority, Western Australia, state/local authority
World Wildlife Fund for Nature (WWF)	Civil Society, Australia, Environmental non-government organisation (eNGO)
Bardi Jawi Prescribed Body Corporate	Authority, Australia, Native title representative body
Kimberley Land Council (KLC)	Civil Society, Western Australia – Kimberley, Aboriginal authority
Djarindjin Community	Civil Society, Western Australia – Kimberley, Aboriginal community
Wanjina-Wungurr (Native Title) Aboriginal Community	Civil Society, Western Australia – Kimberley, Aboriginal community
Yawuru Native Title Holders Aboriginal Community	Civil Society, Western Australia – Kimberley, Aboriginal community
Kooljaman at Cape Leveque	Civil Society, Western Australia – Kimberley, Aboriginal community
Lombadina Community	Civil Society, Western Australia – Kimberley, Aboriginal community
Department of Aboriginal Affairs	Authority, Western Australia, Regulator
Indigenous Land Corporation	Authority, Australia, Central authority
National Native Title Tribunal (NNTT)	Authority, Commonwealth, Central authority
National Offshore Petroleum Titles Administrator (NOPTA)	Authority, Commonwealth, Central authority
Australian Hydrographic Service (Department of Defence)	Authority, Commonwealth, Central authority
Department of Defence – Northern Command	Authority, Commonwealth, Central authority
Australian Fisheries Management Authority (AFMA) North West Slope Trawl Fishery (NWSTF) Southern Bluefin Tuna Fishery Western Skipjack Fishery Western Tuna and Billfish Fishery	Authority, Commonwealth, Central authority
Australian Customs Service - Customs Coastwatch	Authority, Commonwealth, Central authority
Department of Fisheries (DoF)	Authority, Western Australia, state/local authority
Minister for Fisheries	Authority, Australia, Elected officials

Organisation	Relevance
Commonwealth Fisheries Association (CFA)	Business, Australia, Industry association – marine
Western Australian Fishing Industry Council (WAFIC), including stakeholders: Kimberley Prawn Managed Fishery Mackerel Managed Fishery Northern Demersal Scalefish Fishery Joint Authority Northern Shark Fisheries Pearl Producers Association, Kimberley Professional Fishermen's Association (KPFA) Northern Shark Fisheries, including the West Australian North Coast Shark Fishery and the Joint Authority Northern Shark Fishery	Business, Western Australia, Industry association – marine
Minister for Fisheries Western Australia	Authority, Western Australia Australia, Elected officials
Jamaclan Marine Services (JMS)	Business, Australia. Industry association- marine
Western Australian Fishing Industry Council (WAFIC)	Business, Western Australia, Industry association- marine
Pearl Producers Association (PPA)	Business, Western Australia, Industry association- marine
Australian Conservation Foundation (ACF)	Civil Society, Australia, eNGO
Centre for Whale Research (WA) Inc.	Business, Western Australia, Industry association- marine
Conservation Council of WA (CCWA)	Civil Society, Western Australia, eNGO
Recfishwest	Civil Society, Western Australia, Recreational groups
Private commercial fishing permit holders - various	WA fisheries contacts – business
Private commercial fishing permit holders - various	Commonwealth fisheries contacts – business

8.1 Consultation undertaken

INPEX has produced an activity-specific factsheet detailing key information about development drilling activities, including:

- description, location and schedule (timing and duration)

- vessels/equipment to be used and logistics information
- environmental sensitivities and management approach
- contact information for stakeholder queries and feedback, and a means for the stakeholder to “opt out” of further communications.

In addition to provision of the factsheet, INPEX has also engaged with stakeholders through face-to-face meetings, emails and phone calls, as needed, to provide additional information on the overall development drilling campaign and the consultation process.

To date, consulted stakeholders have not raised concerns with regards to the overall development drilling campaign. The feedback received has related primarily to requests for the factsheet or for further engagement. Other requests related to notifications required by some Agencies/Authorities and these requirements have been included in the EP as performance standards in control/mitigation measures.

In October 2014, after the opportunity to engage a second MODU to assist in the Development Drilling Campaign activities was confirmed, a stakeholder identification activity was conducted to review the consultation undertaken in 2013 and 2014 to identify:

1. if relevant information associated with pre-reservoir drilling activities had been provided
2. if there were any gaps in the information provided in 2013 to relevant stakeholders
3. if there were any additional stakeholders relevant to pre-reservoir drilling activities not previously consulted.

8.2 Ongoing consultation

As appropriate to the nature and the scale of the Project, INPEX has planned for only a low level of ongoing consultation during the operational phase of the activities.

Stakeholders will be notified of any proposed changes, and how they may be affected, verbally and/or by e-mail or letter.

Ongoing stakeholder feedback and concerns have been encouraged during previous consultation efforts and, through, use of the INPEX contact details provided in the fact sheet, stakeholders can continue to contact INPEX with feedback.

9 TITLEHOLDER'S NOMINATED LIAISON PERSON

The main point of contact for further information regarding this EP or the Project is:

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10 REFERENCES

Australian Maritime Safety Authority (AMSA). 2014. The National Plan for Maritime Environmental Emergencies. Australian Maritime Safety Authority, Canberra. Viewed online on 3 April 2014 at < <http://www.amsa.gov.au/environment/maritime-environmental-emergencies/national-plan/> >.

Bureau of Meteorology (BoM). 2013. Climate Statistics. Bureau of Meteorology. <http://www.bom.gov.au/> (Accessed: 26/03/2013)

Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC). 2013. Conservation Values Atlas. <http://www.environment.gov.au/coasts/marineplans/cva/index.html> (Accessed: 05/07/2013)

INPEX. 2010. Ichthys Gas Field Development Project: Draft Environmental Impact Statement. Prepared for INPEX.

McLoughlin, R.J., Davis, T.L.O. and Ward, T.J. 1988. Sedimentary provinces, and associated bedforms and benthos on the Scott Reef-Rowley Shoals platform off north-west Australia. RPS Environmental Pty Ltd. 2007. INPEX Environmental Impact Assessment Studies – Technical appendix: Marine sediment and water quality. Report prepared by RPS Environmental Pty Ltd, Perth, for INPEX Browse, Ltd., Perth, Western Australia.

APPENDIX A: ENVIRONMENTAL IMPACTS, RISKS AND CONTROL MEASURES

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
Physical presence		
Physical presence of MODU, supply vessels and helicopters	<p>Interference with and/or exclusion of other commercial users.</p> <p>Damage or loss of equipment</p> <p>Loss of access within 500 m safety exclusion zone leading to loss of revenue</p>	<ul style="list-style-type: none"> Establishment and maintenance of a 500 m petroleum safety zone around the MODU. MODU safety case (or revision) stipulates only supply vessels enter the 500 m safety exclusion zone upon receiving approval from the Offshore Installation Manager (or appropriate delegate). A company standby vessel will be on location and radar will be used to warn any vessels should they come within the exclusion zone. Implementation of a stakeholder engagement procedure and consultation with relevant stakeholders. Adherence of contractors to relevant standard maritime safety or navigation procedures, as per <i>Navigation Act 2012</i>, <i>Convention on the International Regulations for Preventing Collisions at Sea 1972</i>, Part B – Steering and Sailing (Rules 4–19), International Finance Corporation (IFC) <i>Environment, Health and Safety Guidelines for Offshore Oil and Gas Development – Ship collision and Marine Orders – Part 30: Prevention of collisions, Issue 8</i> (Order No. 5 of 2009) (as implemented by the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i>), as appropriate to vessel class. Contractor compliance with the <i>INPEX Aviation Standard</i> (PER-00146046).
Anchoring of MODU	Temporary physical scarring of benthic habitats	<ul style="list-style-type: none"> Pre-drilling surveys to verify MODU anchoring takes place in areas which do not support sensitive benthic primary producer habitat. Preparation and implementation of a Rig Move and Positioning Plan prior to the MODU arriving in the Project area.
Introduction of IMS	<p>Reduction in species biodiversity of surrounding environment</p> <p>Displacement of native marine species</p> <p>Socio-economic impacts on commercial resources (e.g. fisheries)</p>	<ul style="list-style-type: none"> Adherence of contractors to the <i>INPEX Quarantine (Environmental) Management Standard</i> (C075-AH-STD-0020) and <i>INPEX Marine Quarantine Guidelines</i> (C075-AH-GLN-0016). Pre-mobilisation IMS risk assessment completed for selected MODU or relevant vessels (vessel mobilised from outside of Australian waters and required to enter and operate within nearshore Australian waters defined as being with 12 nautical miles of land and waters less than 50 m depth). Based on the outcomes of the IMS risk assessment, implement management measures commensurate with the risk, such as inspections and movement restrictions. Compliance with all Australian legislation and current guidance from Department of Agriculture and WA Department of Fisheries associated with quarantine matters. Maintenance of a biofouling record book and ballast water exchange book. Ballast water management requirements, including ballast water exchange book.

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
Interference/ collision with marine fauna	Marine fauna behavioural change Injury or mortality of significant fauna from vessel strike	<ul style="list-style-type: none"> Vessels will comply with EPBC Regulations 2000 – Part 8 Division 8.1. Implementation of the INPEX <i>Marine Megafauna Interaction and Observation Procedure</i> (C075-AH-PRC-0029). Crew briefings. Bridge crew trained in marine mammal and marine turtle identification.
Accidental loss of equipment overboard from MODU	Temporary localised damage/ disturbance of benthic habitats	<ul style="list-style-type: none"> Mobilise supply vessel to pick up floating objects. Maintenance of clear work areas (i.e. good housekeeping practices). Elimination of working at heights, if possible. Certified lifting equipment and use of working at heights tools to prevent dropped objects. Post-well remotely operated vehicle (ROV) survey to verify no dropped objects present. Retrieval of any dropped objects where safe and feasible.
Well abandonment	Temporary localised damage/ disturbance of benthic habitats Localised decline in water quality	<ul style="list-style-type: none"> Implement the INPEX <i>Well Construction and Integrity Well Design Standard</i> (PER-00227668) and drilling campaign Well Operations Management Plan (WOMP). Casings will be cut below the seafloor with a post-well ROV survey will be conducted to verify this is conducted.
Waste management		
Improper management of non-hazardous waste	Pollution and contamination of the environment Injury or mortality of marine biota (ingestion, or entanglement with litter)	<ul style="list-style-type: none"> Compliance with the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> – Parts IIIA and IIIC. Compliance with <i>Marine Orders – Part 95: Marine Pollution Prevention – Garbage</i> (as appropriate to vessel class), including maintenance of a garbage disposal record. Adherence to INPEX <i>Offshore Development Drilling Waste Management Plan</i> (C020-AH-PLN-00005) and the INPEX <i>Offshore Development Drilling Liquid Discharge Management Plan</i> (C020-AD-PLN-00006). Preparation and implementation of Contractors' Waste Management Plan.
Improper management of hazardous waste	Temporary and localised reduction in water quality leading to toxic effects on marine biota Injury or mortality of marine biota	<ul style="list-style-type: none"> Compliance with the <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983</i> – Parts IIIA and IIIC. Compliance with <i>Marine Orders – Part 94: Marine Pollution Prevention – Packaged Harmful Substances</i> (as appropriate to vessel class). Adherence to INPEX <i>Offshore Development Drilling Waste Management Plan</i> (C020-AH-PLN-00005) and the INPEX <i>Offshore Development Drilling Liquid Discharge Management Plan</i> (C020-AD-PLN-00006). Preparation and implementation of Contractors' Waste Management Plan, which includes

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
		<p>prohibition of discharge or disposal of hazardous waste overboard to sea.</p> <ul style="list-style-type: none"> Contractor compliance with the INPEX <i>Chemical Selection, Assessment and Approval Procedure</i> (C075-AH-PRC-0028).
Discharges to the marine environment: planned		
Cooling water discharge	<p>Localised increase in ambient sea water temperature</p> <p>Reduction of water quality</p>	<ul style="list-style-type: none"> Adhere to International Finance Corporation (IFC) and World Bank Effluent Emission Standards for all discharges of cooling water. Release of cooling water will be above sea level to enable effective cooling, aeration and dispersion. Biocide concentrations monitored to ensure they are kept at minimum dosage required to maintain system integrity.
Treated sewage, grey water and putrescible waste discharge	Reduction in water quality	<ul style="list-style-type: none"> Manage and dispose of sewage and putrescible wastes in accordance with MARPOL 73/78 Annex IV and Annex V (as appropriate to vessel class), Marine Orders – Part 96: Marine Pollution Prevention – Sewage and Marine Orders - Part 95: Marine Pollution Prevention – Garbage. Adherence to IFC <i>Environmental, Health and Safety Guidelines for Offshore Oil and Gas Development</i> Current International Sewage Pollution Prevention Certificate. Sewage and putrescible wastes macerated to a diameter of less than 25 mm prior to disposal. Untreated and treated sewage disposal land proximity restrictions. Discharge records maintained.
Drainage overboard of treated bilge and treated and untreated deck drainage	Temporary and localised reduction in water quality	<ul style="list-style-type: none"> Compliance with <i>Marine Orders – Part 91: Marine Pollution Prevention – Oil; and Marine Orders – Part 94: Marine Pollution Prevention – Packaged Harmful Substances</i>, as appropriate to vessel class, <i>Protection of the Sea (Prevention of Pollution from Ships) Act 1983 – Part II</i> and the IFC <i>Environmental, Health and Safety Guidelines for Offshore Oil and Gas Development</i> Liquids with oil-in-water content exceeding 15 ppm will be contained and disposed of onshore. Liquids from drains will be discharged only if the oil-in-water content does not exceed 15 ppm. MODU and vessels will have current MARPOL compliant ship oil pollution emergency plan (SOPEP). Adherence to INPEX <i>Offshore Development Drilling Liquid Discharge Management Plan</i> (C020-AD-PLN-00006). MODU/vessel contractors will prepare and implement specific procedures which will ensure a

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
		functioning deck drainage system.
Disposal of drill fluids and drill cuttings (residual SBM on drill cuttings and WBM)	Increased water turbidity Smothering of significant benthic fauna Temporary and localised reduction in water quality	<ul style="list-style-type: none"> Contractor compliance with the INPEX <i>Management of Chemicals Guideline</i> (C075-AH-GLN-0006), INPEX <i>Chemical Selection, Assessment and Approval Procedure</i> (C075-AH-PRC-0028) and INPEX <i>Drilling and Completion Fluid Selection Guideline</i> (PER-2151146729). Discharges of SBM drill cuttings in accordance with the WA Department of Mines and Petroleum Guidelines: Drilling Fluids Management. No planned discharge of whole SBM drilling fluids offshore. Discharge of fluids (WBM only) and cuttings will be near the sea surface to enhance dispersion through the water column. Bunkering procedures for SBM transfers will be prepared and implemented. Verification that procedures are prepared and implemented which detail the safe and efficient use of the Riserless Mud Recovery system (RMR) and for discharge and treatment of SBM and WBM cuttings. Verification that the MODU contractor adheres to the IFC recommendations regarding the discharge of drilling fluids and cuttings.
Discharge of cementing fluids and additives	Increased water turbidity Smothering of significant benthic fauna Temporary and localised reduction in water quality	<ul style="list-style-type: none"> Verification that MODU specific procedures align with the INPEX <i>Management of Chemicals Guideline</i> (C075-AH-GLN-0006), which includes selection of cement through the INPEX <i>Chemical Selection, Assessment and Approval Procedure</i> (C075-AH-PRC-0028), use of a ROV survey to monitor for cement breaking seabed and recording of cement volumes discharged. Verification that the MODU contractor complies with NOHSC: 1008 (2004) – <i>Approved Criteria for Classifying Hazardous Substances</i>, INPEX <i>Management of Chemicals Guideline</i> (C075-AH-GLN-0006) and INPEX <i>Offshore Development Drilling Liquid Discharge Management Plan</i> (C020-AD-PLN-00006).
BOP and subsea control fluid discharge	Temporary and localised reduction in water quality	<ul style="list-style-type: none"> Contractor compliance with the corporate INPEX <i>Management of Chemicals Guideline</i> (C075-AH-GLN-0006) and INPEX <i>Chemical Selection, Assessment and Approval Procedure</i> (C075-AH-PRC-0028), which includes the use of the CHARM and OCNS rating as selection criteria in the selection of BOP control fluid. Adhere to INPEX <i>Offshore Development Drilling Liquid Discharge Management Plan</i> (C020-AD-PLN-00006).
Brine discharge from RO plant onboard the MODU	Temporary and localised reduction in water quality	<ul style="list-style-type: none"> Adhere to the IFC Environmental, Health and Safety Guidelines, specifically mixing of desalination brine with other waste streams, if feasible. Adhere to INPEX <i>Offshore Development Drilling Liquid Discharge Management Plan</i> (C020-AD-PLN-00006).

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
Emissions: planned		
Atmospheric emissions combustion of fuel or incineration of waste	Reduction in localised air quality Contribution to global greenhouse gas emissions	<ul style="list-style-type: none"> • Use of low sulfur diesel. • Compliance with the <i>Navigation Act 2012 – Marine Orders – Part 97: Marine Pollution Prevention – Air Pollution</i>, Annex VI, as appropriate to vessel class. • All power generation equipment is maintained and operated in accordance with manufacturer's specifications through the implementation of an operational preventative maintenance system.
Light emissions from MODU and support vessels	Attraction, disorientation or repulsion of migratory seabirds, fish and marine turtles	<ul style="list-style-type: none"> • Lighting will be kept at the lowest acceptable level for safe operating but be consistent with the requirements of the <i>Navigational Act 1912, Marine Orders – Part 30 Prevention of Collision Convention, Issue 8</i> (Order No. 5 of 2009) and International Association of Marine Aids Navigation and Lighthouse Authorities (IALA) Recommendations 0–139: <i>The marking of man-made offshore structures</i>. • HSE inspection of the MODU includes consideration of lighting in terms of safe working conditions and minimising impact on marine fauna.
Noise emissions: general drilling operations	Behavioural change and increased stress levels to marine fauna	<ul style="list-style-type: none"> • Operations to be undertaken in accordance with EPBC Regulations 2000 – Part 8, Division 1. • Implement the INPEX <i>Marine Megafauna Interaction and Observation Procedure</i> (C075-AH-PRC-0029).
Noise emissions: VSP	Behavioural change and increased stress levels to marine fauna	<ul style="list-style-type: none"> • VSP operations will be undertaken in accordance with EPBC Act Policy Statement 2.1. • Implement the INPEX <i>Marine Megafauna Interaction and Observation Procedure</i> (C075-AH-PRC-0029).
ODS	Contribution to global ozone depletion	<ul style="list-style-type: none"> • Maintenance of an ODS Record Book, as required by MARPOL Annex VI (Regulation 12) - Ozone-Depleting Substances from refrigerating plants and firefighting equipment.
Discharges to the marine environment: unplanned		
Spill of MGO/SBM during transfer operations	Temporary and localised reduction in water quality Potential hydrocarbon contact with marine wildlife	<ul style="list-style-type: none"> • Strict adherence to vessel bunkering procedures, INPEX <i>Contractor and Supplier HSE Management Standard</i> (C075-AH-PRC-0004), MARPOL 73/78, Annex I, which include: <ul style="list-style-type: none"> - bunkering undertaken in daylight hours, if operations permit and weather is favourable - use of dry break coupling and weak link break-away coupling - bulk transfer hoses are certified and rated for hydrocarbons and pressure tested - establishment and maintenance of good communications between vessel captain and MODU personnel - monitoring of prevailing and forecast weather conditions - preventative maintenance of equipment.

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
		<ul style="list-style-type: none"> - MODU and vessels have current SOPEP. • Verification that the MODU drilling fluids contractor complies with the INPEX <i>Chemical Selection, Assessment and Approval Procedure</i> (C075-AH-PRC-0028), including selection of low toxicity SBM
Vessel collision, resulting in spill of MGO	<p>Temporary and localised reduction in water quality</p> <p>Potential hydrocarbon contact with marine wildlife</p>	<ul style="list-style-type: none"> • MODU and vessels equipped with appropriate navigational systems, training, practices depth sounders and aids consistent with the <i>Convention on the International Regulations for Preventing Collisions at Sea 1972</i> (COLREGS), Part B – Steering and Sailing <i>Marine Orders – Part 30: Prevention of collisions</i>, IFC <i>Environmental, Health and Safety Guidelines for Offshore Oil and Gas Development and Navigation Act 2012</i> (as appropriate to vessel class), including standard AMSA maritime safety/navigation procedures. • A ‘Notice to Mariners’ issued through AMSA. • Implementation of a stakeholder engagement procedure and consultation with relevant stakeholders consistent with the OPGGS (Environment) Regulations 11A – <i>Consultation with relevant authorities, persons and organisations</i>. • Establishment and maintenance a 500 m safety exclusion zone around the MODU in line with the OPGGS Act 2006 – Section 616. • Simultaneous operations in the Ichthys field managed in accordance with the INPEX <i>Ichthys Field Management Plan</i> (X071-AB-PLN-00001) and INPEX <i>Offshore Construction and Installation SIMOPS Procedure</i> (A063-AY-PRC-0001). • Vessel selection will be conducted with regard to the INPEX <i>Contractor and Supplier HSE Management Standard</i> (C075-AH-STD-0004) and supporting INPEX <i>Contractor and Supplier HSE Management Procedure</i> (C075-AH-PRC-0004) and INPEX <i>Vessel Inspection Procedure</i> (C062-AW-PRC-0001). • MODU/ vessel contractors will comply with MARPOL 73/78 Annex I requirements for a SOPEP. • MODU and vessel contractors will comply with the INPEX <i>Support and Supply Vessel Cyclone Response Procedure</i> (A060-AW-PRC-0002) in cyclone conditions.
Emissions: unplanned		
Unplanned venting of gas during drilling	<p>Reduction in localised air quality</p> <p>Contribution to global greenhouse gas emissions</p>	<ul style="list-style-type: none"> • Implementation of INPEX <i>Well Construction and Integrity Well Control Standard</i> (PER-00227669) and WOMP.

Source of risk (hazard)	Potential environmental impact	Control/ mitigation measures
Implementation strategy administration		
Failure to execute the implementation strategy and performance objectives, standards and measurement criteria	Environmental impacts dependent on the nature of the non-conformance action or incident	<ul style="list-style-type: none"> • Compliance with INPEX <i>HSE-MS Requirements</i> (specifically the INPEX <i>HSE Performance Measurement and Reporting Standard</i>; C075-AH-STD-0048) and INPEX <i>Incident Reporting, Recording and Investigation Standard</i> (C075-AH-STD-0006). • Comply with the INPEX <i>HSE Training and Competency Standard</i> (C075-AH-STD-0011) to ensure personnel are competent. • Significant changes are managed in accordance with the INPEX <i>Ichthys Project Management of Change Standard</i> (C075-AH-STD-0027).
Poor environmental awareness	Environmental impacts dependent on the nature of the non-conformance action or incident	<ul style="list-style-type: none"> • Environmental inductions provided to all employees.
Failure to undertake scheduled audits, inspections, monitoring and review of environmental performance	Environmental impacts dependent on the nature of the non-conformance action or incident	<ul style="list-style-type: none"> • Adherence to the INPEX <i>HSE Audit, Inspection, Monitoring and Review Standard</i> (C075-AH-STD-0025) and the INPEX <i>Ichthys Project Action Tracking System Procedure</i> (C050-AG-PRC-0002).