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Esso Australia Resources Pty Ltd (“Esso”)

**MARLIN B PLATFORM DRILLING ENVIRONMENT PLAN
SUMMARY**

Document Number: AUGO-PO-EMP-060



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1. Introduction

This Environment Plan (EP) summary has been prepared in accordance with the requirements of Regulation 11 (3) and (4) of the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009*. This document summarises the Marlin B Platform Drilling Environment Plan (AUGO-PO-EMP-040), which was accepted by the National Offshore Petroleum Safety Environment Management Authority (NOPSEMA) on 7 October 2014.

The Marlin B Platform Drilling EP covers the drilling and completion activities for the Marlin B Platform Drilling Program. These activities consist of the drilling and completion of five wells, one oil well and four gas producing wells, in the Turrup field, known as the 'base drilling program'. The wells will be drilled from the Marlin B platform using International Sea Drilling Limited's (ISDL) Minimum Area Self Erecting (MASE) Rig 175, in Production Licence Area VIC/L03, approximately 42 km from the Victorian coast.

A further eight expansion wells (oil and gas wells) may be drilled following the drilling and completion of the base drilling program from the Marlin B platform. These expansion wells are also covered by the Marlin B Platform Drilling EP.

Esso Australia Resources Pty Ltd ("Esso") is the operator and a titleholder of the abovementioned production licences and licenced petroleum pipelines. ExxonMobil Australia is the holding company for the Esso and Mobil companies in Australia.

1.1. Location of the Activity

The Marlin B platform is located within the Gippsland basin, approximately 42 km off the Victorian coast in Bass Strait (see Figure 1). The Marlin B platform is situated in a water depth of 59 metres mean sea level (MSL).

The coordinates for the Marlin B platform are provided below:

38° 13' 46" South Latitude
148° 13' 16" East Longitude

The Turrup field underlies the Marlin B platform in Production Licence VIC/L03.

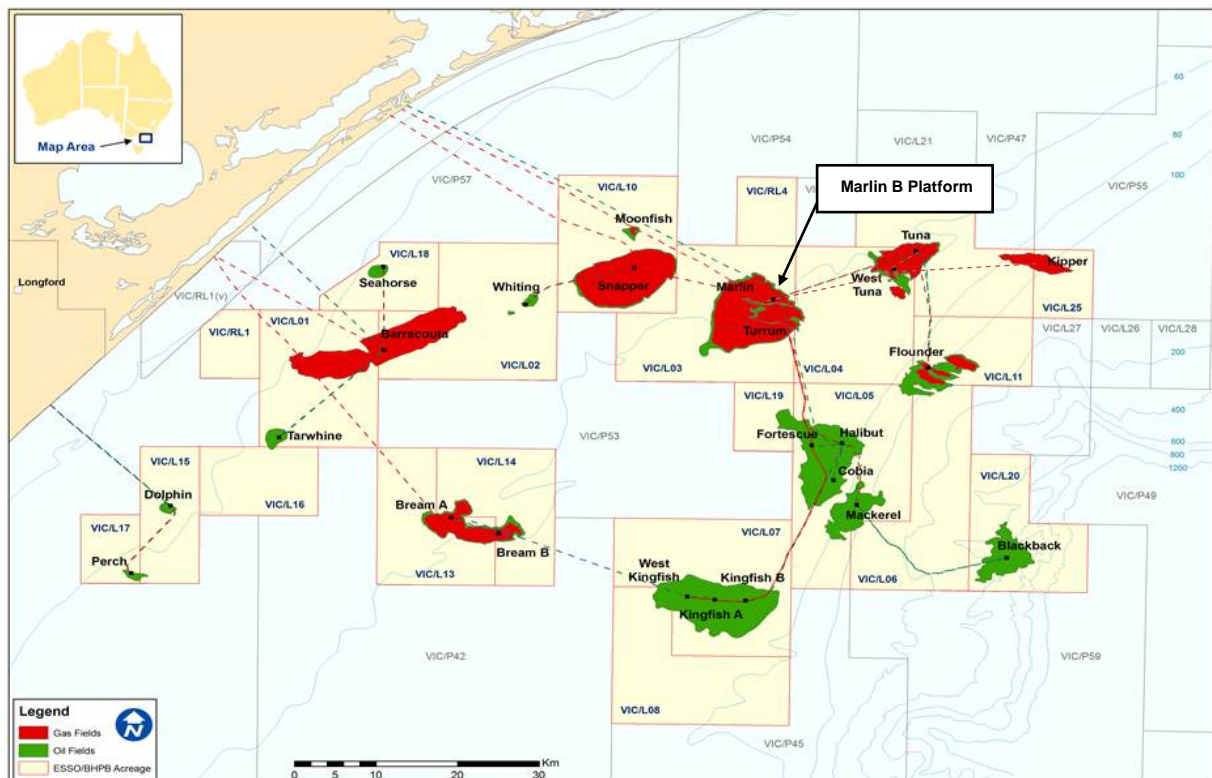


Figure 1 Esso production facilities in Bass Strait



2. Description of the Activity

The Marlin B Platform Drilling Program includes the drilling and completion of five wells (one oil producing well and four gas producing wells) in the Turrum field. The wells will be drilled from the Marlin B platform (Figure 2) using ISDL MASE Rig 175 (Figure 3). A further eight expansion wells (oil and gas wells) may be drilled following the drilling and completion of the base drilling program.

The Marlin B Platform Drilling Program is planned to commence in the fourth quarter of 2014, with drilling expected to continue through 2015. Potential for drilling expansion wells could extend the program to the fourth quarter of 2017.

The general drilling procedure for the base program wells starts with the drilling of a surface hole from the pre-installed conductor. The surface casing is then run and cemented in place. These operations are conducted with a diverter in place. A surface-mounted blowout preventer is installed, and production hole section is drilled. The production casing is then run and cemented in place. Completion tubing is then installed.

Drilling operations will be supported by a supply vessel. The supply vessel will provide drilling equipment, casing, drill pipe and drilling fluids to the platform.



Figure 2 Marlin B Platform (left) connected to Marlin A Platform



Figure 3 ISDL MASE Rig 175 on a Bass Strait platform in 2008, 45° aerial view



2.1. Activities that have the Potential to Impact the Environment

Activities that have the potential to impact the environment from planned activities are divided into four main groups and include:

Drilling Rig Operations and Presence

- Operational emissions (noise, lighting and air emissions).

Support Vessel Operations

- Vessel operations and movement.

Chemicals

- Chemical and hazardous substances storage and handling.
- Bulk transfer activities.
- Supply vessel transfers of packaged materials.

Drilling and Completions

- Surface hole drilling with water based mud (WBM).
- Displacement of drilling fluids and management of interface fluids during displacement from WBM to non-aqueous drilling fluid (NADF).
- Production hole drilling with NADF.
- Cementing operations.
- Well bore clean up activities.
- Use and storage of radioactive sources.
- Crane operations and lifting activities.

The hazards associated with these activities were all assessed for their potential impact on the environment and are outlined in Section 4.



3. Description of the Receiving Environment

This section describes the environment in the platform operating area (i.e. the immediate zone around the platform) and the surrounding area (i.e. the area identified, through Oil Spill Trajectory Modelling, as potentially being impacted by a loss of well control/well blowout event).

3.1. Physical Environment

The Marlin B platform is located in Commonwealth waters within the Gippsland basin, in Production Licence VIC/L03, approximately 42 km off the Victorian coast in Bass Strait. Bass Strait is the region of the continental shelf that separates mainland Australia from Tasmania. Bass Strait, including the platform operating area and surrounds, is located in a relatively shallow area of the continental shelf and has high winds and strong tidal currents. The area includes marine parks and reserves, as well as listed endangered or vulnerable species.

Wind speeds are in the range of 10 to 30 km per hour, with maximum gusts reaching 100 km per hour. The wind direction is predominately westerly during winter, westerly and easterly during spring and autumn (when wind speeds are highest) and easterly during summer. Average offshore summer air temperatures range from 13 to 21°C and average winter temperatures range from 9 to 14°C.

Temperatures in the subsurface waters of the operating area range from about 13°C in August/September to 16°C in February/March. Surface temperatures can exceed 20°C at times in late summer due to the warmer waters of the East Australia Current entering Bass Strait.

Currents around the platform location are tide and wind driven. Tidal movements predominantly have a northeast–southwest orientation. Tidal flows come from the east and west during a rising (flood) tide, and flow out to the east and west during a falling (ebb) tide.

The area around the platform is a high energy environment exposed to frequent storms and significant wave heights. The bathymetry in the Gippsland Basin (Bass Strait, off mainland south-eastern Victoria) is concave shaped, with a shallower rim on the eastern and western entrances to the Strait and a deeper centre.

3.2. Biological Environment

The platform operating area and surrounds support a range of benthic (seabed) invertebrate fauna as well as a variety of vertebrate species such as fish, birds, seals and whales, including listed, endangered, and vulnerable species under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The platform operating area and surrounds also contain a number of marine fauna that have high commercial value.

3.2.1. Species Listed Under the EPBC Act

3.2.1.1. Fish and Shellfish

It is estimated that there are over 500 species of fish found in the platform operating area and surrounds, including a number of species of importance to commercial and recreational fisheries. Four fish species potentially occurring within the surrounding area were listed as ‘threatened’ under the EPBC Act; the Black Rockcod (*Epinephelus daemeli*), the Eastern Dwarf Galaxias (*Galaxiella pusilla*), the Macquarie Perch (*Macquaria australasica*) and the Australian grayling (*Prototroctes maraena*). No EPBC Act listed threatened species were found to occur within the operating area.

Pipefishes, seahorses and seadragons are generally associated with vegetation in sheltered to moderately exposed reef areas at a range of depths from 0 to 50 m, depending on the species (Edgar 1997), but usually at depths of between 5 and 25 m. Given that these species normally inhabit shallow reefs and kelp beds they are not likely to occur within the platform area itself but around adjacent shorelines in the Gippsland basin.

3.2.1.2. Sharks and Rays

Three shark species potentially occurring within surrounding area were listed as ‘threatened’ under the EPBC Act; the Grey Nurse Shark (east coast population) (*Chacharias taurus*), the Great White



Shark (*Carcharodon carchari*), and the Whale Shark (*Rhincodon typus*). Two of these species, the Great White Shark and the Whale Shark, were also identified as potentially occurring within the platform operating area.

Two other species of shark, shortfin mako (*Isurus oxyrinchus*) and porbeagle (*Lamna nasus*), are listed as migratory under the EPBC Act with habitat likely to occur in the platform operating area.

There were no listed or threatened rays in the operating area or surrounds.

3.2.1.3. Reptiles

Three threatened species of turtle, the loggerhead turtle (*Caretta caretta*) (endangered and migratory), the leatherback turtle (*Dermochelys coriacea*) (endangered and migratory) and the green turtle (*Chelonia mydas*) (vulnerable and migratory) are listed as potentially having habitat in the platform operating area. In addition to these species, the hawksbill turtle (*Eretmochelys imbricata*) (vulnerable) is listed as threatened and potentially occurring in the surrounding area.

3.2.1.4. Birds

The Victorian coast and neighbouring islands provide feeding and nesting habitats for many coastal and migratory bird species. Seabirds spend much of their lives at sea in search of prey and return for a short time to breed and raise chicks.

Colonies of seabirds occur to the west of the operating area in Corner Inlet and on the islands around Wilsons Promontory, to the east at the Skerries, Tullaberga Island and Gabo Island and to the south on Curtis Island and the Hogan Island Group. Eastern Bass Strait is also a foraging area for at least 15 species of albatross, three species of petrel and one species of skua.

Ninety-four bird species listed under the EPBC Act, may occur, or are likely to occur, within the platform operating area and surrounds. Of these bird species, 21 may occur, or are likely to occur, within the platform operating area. Many birds periodically pass through the area on their way to or from the Bass Strait islands and mainlands of Victoria, NSW and Tasmania.

3.2.1.5. Seals

Two seal species, the Australian fur seal (*Arctocephalus pusillus doriferus*) and the New Zealand fur seal (*Arctocephalus forsteri*) are known to occur in the platform operating area. Both species are listed under the EPBC Act, however they do not carry a threatened status under Commonwealth legislation or Victorian State legislation. Seals are frequently seen throughout Esso's Bass Strait oil and gas platforms and are usually found resting and swimming in the vicinity of the platform structures.

3.2.1.6. Cetaceans

Several cetacean species (whales, dolphins and porpoises) listed under the EPBC Act, may occur, or are likely to occur, within the platform operating area and surrounds. This includes blue whales (*Balaenoptera musculus*), southern right whales (*Eubalaena australis*), humpback whales (*Megaptera novaeangliae*), bottle-nosed dolphins (*Megaptera novaeangliae*) and dusky dolphins (*Lagenorhynchus obscurus*), all of which may occur, or are likely to occur, within the platform operating area.

Whales are known, and observed, to play and display normal breaching, blowing, lobtailing and diving behaviour around the platform and vessels, including with calves, before moving on again. Although whales are known to migrate through the region during spring and autumn/early winter, the operating platform area is not a recognised feeding, breeding or resting area for cetaceans.

3.2.2. Marine Environments

Offshore marine environments that occur within the surrounding area include:

- Open marine environment (also occurs within the platform operating area).
- Seabed (also occurs within the platform operating area).
- Subtidal rocky reefs.



- Estuaries.

Nearshore environments within the surrounding area include:

- Intertidal rocky shores.
- Intertidal, emergent, sub tidal aquatic vegetation.
- Sheltered intertidal flats and bare sediment (mudflats).
- Marshes.
- Mangroves.
- Sandy beaches and dunes.
- Cliffs/exposed rocky headlands.
- International, national, state, regional or coastal sites of significance or sensitivity.

3.3. Sites of Significance or Sensitivity in the Operating Areas and Surrounds

There are no areas of high conservation significance present in the platform operating area itself. There are sensitive habitats in the surrounding area, comprising of:

- International sites of significance including the Gippsland Lakes Ramsar Site; Corner Inlet Ramsar Site and Croajingolong National Park and Biosphere Reserve (including Nadgee Nature Reserve).
- National sites of significance including the Australian Whale Sanctuary; Beagle Commonwealth Marine Reserve; East Gippsland Commonwealth Marine Reserve; Flinders Commonwealth Marine Reserve; Jervis Commonwealth Marine Reserve; Ben Boyd National Park; Cape Howe Marine National Park; Point Hicks Marine National Park; the Lakes National Park and Gippsland Lakes Coastal Park; Ninety Mile Beach Marine National Park; Corner Inlet Marine National Park; Wilsons Promontory Marine National Park, Wilson's Promontory Marine Park, Wilsons Promontory Marine Reserve and Wilsons Promontory National Park; Kent Group National Park and Kent Group Marine Reserve.
- State (NSW) sites of significance including the Jervis Bay Marine Park; and Batemans Marine Park including Montague Island Nature Reserve.
- State (Victorian) sites of significance including the Gabo Island Harbour Special Management Area and Gabo Island Light Station Reserve; Mallacoota Inlet Special Management Area; The Skerries Special Management Area; Beware Reef Marine Sanctuary; Cape Conran Coastal Park; Corner Inlet and Nooramunga Marine and Coastal Parks; and Bass Strait Islands Nature Reserves and Conservation Areas.
- State (Tasmanian) sites of significance including the Bass Strait Islands Nature Reserves and Conservation Areas.

3.4. Socio-Economic Environment

3.4.1. Cultural Heritage

There are no World Heritage properties or National Heritage places in the platform operating area and surrounds.

The Gunai-Kurnai people hold native title over much of onshore Gippsland, and 200 m of offshore sea territory between Lakes Entrance and Marlo. There are no other native title areas within the platform operating area and surrounds.

3.4.2. Shipwrecks

A search of the National Shipwrecks Database identified 194 shipwrecks within the surrounding area (32 in NSW waters and 162 in Victorian waters) and none in the platform operating area.



3.4.3. Commercial Fishing

Various commercial fisheries are known to occur within the platform operating area and surrounds. The main commercial Commonwealth fisheries within the surrounding area are the Southern and Eastern Scalefish and Shark Fishery (SESSF); the Bass Strait Central Zone Scallop Fishery (BSCZSF); and the Small Pelagic Fishery. Other Commonwealth fisheries operating within the surrounding area include the Eastern Skipjack Tuna Fishery and the Eastern Tuna and Billfish Fishery.

State administered fisheries operating within the broader region include Victorian and Tasmanian Scallop Fisheries; Victorian, Tasmanian and NSW Abalone Fisheries; Victorian, Tasmanian and NSW Rock Lobster Fisheries; Victorian Commercial Bay and Inlet Fisheries; Tasmanian Shellfish Fishery; NSW Ocean Trawl Fishery; NSW Ocean Trap & Line Fishery; NSW Estuary General Fishery; NSW Ocean Hauling Fishery; and the NSW Oyster Aquaculture. Other State fisheries include the NSW Estuary Prawn Trawl Fishery, Tasmanian Scalefish Fishery, Tasmanian Commercial Dive Fishery, and Tasmanian and Victorian Giant Crab Fisheries.

3.4.4. Recreational Fishing, Boating and Tourism

The Gippsland region is estimated to attract more than 7 million visitors annually. These visitors are estimated to spend an estimated \$1 billion in the region per annum, with flow-on expenditure estimated at over \$699 million per annum. There are more than 1,000 specialised tourism businesses in Gippsland and more than 12,000 people estimated to be employed as a direct result of tourism in Gippsland.

Tourism and recreational activities offered by the coastal areas of central and eastern Gippsland include; recreational fishing amongst the Nooramunga islands, on the Gippsland Lakes, along Ninety Mile Beach, at Cape Conran Coastal Park and Croajingolong National Park and off the coast of Mallacoota; swimming and surfing along the Gippsland coast; scuba diving and snorkelling in Gippsland's Marine and Coastal Parks; and walking and hiking in Gippsland's National and Coastal Parks.

Similar to the Gippsland region, the coastal areas of southern NSW also offer fishing, canoeing, boating, diving and surfing activities in their bays and lakes, beaches and rivers. Popular activities include walking along the Jervis Bay National and Marine Park and Killalea State Park; surfing, swimming or fishing at ocean beaches; diving and snorkelling in the Bushrangers Bay Aquatic Reserve; cycling, sailing, water skiing, rowing and fishing at Lake Illawarra; and exploring Montague Island's colony of Australian fur seals.

3.4.5. Commercial Shipping

Bass Strait is one of Australia's busiest shipping areas with more than 3,000 vessels passing through Bass Strait each year. Bass Strait is a transit route for shipping traffic connecting the eastern and western ports of Australia. A shipping exclusion area (Area to Be Avoided) surrounds platforms in Bass Strait, including the Marlin B platform.

3.4.6. Oil and Gas Industry

More than 4 billion barrels of liquids and 8 trillion cubic feet of gas has been produced in Bass Strait to date, from offshore production facilities (platforms, monotowers and subsea completions) and via a pipeline network of over 600 km; and various fields under exploration or development. There are 26 petroleum production licences held by various titleholders in Bass Strait.



4. Environmental Risk and Impact Assessment and Management

An analysis of environmental hazards and risks has been conducted for the Marlin B Platform Drilling Program. Its purpose was to:

- Identify and assess potential hazards to the environment during the drilling program.
- Undertake a scenario-based risk assessment.
- Identify and rank hazards and determine appropriate risk reduction measures.

Esso identified and assessed the environmental risks associated with the drilling program and identified controls for each risk to reduce the risks to the environment to As Low As Reasonably Practicable (ALARP) and acceptable levels. Workshop participants were chosen based on their familiarity with, knowledge of, and expertise in Esso's operations at the Marlin B location. The approach and methodology used during the ERA process was consistent with AS/NZS ISO 31000.

Environmental impacts and risks for planned activities that have the potential to impact the environment (see Section 2.1) and for unplanned spill scenarios (see Section 4.2) were evaluated first by determining the consequence severity, and estimating the probability or likelihood that the consequences could occur.

- *Consequence severity:* There are four consequence categories (I through IV, with I being the highest consequence level). The consequence categories consider environmental effects (in terms of duration, size/scale, intensity) and sensitivity (in terms of irreplaceability, vulnerability and influence).
- *Probability:* There are five probability categories (A through E, with A being the most likely level). The probability categories consider the probability for each failure, event or condition necessary to produce the consequences, given the implementation of controls that prevent and mitigate the risk.

The combination of consequence severity and probability of occurrence determines the position on the Esso Risk Matrix. The Esso Risk Matrix is divided into four categories, with Category 1 being the highest risk category and Category 4, the lowest. A risk could have a low consequence severity and high probability of occurrence, and result in the same risk ranking as a risk with a high consequence severity and low probability of occurrence. Environmental risks described in this EP were assessed as Category 2, 3 and 4 risks.

Esso then determined whether risks were reduced to ALARP by combining an understanding of the nature and cause of the risk to be avoided and the cost involved in avoiding or mitigating the risk (in terms of increased impact on personal safety and/or the environment, increased time, effort or financial cost). A risk is considered to be reduced to ALARP if there are no additional reasonably practicable measures available to further reduce the risk; or there are no reasonably practicable alternatives to the activity; or the 'cost' of implementing further measures is grossly disproportionate to the reduction in risk.

Esso then determined whether risks were reduced to acceptable levels by inspecting the final category of environmental risk and comparing the management of the risk with internal and external standards and stakeholder feedback. The risk is considered to be reduced to acceptable levels if the level of residual environmental risk associated with the activity was either Category 2, 3 or 4; and the activity is commonplace in current offshore practice (i.e. benchmarked), is compliant with current industry/ExxonMobil Australia policy and standards, and Australian legislation; and any valid claims or objections to the risk from relevant persons or stakeholders, are considered.

4.1. Operations Integrity Management System (OIMS)

The drilling program will be managed in accordance with ExxonMobil's Operations Integrity Management System (OIMS) and IDSL's Health, Safety and Environment Management System (HSEMS).



The OIMS Framework establishes expectations for addressing risks inherent in the business and ensuring hazards are safely controlled. All OIMS management systems contribute to the effective management of the identified environmental risks and impacts in the Marlin B Platform Drilling EP. OIMS Systems that have been referenced as controls in Table 1 are:

- *OIMS System 5-2 (Personnel Training)* ensures that personnel are trained in the knowledge and skills necessary to meet the requirements of their specific positions and roles.
- *OIMS System 6-3 (Well Management)* provides the structure for wellwork planning and operations, as well as ongoing well integrity activities.
- *OIMS System 6-6 (Facility Integrity Management)* ensures that the operations integrity of all Esso-owned or controlled critical equipment is maintained over the complete life cycle of the equipment without significant failures that would (1) result in uncontrolled emissions, fires, explosions, or incidents that might pose serious danger to people, the environment, or assets; or (2) significantly impact equipment availability and reliability.
- *OIMS System 8-1 (Contractor Selection and Management)* provides a systematic approach for the management of interfaces with third-party suppliers of services (i.e., contractors) to achieve continuous improvement in contractor operations integrity performance. This System covers requirements for interfaces for monitoring, evaluation, and feedback to the contractor.
- *OIMS System 10-2 (Emergency Preparedness and Response)* ensures that Esso establishes effective emergency preparedness and response, and provides well maintained equipment and trained personnel to manage incidents. Emergency situations include those incidents that impact safety, security, health, and the environment.

4.2. Unplanned Events

Consideration was also given to unplanned events which, although unlikely to occur, could lead to impacts to the environment. Based upon the proposed activities, an assessment of all potential spill scenarios (for chemicals, drilling fluids and hydrocarbons) which could occur from drilling operations was conducted as part of the Environmental Risk Assessment (ERA). The ERA identified the following worst-case spill scenarios:

- Vessel collision with the platform or another vessel.
- Encountering shallow gas resulting in a gas and condensate release.
- Loss of well control/well blowout event resulting in an oil and/or condensate release.

The *loss of well control/well blowout event* was carried forward to Oil Spill Trajectory Modelling and determined the Zone of Potential Impact to the environment in the unlikely occurrence of an unplanned event.

The Zone of Potential Impact encompasses the platform operating area (i.e. the immediate zone around the platform) and the surrounding area (i.e. the area identified, through Oil Spill Trajectory Modelling, as potentially being impacted by a loss of well control/well blowout event, and described in Section 3).



4.3. Hazards, Potential Impacts and Control Measures

A summary of the environmental hazards, potential impacts and controls is provided in Table 1.

The Esso Risk Matrix is divided into four risk categories. The significance of each Risk Category is as follows:

Category 1: A higher risk where specific controls should be established in the short term and should, when possible, be reduced to a Category 2 risk or below. Continued operation requires annual review and approval by the Production Manager or equivalent.

Category 2: A medium risk that should be reduced unless it is not "reasonably practicable" to do so.

Category 3: A medium risk that should be reduced if "lower cost" options exist to do so.

Note: "Lower cost" denotes follow-up work that can be completed without a) allocating extensive engineering, technical, and operations manpower or b) the need for unit shutdowns or activities which may introduce other risks or use resources that may be more appropriately used to address higher risk category items.

Category 4: A lower risk that is expected to be effectively managed in base OIMS practices and therefore typically requires "No Further Action." Risk mitigation measures that are in place to manage the risk to Category 4 should be continued.

Environmental risks described in this Environment Plan have been assessed as Category 2, 3 and Category 4 risks.

Table 1 Summary of Hazards, Potential Impacts and Control Measures

Hazard	Potential Impact	Control Measures	Risk Ranking
Drilling rig operations and presence			
Physical presence – Noise (combined assessment with noise from support vessel)	Behavioural change, impairment to movement patterns of seabirds, hearing impairment to marine fauna, increased stress in marine fauna	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors maintain vessel thrusters. OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures that vessel contractors maintain a 300 m standoff distance from cetaceans (where possible and safe to do so as they move into and out of the 500 m exclusion zone).	4
Physical presence – Lighting (combined assessment with noise from support vessel)	Disruption to migratory patterns of seabirds and movement patterns of marine fauna.	None – the presence of the rig was assessed as not significant to warrant controls.	4
Emissions to atmosphere from fuel combustion equipment operation.	Contribution to greenhouse gases.	Preventive maintenance programs in place for fuel combustion equipment and energy usage equipment to maximise efficiency.	4
Support vessel operations			
Discharge of vessel deck drainage	Localised and temporary reduction in water quality leading to potential impact on marine organisms.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors have scupper plugs fitted to overboard drains.	4



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Discharge of vessel oily water (bilge)	Localised and temporary reduction in water quality leading to potential impact on marine organisms.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors treat bilge to an oil-in-water concentration of 15ppm prior to discharge. OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors have a MARPOL-compliant certified oily water separator system.	4
Sewage discharge from vessels	Sewage waste will be readily dispersed and degraded with little or no impact expected.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors treat sewage through a MARPOL-compliant certified sewage treatment system prior to discharge.	4
Disposal of food wastes from vessels	Food waste will be readily degraded and dispersed, with little or no impact expected.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors macerate putrescible waste (<25mm size) prior to discharge, or the waste will be taken ashore for disposal.	4
Disposal of solid/general waste from vessels	Localised and temporary reduction in water quality leading to potential impact on marine organisms.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors store general refuse, solid and hazardous waste appropriately on the vessels (per Garbage Management Plan) and transfer the waste onshore for disposal.	4
Ballast water discharge - Unplanned introduction/transmission of invasive species	Introduced exotic species out-compete endemic species for local resources.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors comply with the requirements of AQIS's Australian Ballast Water Management 2008.	4
Vessel biofouling - Unplanned introduction/transmission of invasive species	Introduced exotic species out-compete endemic species for local resources.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors undertake marine pest inspection and hull anti-fouling undertaken for all vessels within 7 days prior to entering Australian Waters, in accordance with the National Biofouling Management Guidance for the Petroleum Production and Exploration Industry (DAFF 2009).	4
Vessel movements - Unplanned collision with marine fauna	Death or injury of marine fauna.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors maintain a 300 m standoff distance from cetaceans (where possible and safe to do so) as they move into and out of the 500 m exclusion zone, and employ avoidance measures such as reducing speed within the 500 m exclusion zone (where possible and safe to do so) should listed marine species (such as cetaceans or seals) be sighted.	4
Fuel combustion equipment on vessels	Contribution to greenhouse gases.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors have certified fuel-combustion equipment and operate in accordance with a current MARPOL Air Pollution Prevention Certificate, where applicable.	3
Chemicals			
Spill/release on deck of chemicals or hazardous substances and/or failure of primary containment.	Localised and temporary reduction in water quality leading to potential impact on marine organisms within the operating area.	Hazardous substances are kept in storage containers (packages) that are suitable for their content to prevent loss of primary containment. Many are self bunded containers. Chemicals and oil drums are kept in bunded chemical storage areas. Spill kits to contain spills on deck. Personnel are trained in storage and handling of chemical substances.	4



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Hazard	Potential Impact	Control Measures	Risk Ranking
Uncontrolled release of chemicals and cement, non aqueous drilling fluid, brine, barite, and bentonite during bulk transfer operations.	Localised and temporary reduction in water quality leading to potential impact on marine organisms within the operating area.	<p>Permit required for cement, barite, other powders, and NADF bulk transfer activities.</p> <p>Bulk transfer of cement, barite, other powders, NADF and liquid chemicals only occur during suitable weather and sea states</p> <p>Hoses used for cement, barite, other powders, NADF and liquid chemicals are inspected prior to transfer</p> <p>Hoses used for cement, barite, other powders, NADF and liquid chemicals are pressure tested before transfers to check for leaks or hose failures</p> <p>Hoses used for NADF and liquid chemicals are fitted with dry break couplings.</p> <p>Hoses and dry break couplings are changed out regularly and equipment used for the transfers are subjected to their own equipment strategy for inspection and maintenance.</p> <p>OIMS System 10-2 (Emergency Preparedness and Response) ensures effective emergency preparedness and response plans are in place, which provide for well-maintained equipment and trained personnel.</p> <p>OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors have a SOPEP in place.</p>	4
Unplanned release of chemicals during supply vessel transfers of packaged chemicals	Localised and temporary reduction in water quality leading to potential impact on marine organisms within the operating area.	<p>OIMS System 6-6 (Facility Integrity Management) ensures cranes and lifting gear are appropriately maintained.</p> <p>Licensed ISDL crane operators</p> <p>Use of D-220 Checklist for certification strut and winch line inspections.</p>	4
Drilling and completions			
Discharge of drill cuttings (Water Based Mud adhered) and Water Based Mud.	Localised and temporary reduction in water quality leading to potential impact on marine organisms within the operating area. Local smothering of benthic organisms within the operating area.	Use of low impact constituents to make up Water Based Mud.	4
Discharge of mud tank washings and interface fluids.	Localised and temporary reduction in water quality leading to potential impact on marine organisms within the operating area.	<p>Permit required for mud tank cleaning and overboard discharge.</p> <p>Use of low impact constituents to make up all drilling fluids and use of low impact chemicals for tank washing.</p> <p>Transfer out as much of the tank residue before starting washing procedure.</p> <p>Washings and interface fluids are evaluated to confirm oil in water concentration is less than 10% by volume before discharging.</p>	4
Discharge of Non Aqueous Drilling Fluid drill cuttings.	Increased water turbidity, toxicity to marine organisms in water column and/or sediments and oxygen depletion in sediments within the operating area. Local smothering of benthic organisms within the operating area.	<p>Cuttings processing system and NADF recovery system is used to reduce NADF ROC to <10% ROC by volume over each hole section where NADF is used</p> <p>Use of low impact constituents to make up NADF.</p> <p>Sampling points at cuttings discharge lines to measure NADF ROC.</p>	4
Discharge of cement and trace chemicals to the seabed.	Localised and temporary reduction in water quality leading to potential impact on marine organisms.	Use of low impact cement mix and additives.	4
Discharge of wellbore clean-up fluids.	Localised and temporary reduction in water quality leading to potential impact on marine organisms.	Use of low impact components to make fluids for wellbore clean-up that are discharged overboard.	4



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Hazard	Potential Impact	Control Measures	Risk Ranking
Use and storage of radioactive sources	Localised change in radiation leading to potential impact on marine organisms.	Use of certified sub-contractors. Radioactive sources are stored and transported in certified storage containers.	4
Crane operations and lifting activities	A dropped object overboard could fall on live equipment or piping releasing hydrocarbons causing localised and temporary change in water quality.	OIMS System 6-6 (Facility Integrity Management) ensures cranes and lifting gear are appropriately maintained. Licenced ISDL crane operators. Use of D-220 Crane Operators Checklist for certification strut and winch line inspections. OIMS System 10-2 (Emergency Preparedness and Response) ensures effective emergency preparedness and response plans are in place, which provide for well-maintained equipment and trained personnel. OIMS System 6-6 (Facility Integrity Management) ensures oil spill equipment is appropriately maintained.	4
Unplanned events			
Vessel collision (with platform or another vessel) - Unplanned release of chemical or diesel	Localised reduction in water quality leading to potential impact on marine organisms.	OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors have trained and qualified Vessel Masters. OIMS System 8-1 (Evaluating, Selecting and Monitoring Third Parties) ensures vessel contractors have a SOPEP in place. OIMS System 10-2 (Emergency Preparedness and Response) ensures effective emergency preparedness and response plans are in place, which provide for well-maintained equipment and trained personnel. OIMS System 6-6 (Facility Integrity Management) ensures oil spill equipment is appropriately maintained.	4
Encountering shallow gas resulting in a methane gas/condensate release.	Contribution to greenhouse gas emissions and potential localised impact to marine organisms.	A pilot hole will be drilled on the first well. A diverter is installed to prevent broaching on surface hole sections. Diverter exercises are conducted. Diverter is function tested during the diverter exercise. Shallow gas procedures are in place to respond to a shallow gas event.	4



Hazard	Potential Impact	Control Measures	Risk Ranking
Loss of well control while drilling, resulting in a release of hydrocarbon to the marine environment.	<p>Oil Spill Trajectory Modelling shows the following potential impacts may occur in the most severe loss of well control/well blowout event:</p> <ul style="list-style-type: none"> • Surface oiling to shoreline in Victoria, east of Wilson's Promontory; southern NSW; or Bass Strait Islands. Dissolved/entrained oil in nearshore waters. • Change in water quality leading to potential impact on seabirds, shorebirds, marine mammals, reptiles, fish and other marine organisms. • Taint (off-flavour) of seafood harvested from areas severely affected by a spill. • Coastal waters of declared native title areas or shipwreck sites exposed to oil. • Exclusion of fishing, shipping, boating, tourism or oil and gas activity from spill-affected areas. 	<p>Well design incorporates the Barrier Philosophy.</p> <p>Procedures to be used to regain well control, should they be required, have been agreed between the rig operator (ISDL) and ExxonMobil.</p> <p>Well control equipment is maintained and tested.</p> <p>Use of D-180 Well control readiness checklist.</p> <p>Selection of competent drilling contractor.</p> <p>Utilising personnel who are trained and competent in well control.</p> <p>Drilling fluid overbalance is maintained through use of correctly weighted wellbore fluids.</p> <p>Continuous monitoring of pressure parameters during drilling.</p> <p>Pressure testing of physical barriers.</p> <p>Drill crew is trained in emergency well control procedures.</p> <p>Shut in any nearby flowing wells, if determined necessary by the anti-collision study plots, which incorporate relevant defined ellipses of uncertainty (EOU) and conductor positions.</p> <p>OIMS System 10-2 (Emergency Preparedness and Response) ensures effective emergency preparedness and response plans are in place, which provide for well-maintained equipment and trained personnel.</p> <p>OIMS System 6-6 (Facility Integrity Management) ensures oil spill equipment is appropriately maintained.</p>	2

4.4. Response Arrangements

In the highly unlikely event of an unplanned loss of containment, the Oil Pollution Emergency Plan (OPEP) outlines the response arrangements that can be undertaken, including:

- Source control.
- Monitoring and natural degradation.
- Dispersants.
- Protection and deflection.
- Containment and recovery.
- Shoreline clean-up.
- Setting exclusion zones.

Response arrangements will be utilised according to the size and type of spill, environmental and cultural sensitivities, prevailing weather conditions, access constraints and available resources. A Net Environmental Benefit Analysis (NEBA) is applied to consider the advantages and disadvantages of various oil spill response options, which is completed in consultation with relevant government departments and agencies.

The OPEP also outlines the resources (personnel and equipment) which may be utilised depending on the size and nature of the spill, the lead organisations and responders, and the notification requirements. The OPEP interfaces with the spill contingency plans developed by Australian Maritime Safety Authority (AMSA) (National Plan), Victorian Government (VicPlan), NSW Government (NSW Plan), Tasmanian Government (Tas Plan), Gippsland Ports (Gippsland Region Marine Pollution Contingency Plan), and the Australian Marine Oil Spill Centre (AMOSOC) (AMOSPlan).



Esso maintains oil spill response equipment stockpiles at its facilities at Long Island Point (near Hastings) and Barry Beach Marine Terminal (South Gippsland). In addition, Esso can call upon equipment and trained personnel from AMOSC (Geelong), Victorian State Plan resources, Australian National Plan for Maritime Environmental Emergencies (National Plan) resources (e.g. from AMSA), or internationally through its membership to Oil Spill Response Limited (OSRL).

Esso has developed checklists for managing an unplanned loss of containment, which include responding to the first sighting of oil and gathering spill information, implementing source control measures, classifying response levels (Level 1, Level 2 or Level 3), implementing response action plans/arrangements and reporting to statutory agencies. Esso manages incidents using the Incident Command System, which is a system designed to provide a consistent organisation to respond to emergency situations. Positions within the ICS are fixed and have specific functions, ensuring that all responders know what to do and where they report in the organisation structure. A response to a spill may also utilise members of the Esso Emergency Support Group (ESG) who provide strategic support, and if the response level is elevated, ExxonMobil's Regional Response Teams who have experience in responding to emergencies internationally.

Waste generated through oil spill response operations will be managed using Esso's Waste Management Manual (WMM). Esso has a contract in place for the provision of waste management services (including treatment, recycling and disposal) and is able to quickly mobilise a team of experts anywhere in Australia. If oil spill response operations result in the generation of wastes outside of Victoria, Esso will manage and dispose of these wastes using a spill-specific Waste Management Plan.

Wildlife response will be managed through applicable wildlife response arrangements in each state. In Victoria, wildlife response will be initiated under Victoria's emergency management arrangements as per the *Emergency Management Act 1986* (Vic). The Wildlife Response Plan for Marine Pollution Emergencies (which is a sub-plan to VicPlan) will also be implemented. In Tasmania, the WildPlan will be implemented and in NSW, the Agriculture and Animal Services Functional Area Supporting Plan and associated policies and procedures will be implemented.

The OPEP includes an Operational and Scientific Monitoring Program (OSMP), which is initiated in the event of a spill. Esso has third party contracts in place for the provision of environmental monitoring services.

Training and exercises are used to maintain Esso's ability to implement an emergency response. Oil spill response training is made available to specific Esso personnel required to undertake a role in oil spill response. Elements of the OPEP, and associated oil spill response resources (equipment or personnel), are exercised at least annually. Additional exercises are scheduled should there be a significant change to response arrangements.

4.4.1. Spill Response Activities Potential Impacts and Risks

Spill response activities have the potential to incur impacts and risks to the environment, and these are managed carefully with controls in place in the unlikely event a spill does occur. The potential environmental impacts and risks associated with proposed response strategies include:

- Seabed disturbance from mobilising a relief well drilling rig or mechanical agitation,
- Exclusion of ocean and shoreline users due to implementation of spill exclusion zones,
- Exposure of in-water fauna to oil and/or dispersant from applying dispersant, or mechanical agitation techniques,
- Shoreline impacts from spill response equipment and personnel mobilisation,
- Inappropriate waste disposal,
- Impacts to wildlife from inappropriate handling,
- Noise from vessels or aircraft,
- Vessel collision with marine fauna, and
- Additional spills (e.g. from spill response vessel collision, ROV collision or release, or an unplanned release while manually cleaning up oil).



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Esso has detailed performance outcomes and standards on controls that manage the above potential impacts and risks to ensure spill response activities are managed to ALARP and acceptable levels during an actual spill response.



5. Implementation Strategy

The implementation strategy detailed in the Marlin B Platform Drilling EP identifies OIMS systems, practices and procedures that are used to ensure environmental impacts and risks of the activity are reduced to ALARP and acceptable levels, and that environmental performance outcomes and standards are met. The implementation strategy includes the following elements:

- Clear definition of personnel roles and responsibilities.
- Training, communications and awareness of environmental commitments.
- Performance measurement review and reporting, including regulatory reporting, incident reporting and environmental performance review.
- Environmental monitoring, auditing, assessments, investigations and inspections.
- Management of third party contractor services.
- Emergency and oil spill preparedness and response.
- Ongoing consultation.

5.1. Ongoing Monitoring and Performance Review

Esso will undertake an annual compliance audit against the EP. The audit will contain a detailed assessment of compliance with the environmental performance outcomes and standards and an overview of the effectiveness of control measures (i.e. that impacts and risks are reduced to ALARP and acceptable levels). Findings and recommendations of the audit will be documented and communicated to the crew.

OIMS Assessments are also carried out to confirm that the ongoing monitoring and measurement processes detailed in each of the OIMS systems are being carried out, environmental performance outcomes and standards are being met, and environmental impacts and risks are reduced to ALARP and managed to acceptable levels. OIMS Assessments are undertaken on a rotating basis (internal and external assessment on each system every two years), and an OIMS review occurs annually to confirm the status and effectiveness of each system.

Monitoring of environmental performance is undertaken on a regular basis through various forums including monthly leadership meetings, twice-daily tool box meetings, and daily rig calls and morning meetings.

Investigations into environmental incidents and non-conformances are conducted in accordance with Esso's Incident Management System (as detailed in OIMS System 9-1 Incident Management). Notification, reporting and investigation of incidents:

- Ensures management, regulatory authorities and other appropriate personnel are notified of all incidents and near misses on a timely basis;
- Enables the sharing of learnings throughout the organisation to continuously improve internal health, safety and environment systems;
- Identifies corrective actions to prevent re-occurrence; and
- Enables the analysis and trending of incident data to ensure appropriate focus on emerging issues.

In accordance with Regulation 17 (6) of the *Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations 2009*, Esso will submit a proposed revision of the EP to NOPSEMA before, or as soon as practicable after, a new or significantly increased environmental impact or risk has been identified that is not provided for in the EP.



6. Consultation

Esso has undertaken consultation with all relevant stakeholders potentially affected by the Marlin B Platform Drilling Program.

Stakeholders included:

- Commonwealth and State Victorian, NSW and Tasmanian government bodies and others that provide direct advice or collaborate on plans in a spill response (e.g., emergency and oil spill response agencies and providers, fishing management authorities, emergency services and port authorities).
 - Australian Marine Oil Spill Centre (AMOSC)
 - Australian Maritime Safety Authority (AMSA)
 - Asia-Pacific Applied Science Associates (APASA)
 - Victorian Department of Transport Planning and Local Infrastructure (DTPLI)
 - Victorian Department of State Development, Business and Innovation (DSDBI)
 - Victorian Department of Environment and Primary Industries (DEPI)
 - Transport for NSW
 - Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE)
 - Tasmanian Parks and Wildlife Service (PWS)
 - Australian Fisheries Management Authority (AFMA)
 - Commonwealth Fisheries Association (CFA)
 - Commonwealth Department of the Environment (DoE)
 - Environment Protection Authority Victoria (EPA Vic)
 - Gippsland Ports
 - Philip Island Nature Park
 - Wildlife Victoria
 - Gippsland Coastal Board
 - State Emergency Service (SES)
 - Victoria Police – Gippsland Water Police
 - Cardno Lane Piper (environmental monitoring)
- Commercial and recreational fisheries; fishing industry groups, associations and co-operatives;
 - Seafood Industry Victoria (SIV)
 - Tasmanian Seafood Industry Council (TSIC)
 - Victorian Department of Environment and Primary Industries (DEPI) – Fisheries
 - Corner Inlet Fisheries Habitat Association
 - Eastern Victorian Sea Urchin Divers Association
 - East Gippsland Estuarine Fishermen's Association
 - Lakes Entrance Fishermen's Co-operative Limited (LEFCOL)
 - Lakes Entrance Scallop Fishing Industry Association
 - Port Franklin Fishermen's Association
 - South East Trawl Fishing Industry Association (SETFIA)
 - Sustainable Shark Fishing Association



- Victorian Recreational Fishing (VRFish)
- Victorian Scallops Industry Association
- Victorian Bays and Inlets Fisheries Association
- Victorian Rock Lobster Association
- Victorian Fishery Association Resource Management
- Other relevant government bodies; State (Victorian) catchment management authorities; native title holders;
 - National Offshore Petroleum Titles Administrator (NOPTA)
 - Department of Industry (DoI)
 - East Gippsland Catchment Management Authority
 - Gunai-Kurnai via Office of Aboriginal Affairs
- Other oil and gas industry operators in Bass Strait;
 - Bass Oil Company Limited
 - BHP Billiton Petroleum (Bass Strait) Pty Ltd
 - Carnarvon Hibiscus Pty Ltd / 3D Oil
 - Nexus Energy Ltd
 - Oil Basins Limited
 - Origin Energy
 - ROC Oil Limited
 - Santos
 - Strategic Energy Limited
- Shire councils.
 - East Gippsland Shire Council
 - South Gippsland Shire Council
 - Wellington Shire Council

6.1. Consultation Already Undertaken

A number of mechanisms to communicate with stakeholders were used to ensure stakeholders can make an informed assessment of the possible consequences of the activity on their functions, interests or activities. This included distribution of a fact sheet, an email update on the Bass Strait Production EPs, and correspondence through questions/comments raised, and through the website (www.exxonmobil.com.au/offshore).

Consultation with stakeholders who were expected to provide direct advice or collaborate on plans in oil spill response included workshops and meetings/phone discussions.

During the consultation period, Esso received queries and feedback from twelve stakeholders regarding the drilling activity, of which four presented valid claims and/or objections and these have been summarised in Table 3. One related to noise (No. 1), two to the discharge of drill cuttings (No. 2 and 3), and one concerning notification of other oil and gas operators in eastern Bass Strait in the event of an oil spill (No. 4). All valid claims or objections from relevant persons/stakeholders to the environmental risks identified in the EP were considered during the ERA process when determining that potential impacts had been reduced to acceptable levels. All stakeholder feedback was considered by Esso with follow up clarifications, objections and claims discussed at meetings or one-on-one telephone conversations held between Esso and the stakeholders.



Table 3 Summary of Claims/Objections and Responses during Stakeholder Consultation

No.	Stakeholder Claim/Objection	Summary of Response
Noise		
1	<p>What is the noise baseline for drilling? What are animal behaviors in response to drilling noise, and how and over what period will this be monitored?</p> <p>Does this include the cumulative noise of all activities such as stand-by vessels, supply vessels and drilling combined?</p>	<p>The risk of noise on marine fauna was considered for the Marlin B Drilling program. A noise survey was conducted on Snapper platform in 2008 during drilling with the same rig being used for Marlin B, and found that drilling noise levels were less than 100dB on the rig and most noise monitored was between 85 to 94dB. By comparison, ambient ocean noise as a result of wind and wave activities have been assessed at 90 to 110 dB and guideline underwater noise behaviour threshold levels for fish are reported to be over 150dB (RMS). We have not come across comparative thresholds for sharks; and the Marlin B platform and surrounds is not a recognised breeding area for sharks.</p> <p>Whales and dolphins are known to come up near the platforms and vessels, including while drilling is taking place, and display their normal behaviours, indicating that they are not adversely affected by noise. Observations of marine fauna including whales, seals, and dolphins near Esso platforms and supply vessels have occurred across more than 10 years.</p> <p>We intend to use the regular supply vessels in Bass Strait for mobilising drilling equipment, with no expected additional impacts from vessels.</p>
Discharge of drill cuttings		
2	<p>How will Esso determine impact from discharge of drill cuttings are in accordance with the environmental risk assessment, including potential impacts to the food chain?</p>	<p>The use of environmentally sound drilling fluids, combined with solids removal/fluid recovery systems for NADF, reduces the environmental impact associated with the discharge of drilling fluids. Modelling investigations showed that in Bass Strait conditions, drilling fluids disperse without any discernible environmental impacts.</p> <p>In addition to modelling, there have been two key field studies (at Fortescue and Snapper) undertaken in Gippsland Basin that confirm that impacts from drilling cuttings and fluids are localized and short in duration, and are very unlikely to have negative impacts on fishing food source or seafood at any widespread or population level.</p> <p>We measured the effect on the seabed of discharged drilling cuttings and fluids at Fortescue before, during and after the 1998 drilling program, monitoring various components (including seabed health and metals) using a sediment grab sampler launched off a boat. In that study, it showed that the concentration of metals (barium) would not have measurable effects on marine species. Impacts to animals that live in sediment was limited to the area immediately around the platform, and these fully recovered within four months of drilling.</p> <p>The field study at Snapper in 2009 used an ROV to do a visual inspection around the Snapper Platform, five months after drilling was completed, that showed a large number of small burrows and mounds created by seabed organisms (such as crustaceans and sea worms) within the cuttings. There were fish, sharks and seals observed around the platform.</p> <p>Given the localized effects of the discharge of drilling cuttings and fluids, there is not expected to be any measurable effects on seafood or fish food sources.</p> <p>We are implementing a visual ROV survey to assess the extent of cuttings around the platform following drilling.</p>



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No.	Stakeholder Claim/Objection	Summary of Response
3	<p>What is contained in the drill cuttings and muds?</p> <p>What is the impact around the platform by the drill cuttings or drill mud from smothering?</p>	<p>The drill cuttings are sediment particles (such as sand and silt) that are recovered from the rock that is drilled from inside the drill well. There are two types of drilling fluids used on the rig, Water-Based Mud (WBM) and Non-Aqueous Drilling Fluid (NADF). Components of the drilling fluids have been chosen for their low environmental impact and according to relevant international or equivalent standards. The primary fluid components of water based mud (WBM) are: seawater, absorbent clay called bentonite, and guar gum, a controlling agent for ease of drilling and to prevent fluid loss. Non-aqueous drilling fluids (NADF) are made up of a low toxicity oil base, water and a small percentage of solids that control the density of the drilling fluid and help control pressure within the well.</p> <p>Modelling investigations showed that in Bass Strait conditions, drilling fluids disperse over an extensive area without any discernible environmental impacts. Underwater surveys also confirm that cuttings are only distributed locally under the platform.</p> <p>We measured the effect on the seabed of discharged drilling cuttings and fluids at Fortescue before, during and after the 1998 drilling program, monitoring various components (including seabed health and metals) using a sediment grab sampler launched off a boat. In that study, it showed that impacts to animals that live in sediment was limited to the area immediately around the platform, and these fully recovered following drilling.</p> <p>The field study at Snapper in 2009 used an ROV to do a visual inspection around the Snapper Platform, five months after drilling was completed, that showed a large number of small burrows and mounds created by seabed organisms (such as crustaceans and sea worms) within the cuttings. There were fish, sharks and seals observed around the platform.</p> <p>The field study at Snapper is relevant at Marlin B because the rock that we are drilling into for the Marlin B drilling program is the same age as those in the 2008/09 Snapper Drilling program, and they were deposited in the same coastal plain environment. The rock is comprised of layers of sandstone, siltstone, shale and occasional coals, and to get there, we drill through limestone and calcareous marl, which is a mixture of limestone and shales. These rock formations are the same rocks have been drilled across the Basin throughout the last 40 years of Esso's operations.</p> <p>We are implementing a visual ROV survey to assess the extent of cuttings around the platform following drilling.</p>
Notification		
4	Requested to be notified when drilling commences and is completed.	We notified the stakeholder of drilling commencement and will notify them when it is completed.

Other feedback from consultation with stakeholders resulted in relevant contributions to the OPEP, which have been outlined in Table 4. No stakeholder had feedback that impacted the control measures outlined in the EP.



Table 4 Further Stakeholder Contributions to the OPEP

Agency	Contribution to the Oil Pollution Emergency Plan
AMOSOC	<ul style="list-style-type: none">• Response strategy.• Personnel and resources available.
AMSA	<ul style="list-style-type: none">• Notification requirements.
Department of Environment	<ul style="list-style-type: none">• Clarification of role.
Department of Transport, Planning and Local Infrastructure	<ul style="list-style-type: none">• Recommended to consult with Gunai-Kurnai and Parks Victoria.
Tasmania Parks and Wildlife Service	<ul style="list-style-type: none">• Identified the presence of additional coastal reserves in Bass Strait.• Wildlife response.
Gippsland Water Police	<ul style="list-style-type: none">• Clarification of role and availability of resources.

6.2. Ongoing Consultation

Esso will continue to consult with stakeholders during the drilling activity. This will consist of:

- Keeping a record of communication with stakeholders, for any correspondence pertaining to the drilling activity.
- Maintaining oil spill response preparedness for drilling operations through workshops, mock scenarios and collaborative meetings.



7. Contact Details

The environmental contact for this activity is:

Farrah Tan
Esso Australia Pty Ltd for and on behalf of Esso Australia Resources Pty Ltd
Environment & Regulatory Supervisor
GPO Box 400
Melbourne VIC 3001
Telephone: (03) 9622 7250
Email: farrah.sl.tan@exxonmobil.com