

The ExxonMobil logo is displayed in red text on the left side of the image. The word "Exxon" is in a bold, sans-serif font, and "Mobil" is in a similar font with a red flame-like shape above the letter 'i'.

**ExxonMobil**

Exploration well  
plug and abandonment

A solid red rectangular box is located in the bottom-left corner of the image, containing white text.

Gudgeon-1 and  
Terakihi-1



Esso Australia is planning to undertake an offshore activity to plug and abandon (P&A) two exploration wells – Gudgeon-1 and Terakihi-1 in Gippsland Basin off the Victorian coastline.

All well P&A activities will be undertaken by the Helix Q7000 Light Well Intervention Vessel (LWIV), as pictured on cover. The Q7000 was built in 2017 and operates in accordance with current international safety and environmental standards, such as those set by the International Convention for the Prevention of Pollution from Ships (MARPOL) and Australian Maritime Safety Authority (AMSA). No seismic activity is required.

### Activity description

The Gudgeon-1 and Terakihi-1 exploration wells were originally suspended for potential future use which is no longer viable, so permanent barriers will be installed to enable the wells to be safely P&A'd in accordance with regulatory requirements. Well P&A is a safe and long-standing practice.

For all wells, a blowout preventer will be used to prevent the release of hydrocarbons during the plugging of the wells. Tubing and associated instruments and control valves will be removed, and permanent cement plugs/barriers installed to provide multiple physical barriers to prevent the release of any hydrocarbons that remain in the reservoir. The Gudgeon-1 and Terakihi-1 wellheads will then be cut at or below the seabed and removed.

### Potential impacts and control measures

Provided in the following pages are the key potential impacts and control measures relating to the P&A activity to assist relevant persons in making an informed assessment of possible impacts to their functions, interests or activities in the area.

### Activity location

The Gudgeon-1 and Terakihi-1 wells are located approximately 85 kilometres off the Gippsland coastline, south-east of Lakes Entrance in water depths of approximately 300-400 metres.

The wells are not located within any established or proposed Commonwealth or State Marine Protected Areas, Critical Habitats or Threatened Ecological Communities. It is recognised that the activities will overlap with existing fisheries with the establishment of a 500-metre Petroleum Safety Zone (PSZ) around both Gudgeon-1 and Terakihi-1 subsea wells while the activity is being undertaken.

Once completed this activity will ultimately eliminate the risk of any loss of hydrocarbon containment and will remove obstructions and snag points for commercial fishing.

### ACTIVITY TIMING

#### EARLIEST DATE OF COMMENCEMENT

# Q3 2023

#### ALL P&A ACTIVITY COMPLETED WITHIN

# 3 months

#### FIELD ACTIVITIES ESTIMATED TO TAKE

# ~30 days

#### PER WELL

#### P&A ACTIVITIES WILL BE CONDUCTED

# 24/7

THE TIMING AND ORDER OF ACTIVITY MAY VARY AND IS CONTINGENT ON REGULATORY APPROVALS, JOINT VENTURE APPROVALS, WEATHER AND RIG/VESSEL SCHEDULES

## LIGHT WELL INTERVENTION VESSEL AND VESSEL-BASED POTENTIAL IMPACTS AND CONTROL MEASURES

POTENTIAL IMPACTS	POTENTIAL CONSEQUENCE	CONTROL MEASURES
LWIV mooring	Temporary and localised seabed disturbance	<ul style="list-style-type: none"> <li>As the LWIV is self-propelled and will be holding position by means of dynamic positioning, no anchoring will be required under normal circumstances, therefore no impact on the seabed.</li> </ul>
Planned discharges to the marine environment <sup>1</sup>	Temporary and localised reduction in water quality; temporary change to predator/prey dynamics	<ul style="list-style-type: none"> <li>Routine discharges and vessel waste treatment systems will meet MARPOL requirements and are routinely maintained.</li> <li>Food scraps will be macerated prior to discharge.</li> <li>Discharged bilge water will have less than 15 parts per million oil in water content.</li> <li>Chemicals planned for discharge will undergo an environmental assessment to confirm suitability for discharge prior to use.</li> </ul>
Sound emissions	Temporary displacement of sound sensitive fauna around active vessels	<ul style="list-style-type: none"> <li>Support vessels and helicopters will comply with <i>Environment Protection and Biodiversity Conservation Regulations 2000</i> Part 8 Division 8.1 interacting with cetaceans, for example helicopters adhering to strict distances from cetaceans when sighted.</li> <li>During specific months a Marine Mammal Observer will be placed on the LWIV to aid in sighting and reporting of whales and there will be no more than two attendant vessels alongside the LWIV at any one time to reduce the cumulative sound emissions.</li> <li>If certain listed species of whales are spotted additional controls are in place to help protect and minimise noise disturbance to these species.</li> </ul>
Light emissions	Attraction of light sensitive species; change in fauna behaviour	<ul style="list-style-type: none"> <li>Lighting will be used in accordance with the National Light Pollution Guidelines for Wildlife.</li> <li>Lighting will be kept to a minimum while still meeting navigational and workplace safety requirements.</li> </ul>
Air emissions	Temporary and localised reduction in air quality	<ul style="list-style-type: none"> <li>Marine engines are routinely maintained and air emissions will meet MARPOL requirements.</li> <li>There will be no requirement for flaring or venting during P&amp;A activities.</li> </ul>
Unplanned interaction with marine fauna (vessel strike)	Injury or death of marine fauna	<ul style="list-style-type: none"> <li>Support vessels will comply with <i>Environment Protection and Biodiversity Conservation Regulations 2000</i> Part 8 Division 8.1 interacting with cetaceans.</li> <li>LWIV will be stationary during well intervention. Normal speed when relocating is less than 10 knots. Watchkeeping will be maintained during vessel relocations.</li> <li>Any injury/mortality of <i>Environment Protection and Biodiversity Conservation Act 1999</i>-listed fauna will be reported to the Department of Climate Change, Energy, the Environment and Water.</li> </ul>
Unplanned introduction of Invasive Marine Species	Displacement of native species and habitat domination	<ul style="list-style-type: none"> <li>LWIV and all support vessels will have a Ballast Water Management Plan and associated certificate.</li> <li>LWIV and all support vessels will comply with Australian Ballast Water Management requirements.</li> <li>A Biofouling Risk Assessment process will be completed.</li> <li>Submersible equipment (Remotely Operated Vehicle, blowout preventer) will be rinsed on completion of each activity and is normally stored on deck, thereby minimising Invasive Marine Species risk.</li> </ul>

<sup>1</sup> Including sewage and food waste, treated bilge and deck wash, and cooling water and brine.

## PLUG AND ABANDONMENT ACTIVITY POTENTIAL IMPACTS AND CONTROL MEASURES

POTENTIAL IMPACTS	POTENTIAL CONSEQUENCE	CONTROL MEASURES
Discharge of cement	Localised and temporary: reduction in water quality; smothering of benthic habitat	<ul style="list-style-type: none"> <li>• Low toxicity cement additives have been selected for use.</li> <li>• Cement hose flushing and slurry releases will be rapidly diluted and dispersed by the dynamic marine environment.</li> </ul>
Drilling fluid and cuttings discharges	Localised and temporary: increase in turbidity; burial of benthic habitat in immediate seabed area; potential toxicity impacts	<ul style="list-style-type: none"> <li>• Seawater-based fluids will be used where practicable.</li> <li>• Low toxicity non-aqueous fluids and additives will be used when required.</li> <li>• Non-aqueous fluids will be removed as much as possible from the cutting fluids using 'solids control equipment' prior to discharge overboard.</li> <li>• Dynamic seabed and marine environment will rapidly disperse discharged cuttings and drilling fluids.</li> </ul>
Well fluid discharges	Increased salinity; potential toxicity effects	<ul style="list-style-type: none"> <li>• Low toxicity chemical additives will be selected for use in abandonment and completion fluids.</li> <li>• Chemicals used in well fluids will undergo environmental assessment to confirm suitability for discharge prior to use.</li> <li>• Dynamic seabed and marine environment will rapidly disperse discharged well fluids.</li> </ul>
Disconnection/cutting discharges	Localised and temporary: reduction in water quality; smothering of benthic habitats	<ul style="list-style-type: none"> <li>• Chemicals planned for discharge will undergo environmental assessment to confirm suitability for discharge.</li> <li>• Discharges will rapidly disperse in dynamic seabed and marine environment.</li> </ul>
Naturally Occurring Radioactive Materials	Temporary exposure of marine fauna to radioactive materials	<ul style="list-style-type: none"> <li>• As these wells have never been producing there is no credible risk for Naturally Occurring Radioactive Materials.</li> <li>• It is the aim that wellheads will be removed on completion of P&amp;A activities and disposed in accordance with the <i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i>.</li> </ul>
Vessel collisions	Vessel impacts; injury or death; spill risk; interruption to plug and abandonment activities	<ul style="list-style-type: none"> <li>• Marine users will be informed (including Notices to Mariners) prior to commencement of the P&amp;A activities so they will be able to plan their activities and avoid unexpected interference.</li> <li>• Establishment of temporary fairways and 2-nautical mile buffer zone through AMSA/Australian Hydrographic Service.</li> <li>• PSZ established in accordance with the <i>Offshore Petroleum and Greenhouse Gas Storage Act 2006</i> at least one month before start of field activities.</li> <li>• Establishment of adequate navigation aids and communication systems on LWIV and supporting facilities (virtual buoy).</li> <li>• Collaboration with AMSA in ensuring adequate warnings and notifications to mariners.</li> <li>• Implementation of vessel communication procedures.</li> <li>• Relevant persons whose activities are within the activity location will be notified of activities approximately four weeks and again one week prior to commencement.</li> </ul>

### Petroleum Safety Zones and Notice to Mariners

A 500-metre PSZ around the Gudgeon-1 and Terakihi-1 subsea wells will be established by the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for the duration of the activity, in accordance with Section 616 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*.

The exact location of the rig will be communicated to other marine vessels via a Notice to Mariners issued by the Australian Hydrographic Service and AUSCOAST warnings issued by the AMSA.

Since the wells are located in close proximity to the main shipping route, AMSA has established temporary fairways adjacent to the Gippsland Basin Traffic Separation Scheme, to divert maritime traffic away from the rig location (Notice to Mariners 369(P)/2022, issued on 29 April 2022).

The date of effect was 1 August 2022, to allow adequate time for international vessels to adopt this deviation. AMSA has allowed for a 2-nautical mile buffer zone around each of the well locations. In addition, a 'virtual buoy' or Automatic Identification System Base Station will transmit a signal to 'mark' the change on the electronic chart display and information system of passing vessels, as well as AMSA navigation warnings to passing ships, from its virtual buoys, for the northern and southern approaches.

### Interaction with commercial fishing

The well sites are located within existing designated Commonwealth fisheries that may be used by commercial fishers.

The 500-metre PSZ will be communicated to the Lakes Entrance Fishermen's Co-op, South East Trawl Fishing Industry Association and Seafood Industry Victoria as it is a legal requirement that the area should be avoided during petroleum-related activities.

### Environment Plans

Under the *Offshore Petroleum and Greenhouse Gas Storage Act 2006*, before any petroleum-related activities in Commonwealth waters can commence, an Environment Plan (EP) must be accepted by NOPSEMA.

A single EP is proposed to be developed for these two well P&As.

The EP is a comprehensive document that describes the existing environment, including relevant persons, and how Esso Australia will undertake the P&A activities to avoid, minimise or manage potential environmental impacts to As Low As Reasonable Practicable (ALARP) and meet regulatory acceptability criteria. Achieving ALARP requires a titleholder to implement all available control measures where the cost is not grossly disproportionate to the environmental benefit gained from implementing the control measure.

In the course of preparing an EP, Esso Australia must consult with relevant authorities, persons and organisations whose functions, interests or activities may be affected by the proposed activities (i.e. a relevant person) and provide the opportunity for any issues or concerns to be raised.



### OIL POLLUTION EMERGENCY PLAN

Under Commonwealth environment legislation, Esso Australia must demonstrate and document oil spill response arrangements. The Oil Pollution Emergency Plan (OPEP) forms part of an EP submission and demonstrates our capability to respond in the unlikely event of an oil spill.

Esso Australia is a member of the Australian Marine Oil Spill Centre (AMOSOC), a co-operative national oil spill response organisation, which provides access to additional oil spill response resources if required.

Esso Australia's OPEP interfaces with national, state and industry response plans prepared and implemented by the Australian Government via AMSA (NATPLAN), the Victorian Government (Maritime Emergencies (non-search and rescue) Plan), the Tasmanian Government (TASPLAN), the NSW Government (NSW Marine Oil and Chemical Spill Contingency Plan) and the Australian Oil industry's Australian Marine Oil Spill Plan (AMOSPLAN) administered by AMOSOC.

The OPEP defines spill response options which may be applied to a spill event. The selected spill response option(s) would depend upon the size and type of spill; environmental sensitivities within the spill path; prevailing weather conditions; access restrictions and available resources. In all instances, a Net Environmental Benefits Assessment is undertaken, in consultation with relevant government agencies, to consider the advantages and disadvantages of the available spill response options.

Esso Australia Resources Pty Ltd ("EARPL") and Woodside Energy (Bass Strait) Pty Ltd are 50:50 co-venturers in a joint venture for the exploration, development and production of oil and gas from Bass Strait and are the owners of the Longford Facility. EARPL is the designated Operator of the joint venture under the Gippsland Basin Joint Venture Operating Agreement. EARPL receives services, including personnel, from its wholly owned subsidiary, Esso Australia Pty Ltd ("Esso Australia"). Esso Australia is "operator" as defined in the *Occupational Health and Safety Regulations 2007*.

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Esso Australia is committed to ongoing engagement with the communities where we operate. Esso has been consulting with relevant persons potentially affected by this activity through a number of different channels. We will continue to address questions and consider feedback from relevant persons throughout this activity.

Esso welcomes the opportunity for more face-to-face meetings and will continue to keep relevant persons informed of the proposed activities throughout the planning phase and into the execution phase.

If you have any specific questions or feedback about any of these activities please contact Esso at:

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or call:

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