Seabirds, Penguins and Marine Turtles

ConocoPhillips Australia is planning to undertake exploration activities in offshore permits VIC/P79 and T/49P located in Commonwealth waters. The proposed activity is a continuation of ConocoPhillips Australia's exploration activities in the offshore Otway basin which aims to identify commercially viable natural gas reserves to help meet Australia's energy needs.

About the Otway Exploration Program

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ConocoPhillips Australia is proposing to undertake an exploration program that consists of seabed surveys and the drilling of up to six exploration wells in exploration permits VIC/P79 and T/49P located in Commonwealth waters offshore of Victoria and King Island, Tasmania.

ConocoPhillips Australia has commenced preparation of an Environment Plan (EP) that will seek approval for this exploration drilling program to be undertaken. Drilling commencement is dependent on regulatory approval and drilling rig availability. The initial activity will be seabed surveys which will commence no earlier than January 2024.

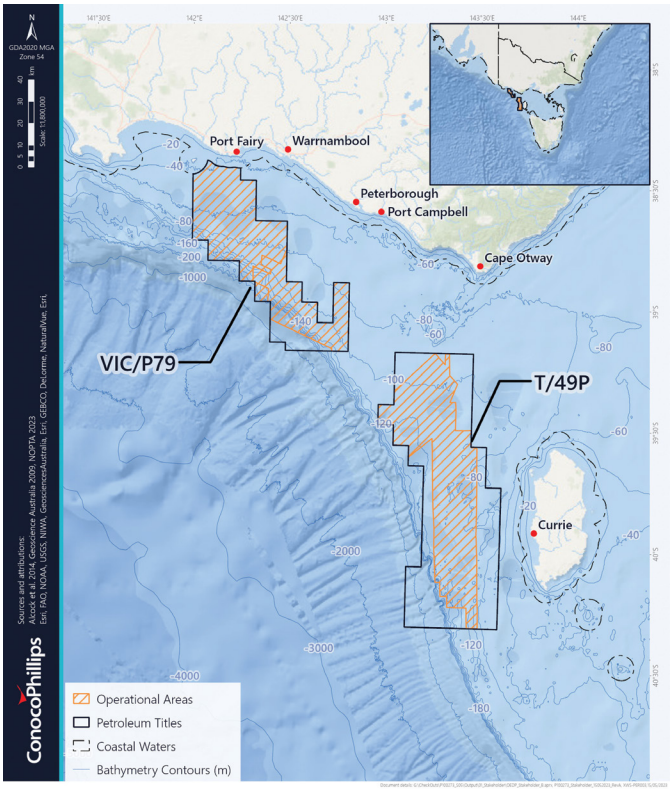
We are committed to ensuring that seabirds, penguins and marine turtles continue to undertake biologically important behaviours in the offshore environment, with no unacceptable impacts to critical life-cycles stages or population characteristics because of the Otway exploration drilling program.

This information sheet summarises the ongoing assessment of potential impacts and risks to seabirds, penguins and marine turtles arising from exploration activities.

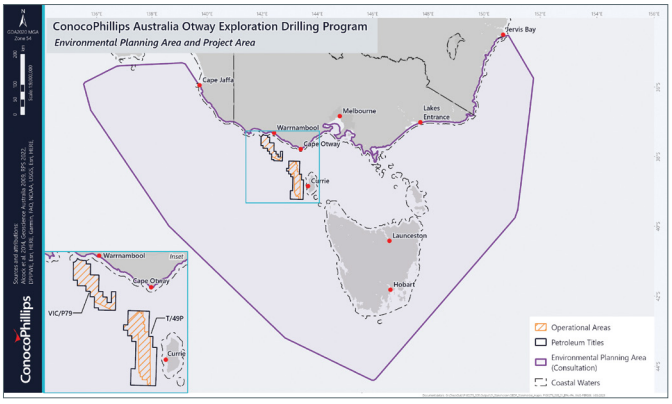
Figure 1 opposite shows the permit areas, the operational areas within which exploration activities may occur, and the Environmental Planning Area that has been applied to ensure that far ranging environmental values and sensitivities are appropriately identified and considered.

Map of Permit Areas

Figure 1



Environmental Planning Area Map



KEY INFORMATION

- ConocoPhillips Australia is planning to undertake an exploration program in the Otway Basin and is preparing an Environment Plan which will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for public comment and assessment. Any decision to proceed to development will be dependent on a conducive investment environment.
- The EP will include an assessment of potential impacts and risks to seabirds, penguins and marine turtles that might arise from the exploration program.
- A preliminary assessment of impacts and risks to seabirds, penguins and marine turtles has identified that:
  - Seabirds, penguins and marine turtles are known to be sensitive to the effects of artificial light, particularly during critical behaviours such as breeding and foraging for seabirds and penguins, and nesting and hatching for marine turtles.
  - Marine turtles are known to be sensitive to the effects of underwater noise. However, there are no biologically important behaviours or critical habitat essential to marine turtles identified in the area and their presence is expected to be of a transient nature.
  - A number of seabird species utilise the offshore Otway Basin for biologically important behaviours such as foraging, breeding and migration. Where underwater noise and artificial light have the potential to affect biologically important behaviours of threatened seabird species, effective control measures will need to be in place.
- The purpose of this information sheet is to provide details of potential impacts and risks that have been identified, as well as the measures proposed to reduce those impacts and risks, to support consultation prior to the submission of the Environment Plan.
- If you would like to ask questions or provide feedback, see the contact details at the end of the information sheet.

Seabirds, Penguins and Marine Turtles in the Area

There are several species of seabirds that are known to be present in the Otway Basin. Some of these species such as albatross and petrels, and penguins, are listed as Matters of National Environmental Significance and are protected under the Environment Protection and Biodiversity Conservation Act 1999. Many seabird species utilise the area for biologically important behaviours such as foraging, breeding and migration.

The following species are known to occur within the environmental Planning Area and exhibit one or more of these important behaviours:

- Caspian tern
- Common-diving petrel
- Black-faced cormorant
- Flesh-footed shearwater
- Great-winged petrel
- Greater crested tern
- Little penguin
- Pacific gull
- Short-tailed shearwater
- Shy albatross
- Soft-plumage petrel
- Sooty shearwater
- Wedge-tailed shearwater
- White-capped albatross
- White-faced storm petrel
- White-fronted tern

Marine turtles are highly migratory and rely on both marine and terrestrial habitats. Although they may occur within the Environmental Planning Area, no habitat critical to their survival occurs in the waters off southern Australia and they are not known to exhibit any identified biologically important behaviours in this area. The closest biologically important areas for marine turtles are located south of Brisbane, QLD, and at Shark Bay, WA. Even though the presence of individuals within the area is expected to be of a transient nature, the potential impacts of the Otway Exploration Drilling Program on marine turtles has been assessed as they are listed as Matters of National Environmental Significance and are protected under the Environment Protection and Biodiversity Conservation Act 1999.

Potential interactions with seabirds and marine turtles

The preliminary environmental impact and risk assessment has identified aspects of exploration activities that have the potential to impact, or pose a risk to, seabirds, penguins and marine turtles, as shown below.

Aspect	Potential for impacts to seabirds, penguins and turtles
Artificial Light	Minor consequences for seabirds, penguins and turtles
Underwater Sound	Minor consequence for marine turtles. Negligible consequences for seabirds and penguins
Interactions with Marine Fauna	Low risk to seabirds, penguins and marine turtles
Loss of Material or Waste Overboard	Low risk to seabirds, penguins and marine turtles
Accidental Release of Hydrocarbon	Low risk to seabirds and marine turtles.
	Medium risk to penguins.

Impacts and risks vary for different species. More detail is provided below for impacts and risks associated with light, underwater sound and accidental hydrocarbon releases.

Light

Routine operational lighting on survey vessels, the drilling rig and support vessels is a critical safety requirement for offshore activities and supports safe navigation. In addition, if hydrocarbons are found during exploration, a well test may be conducted involving short periods of flaring for the safe disposal of hydrocarbons.

The impact of routine operational and flaring-related light on marine fauna is highly dependent on the species' vulnerability and behaviours that occur within the area. As animals perceive light differently from humans, an understanding of the type of lights used and the nature of a species vision is required for assessment. Species of concern identified by the National Light Pollution Guidelines (2020)[1] include both seabirds and marine turtles.

Seabirds are most impacted by the intensity and colour of artificial lights. They are particularly sensitive to violet – blue wavelengths, long wavelengths when using their "daylight" adapted vision and short wavelengths when using their "dark" adapted vision. Seabirds may be attracted to the light glow of the drilling rig or vessels which increases the likelihood of injury through collision and may disrupt migration or foraging at sea. Disorientation due to artificial light is especially evident in nocturnal seabird species who migrate, forage, or return to their colonies at night. However, this is typically associated with areas closer to the coast. Artificial light is not identified as a threat in the National Recovery Plan for Threatened Albatrosses and Giant Petrels 2011-2016 (2011[2]). Given the large areas typically covered by foraging birds and the transient nature of these species in the area, artificial light is not expected to cause significant impacts to foraging behaviours.

Light emissions have the potential to impact little penguins as this species is known to occur within 20 km of the operational area. Typically, penguins are most impacted by light when it is directly illuminating nesting areas, as this may prevent individuals from returning to shore at dusk. Potential increases in light levels, particularly along coastline areas where little penguins are known to breed, are not expected to inhibit biologically important behaviours, as the light emissions at 20 km are equivalent to the ambient light on a night with a quarter moon.

Artificial light has been shown to impact critical nesting and hatching behaviours of marine turtles and is listed as a key threat in the Recovery Plan for Marine Turtles in Australia (2017)[3]. Although species may be present, there are no biologically important behaviours, like nesting and hatching, or critical habitat essential to marine turtles identified within southern Australia.

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[1] National Light Pollution Guidelines for Wildlife Including marine turtles, seabirds and migratory shorebirds (2020) by the Department of Environment and Energy. [2] National Recovery Plan for Threatened Albatrosses and Giant Petrels 2011-2016 (2011) by the Department of Environment and Energy. [3] Recovery Plan for Marine Turtles in Australia 2017-2027 (2017) by the Department of Environment and Energy

Underwater Sound

Much like humans, hearing plays an important role in communication for many animal species. For marine species, it is often also an essential tool for navigation and hunting. Additional noise emissions in the marine environment during the Otway Exploration Drilling Program will be caused by vessel and drilling rig movement and drilling. Marine species of concern include those who spend a significant portion of their time under water, like marine turtles. Each species will typically display different sensitivities to underwater noise.

There is potential for seabirds and penguins who spend time foraging at sea to be impacted by noise emissions. However, the majority of seabirds, such as albatrosses and petrels, are not anticipated to remain within the water column for an extended period of time, and penguins are highly mobile and are not expected to remain within relevant effect distances. Noise impacts are assessed over 12, 24 or 48-hour intervals, as the time exposed to the sound is related to the severity of impact. These intervals are typically longer than any seabird species would spend in the water column at one time, or any penguin would remain in the area, and therefore, seabirds and penguins are not expected to be impacted.

Currently, underwater noise impacts to marine turtles are not well understood. These species do not possess external ears. However, it is thought that sounds could potentially be used for navigational and hunting purposes. There is some evidence to support marine turtles' avoidance of areas where noise emissions are occurring. Although species may be temporarily displaced due to noise emissions, any individuals in the area are expected to be transient due to the absence of biologically important behaviours or critical habitat within southern Australia.

Shy Albatross

Reducing Impact and Risk

The objectives of the Offshore Petroleum and Greenhouse Gas Storage (Environment) Regulations (2009) are to ensure that any petroleum activity is carried out in a manner that is consistent with the principles of ecologically sustainable development as set out in section 3A of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Additionally, these activities must be carried out in a manner that reduces the environmental impacts and risks associated with them to as low as reasonably practicable (ALARP), while also ensuring that any remaining environmental impacts and risks are at an acceptable level.

These objectives are critical to the protection of the marine environment and marine ecosystems from negative impacts associated with offshore petroleum activities. The principles of ecologically sustainable development promote the responsible use of natural resources and emphasise the need to consider the long-term impacts of human activities on the environment.

Reducing environmental impacts and risks associated with offshore petroleum activities to ALARP is an important aspect of responsible and sustainable business practices in the offshore petroleum industry. This involves identifying potential environmental impacts and risks associated with an activity, implementing measures to minimise those impacts and risks, and continually monitoring and evaluating the effectiveness of those measures.

Ensuring that any remaining environmental impacts and risks are at an acceptable level is also critical to protecting the marine environment and marine ecosystems. This involves establishing acceptable environmental standards and thresholds for specific activities and ensuring that the environmental impacts and risks associated with an activity do not exceed those standards and thresholds.

Through the development of the Environment Plan and during consultation, ConocoPhillips Australia will identify and evaluate mitigation and management measures to minimise potential impacts to protected species, particularly during periods of peak biological importance. However, given the diversity of biologically important activities with differing peak periods, there is no perfect window where exploration activities can occur without the potential for impact in the absence of effective controls.

Examples of mitigation measures and activity limitations that will be implemented are listed below:

- ConocoPhillips Australia will develop and implement a Seabird Management Plan as per the National Light Pollution Guidelines for the activity. This plan will ensure that the light emissions are minimised to protect seabirds and other species in the area, and that procedures are in place to support grounded birds.
- Flaring will be restricted to a maximum of 120 hours per well and will only be conducted in the event that hydrocarbons are discovered to ensure safe disposal.
- Activity-specific emergency preparedness and response plans and capability will be in place prior to activity commencement. Wildlife response procedures will be incorporated into ConocoPhillips Australia's Oil Pollution Emergency Plan to be activated in the highly unlikely event of an accidental hydrocarbon release. These will include protection priorities relevant to seabirds and penguins, contacts for trained and specialist personnel, species collection and handling procedures and equipment requirements, and nearby veterinary and rehabilitation resources.

Questions

and Answers

How will ConocoPhillips Australia determine when and where drilling will occur?

Drilling commencement is dependent on regulatory approval and drilling rig availability. The initial activity will involve seabed surveys and will commence no earlier than January 2024.

Specific locations for seabed surveys and exploration drilling are yet to be confirmed. ConocoPhillips Australia has undertaken to assess the environmental impacts and risks associated with seabed surveys and drilling activities that may occur anywhere within broader operational areas within petroleum titles T/49P and VIC/P79. This ensures that the impacts and risks associated with all potential survey and drilling locations are assessed.

ConocoPhillips Australia continues to interpret available data to prioritise and select final drilling locations with the highest likelihood of success. This process involves a careful balance of science, economics, and risk management to ensure that drilling efforts are safely executed with minimal impact to the environment.

Why is lighting needed?

The use of navigational and deck lighting is required by Commonwealth law to ensure safe operating conditions for personnel onboard survey vessels, the drilling drilling rig and support vessels, and for other users in marine waters.

What is flaring and why is it needed?

The purpose of exploration drilling is to identify commercially viable natural gas reserves. To know whether a reservoir is suitable for development, the contents of the reservoir are tested onboard the drilling rig. Flaring is a high-temperature process used to burn the waste gases containing combustible components such as natural gas. Flaring occurs from a remote and elevated location, using a specifically designed burner to promote clean and safe disposal of the combustible components.

Flaring is the safest method to dispose of combustible components during a well test. If a well test is conducted, flaring will occur up to a maximum flow rate of 40 MMscf for 120 hours per well over multiple short-term events and may be visible from shore depending on the drilling rig's location.

How far do light impacts extend from the activity?

The National Light Pollution Guidelines (2020) recommend that a 20 km distance is used for the assessment of impacts to sensitive species as it provides a precautionary limit based on observed effects of sky glow on marine turtle hatchlings demonstrated to occur at 15-18 km and fledgling seabirds grounded in response to artificial light 15 km away. Further, a 50 km threshold has been adopted to account for the combination of operational lighting and short-term flaring from the drilling drilling rig.

The light emissions at this distance are equivalent to ambient light on a moonless clear night sky/new moon. Any listed species sensitive to light that may occur within 50 km of the light source will undergo an impact assessment in the Environment Plan.

Contact us

ConocoPhillips Australia values consultation and feedback and invites consultation with individuals, groups and organisations potentially affected by the proposed activities to help inform the development of the EP.

You are invited to provide feedback, request a meeting and ask questions on the proposed activity by contacting us in one of the following ways:

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