

## **ENVIRONMENT PLAN**

## - APPENDICES

Beehive Pre-Drill Seabed Assessment

WA-488-P

15 February 2022 Rev 2



### List of Appendices

- 1 Commonwealth, State & Territory Legislation
- 2 Project Information Flyers
- 3 Stakeholder Communications
- 4 EPBC Act Protected Matters Search Tool (PMST) results

# **Appendix 1**

Commonwealth, State & Territory Legislation

#### COMMONWEALTH LEGISLATION

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (& Regulations 2000)	<ul> <li>Protects matters of national environmental significance (MNES), provides for Commonwealth environmental assessment and approval processes and provides an integrated system for biodiversity conservation and management of protected areas.</li> <li>M NES are: <ol> <li>World heritage properties;</li> <li>National heritage places;</li> <li>Wetlands of international importance (Ramsar wetlands);</li> <li>Nationally threatened species and ecological communities;</li> <li>Migratory species;</li> <li>Commonwealth marine environment;</li> <li>The Great Barrier Reef Marine Park;</li> <li>Nuclear actions (including uranium mining); and</li> <li>A water resource, in relation to coal seam gas development and large coal mining development.</li> </ol> </li> <li>Relevance to this activity: This EP includes a description and assessment of MNES and migratory species (Item 4 and Item 5 in this list) including the Commonwealth marine environment (Item 6), that may be impacted by the activity.</li> </ul>	<ul> <li>Republic of Korea Migratory Birds Agreement 2006 (ROKAMBA).</li> <li>Convention on Biological Diversity and Agenda 21 1992.</li> <li>Agreement between the Government and Australia and the Government of the People's Republic of China for the Protection of Migratory Birds and their Environment 1986 (CAMBA).</li> <li>Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention) 1979.</li> <li>Agreement between the Government and Australia and the Government of Japan for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment 1974 (JAMBA).</li> <li>Convention on International Trade in Endangered Species of Wild Fauna and Flora 1973 (CITES).</li> <li>Convention on Wetlands of International Importance especially as Waterfowl Habitat 1971 (RAMSAR).</li> <li>International Convention for the Regulation of Whaling 1946.</li> </ul>	DAWE (National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) in the case of this activity)

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Offshore Petroleum Greenhouse Gas Storage Act (OPGGSA) 2006 and OPGGS (Environment) Regulations 2009	The Act addresses all licensing and HSE issues for offshore GHG activities extending beyond the 3 nm limit. The Regulations (Part 2) specify that an EP must be prepared for any petroleum activity and that activities are undertaken in an ecologically sustainable manner. <b>Relevance to this activity:</b> The submission and acceptance of this EP satisfies the key requirements of this legislation.	Not applicable.	NOPSEMA
Environment Protection (Sea Dumping) Act 1981 (& Regulations 1983)	Aims to prevent the deliberate disposal of wastes (loading, dumping, and incineration) at sea from vessels, aircraft, and platforms. <b>Relevance to this activity:</b> There will be no dumping at sea within the meaning of the legislation that would require a sea dumping permit to be obtained.	<ul> <li>Protocol on the Prevention of Marine Pollution by Dumping of Waste and Other Matter 1996 [London Protocol]</li> <li>Convention on the Prevention of Marine Pollution by Dumping of Waste and Other Matter 1972 [London Convention]</li> </ul>	DAWE
Australian Maritime Safety Authority Act 1990	Facilitates international cooperation and mutual assistance in preparing and responding to a major oil spill incidents, and encourages countries to develop and maintain an adequate capability to deal with oil pollution emergencies. Requirements are effected through the Australian Maritime Safety Authority (AMSA). AMSA is the lead agency for responding to oil spills in the Commonwealth marine environment and is responsible for implementing the Australian National Plan for Maritime Environmental Emergencies (NatPlan). <b>Relevance to this activity:</b> In the event of a Level 2 or 3 hydrocarbon spill to sea from a vessel in Commonwealth waters, AMSA is the designated Combat Agency and	<ul> <li>Protocol on Preparedness, Response and Cooperation to Pollution Incidents by Hazardous and Noxious Substances 2000</li> <li>International Convention on Oil Pollution Preparedness, Response and Cooperation 1990 (OPRC).</li> </ul>	AMSA

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Underwater Cultural Heritage Act 2018	Protects the heritage values of shipwrecks, sunken aircraft and relics (older than 75 years) in Australian Territorial waters below the low water mark to the outer edge of the continental shelf (excluding the State's internal waterways. It is an offence to interfere with a shipwreck covered by this Act. This Act replaced the <i>Historic Shipwrecks Act</i> 1976 and came into effect on 1 July 2019. <b>Relevance to this activity:</b> No historic shipwrecks have been identified within the activity area through desktop research. In the event of discovery of, and damage to, previously unrecorded wrecks, this legislation may be triggered.	<ul> <li>Convention on Protection of the Underwater Cultural Heritage 2001.</li> <li>Agreement between the Netherlands and Australia concerning old Dutch Shipwrecks 1972.</li> </ul>	DAWE
Ozone Protection and Synthetic Greenhouse Gas Management Act 1989	Regulates the manufacture, importation and use of ozone depleting substances. Relevance to this activity: Vessels will have a register of ozone-depleting substances (ODS).	<ul> <li>United Nations Framework Convention on Climate Change 1992.</li> <li>Montreal Protocol on Substances that Deplete the Ozone Layer 1987.</li> </ul>	DAWE
Navigation Act 2012 (& Regulations 2013)	<ul> <li>This Act regulates ship-related activities in Commonwealth waters and invokes certain requirements of the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78) relating to equipment and construction of ships. Several Marine Orders (MO) are enacted under this Act relating to offshore petroleum activities, including:</li> <li>MO Part 21: Safety of navigation and emergency procedures</li> <li>MO Part 30: Prevention of collisions</li> <li>MO Part 50: Special purpose ships</li> <li>MO Part 59: Offshore industry vessel operations</li> <li>MO Part 70: Seafarer certification.</li> <li><b>Relevance to this activity:</b> Vessels will adhere to the relevant MOs while operating within Commonwealth waters.</li> </ul>	<ul> <li>International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW) as amended, 1995.</li> <li>United Nations Convention on the Law of the Sea 1982 (UNCLOS).</li> <li>International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol of 1978 (MARPOL).</li> <li>International Convention for the Safety of Life at Sea 1974 (SOLAS).</li> <li>Convention on the International Regulations for Preventing Collisions at Sea 1972 (COLREG).</li> </ul>	AMSA

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Protection of the Sea (Prevention of Pollution from Ships) Act 1983 Protection of the Sea (Prevention of Pollution from Ships) (Orders) Regulations 1994	<ul> <li>Regulates ship-related operational activities and invokes certain requirements of the MARPOL Convention relating to discharge of noxious liquid substances, sewage, garbage, air pollution etc.</li> <li>Requires that ships &gt;400 gross tonnes to have pollution emergency plans. Several MO are enacted under this Act relating to offshore petroleum activities, including: <ul> <li>MO Part 91: Marine Pollution Prevention – Oil</li> <li>MO Part 93: Marine Pollution Prevention – Noxious Liquid Substances</li> <li>MO Part 94: Marine Pollution Prevention – Harmful Substances in Packaged Forms</li> <li>MO Part 95: Marine Pollution Prevention – Garbage</li> <li>MO Part 97: Marine Pollution Prevention – Air Pollution</li> <li>MO Part 98: Marine Pollution Prevention – Air Pollution</li> </ul> </li> <li>MO Part 97: Marine Pollution Prevention – Air Pollution</li> <li>MO Part 98: Marine Pollution Prevention – Air Pollution</li> <li>MO Part 98: Marine Pollution Prevention – Mathematical Systems.</li> </ul>	Various parts of MARPOL.	AMSA

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Protection of the Sea (Civil Liability for Bunker Oil Pollution Damage) Act 2008	Sets up a compensation scheme for those who suffer damage caused by spills of oil that is carried as fuel in ships' bunkers. There is an obligation on ships > 1,000 gross tonnes to carry insurance certificates when leaving/entering Australian ports, or leaving/entering an offshore facility within Australian coastal waters. <b>Relevance to this activity:</b> Vessels will hold the required insurance certificates.	<ul> <li>International Convention on Civil Liability for Bunker Oil Pollution Damage 2001.</li> </ul>	AMSA
Protection of the Sea (Harmful Antifouling Systems) Act 2006	Creates an offence for a person to engage in negligent conduct that results in a harmful anti-fouling compound being applied to a ship. Also provides that Australian ships must hold 'anti- fouling certificates', provided they meet certain criteria. <b>Relevance to this activity:</b> Vessels will hold the required valid anti-fouling certificates.	<ul> <li>International Convention on the Control of Harmful Anti-fouling Systems on Ships 2001.</li> </ul>	AMSA
Protection of the Sea (Shipping Levy) Act 1981	Provides that where, at any time during a quarter when a ship with tonnage length of no less than 24 m was in an Australia port, there was on board the ship a quantity of oil in bulk weighing more than 10 tonnes, a levy is imposed in respect of the ship for the quarter. <b>Relevance to this activity:</b> Vessels will adhere to the shipping levy, as required.	Not applicable.	AMSA
Maritime Legislation Amendment (Prevention of Air Pollution from Ships) Act 2007	<ul> <li>This Act implements the requirements of MARPOL 73/78</li> <li>Annex VI for shipping in Commonwealth waters as per:</li> <li>MO Part 97: Marine Pollution Prevention – Air Pollution.</li> <li>Relevance to this activity: Vessels will use low sulfur diesel fuel.</li> </ul>	Various parts of MARPOL.	Department of Infrastructure, Transport, Regional Development and Communications

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
National Greenhouse and Energy Reporting Act 2007 (NGER) (& Regulations 2008)	Establishes the legislative framework for the NGER Scheme, which is a national framework for reporting GHG emissions, GHG projects and energy consumption and production by corporations in Australia. <b>Relevance to this activity:</b> Under the NGER Act, a controlling corporation assesses its reporting obligations by reference to the facilities that are under its 'operational control.' As the vessel contractor does not come under EOG's operational control, it will be required to collect and submit its own emissions data under the NGER Act.	<ul> <li>United National Framework Convention on Climate Change (UNFCCC), entered into force in 1994. Goals under the framework are updated during the annual convention.</li> </ul>	Clean Energy Regulator

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Biosecurity Act 2015 (& Regulations 2016)	This Act provides the Commonwealth with powers to take measures of quarantine, and implement related programs as are necessary, to prevent the introduction of any plant, animal, organism or matter that could contain anything that could threaten Australia's native flora and fauna or natural environment. The Commonwealth's powers include powers of entry, seizure, detention and disposal. Offshore petroleum installations outside of 12 nm are located outside of Australian territory for the purposes of the Act. While these installations are not subject to biosecurity control, aircraft and vessels (not subject to biosecurity control) that leave Australian territory and are exposed to the installations are subject to biosecurity control when returning to Australian territory. When a vessel or aircraft leaves Australian territory and interacts with an installation or petroleum industry vessel it becomes an 'exposed conveyance' and is subject to biosecurity control when it returns to Australian territory unless exceptions can be met. The person in charge of an exposed conveyance carries the responsibility for pre-arrival reporting under the Act and must arrive at a first point of entry. This Act includes mandatory controls in the use of seawater as ballast in ships and the declaration of sea vessels voyaging into and out of Commonwealth waters. The regulations stipulate that all information regarding the voyage of the vessel and the ballast water is declared correctly to the quarantine officers. <b>Relevance to this activity:</b> Vessels sourced from foreign ports will adhere to the DAWE guidelines regarding quarantine clearance to enter Australian waters.	<ul> <li>International Convention for the Control and Management of Ships Ballast Water &amp; Sediments 2004.</li> <li>World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (SPS agreement) 1995.</li> <li>World Organisation for Animal Health and the International Plant Protection Convention 1952.</li> </ul>	DAWE

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Marine Safety (Domestic Commercial Vessel) National Law Act 2012 (& Regulations 2013)	<ul> <li>This Act provides for a national system for Domestic</li> <li>Commercial Vessels (DCV) between states and territories to ensure their safe operation. This system provides for MO and National Standards to be adopted for DCVs of different classes.</li> <li>Current MO include: <ul> <li>MO 501 (Administration – National Law) 2013</li> <li>MO 502 (Vessel Identifiers – National Law) 2013</li> <li>MO 503 (Certificates of Survey – National Law) 2013</li> <li>MO 504 (Certificates of Operation and Operational Requirements – National Law) 2013</li> <li>MO 505 (Certificates of Competency – National Law) 2013</li> <li>MO 507 (Load Line Certificates – National Law) 2013.</li> </ul> </li> <li>This law does not over-ride state legislation with respect to marine environmental management, dangerous goods management, speed limits, navigation aids, rules for prevention of collisions, monitoring of marine communications systems, workplace health and safety or emergency management and response.</li> </ul> <b>Relevance to this activity:</b> Vessels will adhere to the relevant MOs while operating within Commonwealth waters.	Not applicable.	AMSA
Native Title Act 1993	Allows for recognition of native title through a claims and mediation process and also sets up regimes for obtaining interests in lands or waters where native title may exist. <b>Relevance to this activity:</b> Native Title Determination area does not cover the offshore area in which the activity will be undertaken, and therefore there is no relevance to this activity.	Not applicable.	National Native Title Tribunal (NNTT)

Commonwealth Legislation/ Regulation	Scope	Related International Conventions	Administering Authority
Fisheries Management Act 1991 (& Regulations 2009)	This Act aims to implement efficient and cost-effective fisheries management on behalf of the Commonwealth, ensure that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of Ecologically Sustainable Development (ESD), maximise the net economic returns to the Australian community from the management of Australian fisheries, ensure accountability to the fishing industry and to the Australian community in in the Australian Fisheries Management Authority's (AFMA's) management of fisheries resources, and achieve government targets in relation to the recovery of the costs of AFMA. <b>Relevance to this activity:</b> Provides the regulatory and other mechanisms to support any necessary fisheries management decisions in the event of a hydrocarbon spill in Commonwealth waters.	Not applicable.	AFMA
Aboriginal and Torres Strait Islander Heritage Protection Act 1984	This Act provides for the preservation and protection from injury or desecration areas and objects that are of significance to Aboriginal people, under which the Minister may make a declaration to protect such areas and objects. Under the Act, discovery of Aboriginal remains must be reported to the Environment Minister. <b>Relevance to this activity:</b> No known sites of Aboriginal heritage significance occur within the activity area. May be relevant in the event of a hydrocarbon spill requiring shoreline access for clean-up purposes.	Not applicable.	DAWE

#### WESTERN AUSTRALIAN LEGISLATION

WA Legislation/ Regulation	Scope	Relevance to activity	Administering Authority
Conservation and Land Management Act 1984	This Act makes provision for the use, protection and management of certain public lands and waters and the flora and fauna. It establishes authorities responsible for such protection. This Act covers the management of Nationally Important Wetlands that are present along the coast of the EMBA.	This Act would be triggered in the event of a hydrocarbon spill that threatens coastal marine parks, or that access to respond to a hydrocarbon spill is required through such parks.	Conservation and Parks Commission
Contaminated Sites Act 2003 (& Regulations 2006)	This Act provides for the identification, recording, management and remediation of contaminated sites. Under the Act, a 'site' is an area of land or water in WA, including surface water, groundwater and offshore areas out to 3 nm. A site is 'contaminated' if it has a substance in it at above background concentrations, which presents or has the potential to present a risk of harm to human health or the environment.	This Act would be triggered in the event that a hydrocarbon spill contaminates shorelines and requires remediation.	Department of Water and Environmental Regulation (DWER)
Environmental Protection Act 1986	This is the principal Act relating to environmental protection in WA. It establishes the EPA and gives the EPA overall responsibility for the prevention, control and abatement of environmental pollution and for the conservation, preservation, protection, enhancement and management of the environment. Part 5 of the Act states that a person who causes pollution or environmental harms or allows pollution or environmental harm to be caused commits an offence.	Hydrocarbons are listed in Schedule 1 of the Act as a Listed Waste. The Act would be triggered in the event of a hydrocarbon spill that reaches the coast, particularly with regard to waste treatment, transport and disposal.	Office of the EPA
Environmental Protection (Controlled Waste) Regulations 2004	These regulations detail the appropriate management and handling of controlled wastes in respect to the environment. Schedule 1 of the regulations lists waste oil and water, or hydrocarbons and water, mixtures or emulsions as a controlled waste.	These regulations may be triggered in the event that a hydrocarbon spill enters state waters and reaches shorelines, requiring collection and onshore handling, transport and disposal.	DWER

WA Legislation/ Regulation	Scope	Relevance to activity	Administering Authority
Environmental Protection (Unauthorised Discharges) Regulations 2004	These regulations make it an offence to cause pollution through unauthorised discharges, particularly with regard to dark smoke (anything darker than shade 1 on the Australian Miniature Smoke Chart, AS 3543, 1989). It may be a defence to cause dark smoke to prevent irreversible damage to a significant part of the environment. Schedule 1 of the regulations lists hydrocarbon as a material that must not be discharged to the environment.	This Act would be triggered in the event that a hydrocarbon spill enters state waters and/or in-situ burning is a response consideration.	DWER
Emergency Management Act 2005	This Act provides for prompt and coordinated organisation of emergency management in the State. Hazards captured under the Act include events that result in destruction of or damage to the environment. It establishes the State Emergency Management Committee (SEMC), which is the key plan in responding to emergencies of state significance.	This Act would be triggered in the event that a hydrocarbon spill threatens state waters and shorelines. The SEMC would implement the State Emergency Management Plan on behalf of the state.	SEMC
Aquatic Management Resources Act 2016 (ARMA)	This Act provides for the ecologically sustainable development and management of the State's aquatic resources including management of aquatic biosecurity.	This Act would be triggered in the event that a hydrocarbon spill enters state waters and has the potential to impact commercial fishing activities (e.g., closures).	Department of Primary Industry and Regional Development (DPIRD)
Harbours and Jetties Act 1928	This Act relates to the liability of owners of ships for damage to harbours and jetties, and works connected therewith.	This Act may be triggered in the event that a support vessel used for the project causes loss or damage to a harbor or jetty.	Department of Transport (DoT)
Pollution of Waters by Oil and Noxious Substances Act 1987 (& Regulations 1993)	This Act provides for the protection of the sea and certain waters from pollution by oil and other noxious substances discharged from ships (as defined in the WA Marine Act, see below). This Act prohibits the discharge of oil or noxious substances into State waters and provides for the removal of oil or any mixture containing oil from affected waters.	This Act may be triggered in the event that a hydrocarbon spill enters state waters.	EPA & DoT
Western Australian Marine Act 1982 (& (Infringements) Regulations 1985)	This Act regulates navigation and shipping in WA waters.	Activity vessels traversing WA state waters (e.g., in the event of hydrocarbon spill) must abide by the requirements of the Act with regard to marine safety requirements.	DoT

WA Legislation/ Regulation	Scope	Relevance to activity	Administering Authority
Biodiversity Conservation Act 2016 (& Regulations 2018)	This Act provides for the conservation and protection of wildlife. Licences to take (i.e., for fauna, to kill, capture, disturb, hunt and for flora to gather, pluck, dig up, destroy, etc) protected flora and fauna on Crown land (e.g., coastal parks) are required under this act. The regulations provide for the issuing of licences to take, keep, import and export flora and fauna, and for the caring of sick or injured fauna.	This Act would be triggered in the event that native wildlife rescue and treatment is required in the event of a hydrocarbon spill, or that native habitat on the coast may be damaged in the process of responding to coastal stranding of hydrocarbons.	Department of Biodiversity, Conservation and Attractions (DBCA)
Animal Welfare Act 2002 (& Animal Welfare (General) Regulations 2003)	This Act is established to provide for the welfare, safety and health of animals, to regulate the use of animals for scientific purposes and for related purposes. The Act is focused on prohibiting cruelty to, and other inhumane or improper treatment of, animals.	This Act would be triggered in the event that wildlife rescue and treatment is required in the event of a hydrocarbon spill.	DPIRD

#### NORTHERN TERRITORY LEGISLATION

NT Legislation/ Regulation	Scope	Relevance to activity	Administering Authority
Environment Protection Act 2019 (& Regulations 2020)	This Act provides the requirement for operators in the Northern Territory to hold an 'environmental approval' for proposed actions that will have a significant impact on the environment or require referral under a 'referral trigger'.	The Act would be triggered in the event of a hydrocarbon spill that reaches the shoreline, particularly with regard to pollution and waste containment, avoidance and abatement.	NT EPA
Waste Management and Pollution Control Act 1998 (& (Administration) Regulations 1998)	Legislation protecting the environment through the encouragement of effective waste management, pollution prevention and control practices (relevant for waste disposal and transfer).	This Act and its regulations may be triggered in the event that a hydrocarbon spill enters state waters.	NT EPA
Dangerous Goods Act 1998 (& Regulations 1985)	This Act provides for the safe storage, handling and transport of certain Dangerous Goods.	This Act and its regulations may be triggered in the event that a hydrocarbon spill enters state waters, with regard to incident reporting requirements.	NT Worksafe
Marine Pollution Act 1999 (& Regulations 2003)	This Act provides protection of the marine and coastal environment by minimising intentional and negligent discharges of ship sourced pollutants to coastal waters. It also enacts Annexures 1, 2, 3 and 5 of MARPOL.	This Act and its regulations may be triggered in the event that a hydrocarbon spill enters state waters.	NT Department of Environment, Parks and Water Security (DEPWS)

# Appendix 2

# **Project Information Flyers**

### **Beehive-1 Exploration Well**

Information Flyer #1

17 September 2021

EOG Resources Inc (EOG) is planning to drill the Beehive-1 exploration well ('the project') in Exploration Permit WA-488-P in the Joseph Bonaparte Gulf in Western Australia (WA) (Figure 1, over page).

### Why We're Consulting You

EOG has identified you, your group, organisation or company as a 'relevant person', defined under the Offshore Petroleum and Greenhouse Gas (Environment) Regulations 2009 as someone whose *functions* (power, duty, authority or responsibility), *activities* (things you do or have done) or *interests* (your rights, advantages, duties and liabilities, or concerns) may be affected by the project. Relevant persons typically include Commonwealth, State and Territory government agencies, commercial and recreational fisheries, asset owners and environment groups.

This information flyer aims to introduce you to EOG and provide information about the project and invites you to submit questions or concerns about the project. This process will assist to inform the preparation of the project's Environment Plans (EPs), which are currently in preparation for regulatory submission.

### Who is EOG?

EOG is one of the largest independent crude oil and natural gas exploration and production companies in the United States of America (USA).

EOG is in the process of acquiring the WA-488-P exploration permit from Finniss Offshore Exploration Pty Ltd, which is expected to complete in September or October 2021. EOG has operated offshore since 1992, with a history of nearly 30 years in Trinidad & Tobago, the UK North Sea and the USA Gulf of Mexico.

In the past 10 years, EOG has drilled nearly 40



offshore wells, with an excellent safety and environment record.

### The Project

EOG aims to explore a known hydrocarbon prospect in WA-488-P located in the Bonaparte Basin. The project is divided into two phases; geophysical and geotechnical (G&G) investigations, followed by drilling.

This information flyer is focused on the first phase of work, the G&G investigations. Additional information flyers will be issued as the project progresses.

### Geophysical and Geotechnical Investigations

The G&G investigations are planned to commence any time between the start of February and end of June 2022 (contingent on the receipt of EP acceptance, vessel and equipment availability). They will be undertaken within a 440 km<sup>2</sup> envelope, which is located 163 km from the nearest WA shoreline and 73 km from the nearest Northern Territory (NT) shoreline. Water depths in the project area range from 40 m to 50 m.

The G&G investigations (Figure 2) collect seabed and shallow geological information to inform the safe location of a jack-up drilling rig. The G&G investigations are divided into two phases, as outlined here.

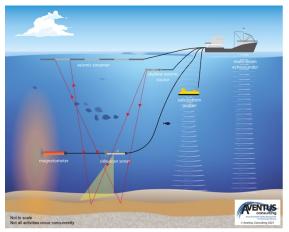


Figure 2. Geophysical investigations



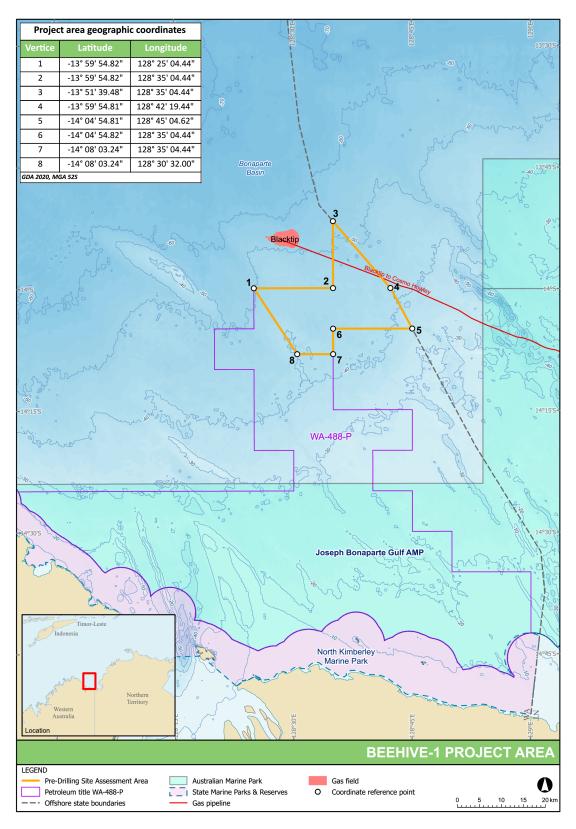


Figure 1. Beehive-1 project area



**Geophysical investigations** involve the following suite of tests:

- Assess water depths (bathymetry) using a multi-beam echo sounder (MBES).
- Detect seabed hazards such as pipelines, shipwrecks, reefs and anchors – using a side scan sonar (SSS).
- Map the structure and thickness of uppermost seabed sediments (shallow geology) – using a sub-bottom profiler (SBP).
- Detect metallic objects on or below the seabed, such as cables, anchors, chains, buried pipelines – using a magnetometer.
- Map the near-surface geological hazards, such as shallow gas pockets – using a mini-airgun or sparker system.

The geophysical activities are likely to be conducted using a small, locally-based vessel (as depicted in Figure 2) and is likely to take up to two weeks to complete.

**Geotechnical investigations** acquire physical measurements and samples of the local shallow geology at and around the potential drill location, using the following techniques:

- Geological analysis of unconsolidated seabed sediments – using grab sampling.
- Geological analysis of formations below the seabed using coring.
- Determine seabed strength using piezo cone penetrometer testing (PCPT) and borehole sampling.

The geotechnical investigations are undertaken using a specialised medium-sized vessel, as depicted in Figure 3, and is likely to take up to two weeks to complete. This may be the same vessel as that used to undertake the geophysical investigations.

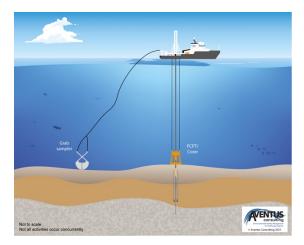


Figure 3. Geotechnical investigations

#### Drilling

Planning for the drilling campaign is underway. The Beehive-1 well is targeting the Sunbird Formation and anticipates the presence of a light oil or gas condensate.

A jack-up drill rig will drill the well vertically to a depth of about 5,000 m using a water-based mud system, which will take 40-50 days. In the event that hydrocarbons are discovered, well testing (that involves flaring) may take place.

It is anticipated that drilling may commence as early as Q3 2022 (contingent on the receipt of EP acceptance, vessel and equipment availability), but ideally no later than Q2 2023. Further details about the drilling campaign will be provided in future information flyers as planning progresses.

#### **Environment Plans**

Preparation of a G&G Investigations EP and a Drilling EP are underway. These will be submitted to the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) for assessment.

The full EPs will be made available on NOPSEMA's website for public exhibition prior to formal assessment by NOPSEMA.

An EP is a comprehensive document that describes the project, outlines stakeholder feedback, details the existing marine and socio-economic environment, describes and assesses impacts and risks and outlines the



control measures to avoid, minimise and mitigate environmental impacts and risks to be acceptable and ALARP (As Low As Reasonably Practicable).

The project will be subject to industry best practice standards and undertaken in accordance with all relevant environmental and safety legislation and regulations.

### Features of the Project Area

Features in the project area include:

- Dominated by the Indonesian Throughflow current and strong tides.
- A seabed dominated by flat featureless plains comprising sand and gravel, with localised reefs and outcrops supporting sponge gardens. The G&G investigations will provide more detail about the type of seabed in the project area. The plains contain diverse infaunal communities (e.g., crustaceans and polychaete worms).
- Seasonal presence or likely presence of threatened migratory species including turtles, sharks, sawfish, whales, dolphins and seabirds.
- Low-intensity commercial fishing by the Commonwealth-managed Northern Prawn Fishery (the project area has a 0.06% overlap with the fishery).
- Some commercial fishing by the WAmanaged Northern Demersal Scalefish Managed Fishery (mostly goldband snapper and red emperor) and Mackeral Managed Fishery.
- An absence of NT-managed commercial fisheries.
- An absence of known shipwrecks.
- Low commercial shipping traffic.
- An overlap by the Department of Defence North Australian Exercise Area.

Distances from the project area to the following features are:

- The Carbonate bank and terrace system of the Sahul Shelf Key Ecological Feature (KEF) 13 km.
- The Blacktip unmanned wellhead platform 13 km.
- Joseph Bonaparte Australian Marine Park (AMP) – 16 km.
- WA North Kimberley Marine Park 50 km.

A summary of key impacts and risks of the G&G investigations is presented in the following pages.

### How to Provide Feedback

EOG encourages you to ask questions or provide feedback on the project using the following contact details:

Email: australia@eogresources.com

Phone: 0409 772 170

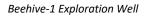
EOG will respond to feedback in a timely fashion.

Background project information (and this information flyer) is also available on the EOG website at:

https://www.eogresources.com/australia

### **Ongoing Consultation**

Consultation with relevant persons will be ongoing throughout the project planning phase, with additional information flyers to be distributed at various milestones.





## Preliminary environmental impact and risk assessment for the Beehive-1 geophysical and geotechnical investigations (WA-488-P)

Hazard	Potential impacts & risks	Avoidance, management and mitigation measures		
Planned events				
Generation of underwater sound from G&G investigations and vessels	Temporary disruption to migration, feeding or breeding patterns for sound-sensitive fauna, such as cetaceans (whales and dolphins).	<ul> <li>In accordance with the EPBC Act Policy Statement 3.1, a 500-m shutdown zone will be maintained during operation of the geophysical equipment to minimise impacts on cetaceans.</li> <li>Vessel engines and thrusters will be maintained in accordance with planned maintenance system to ensure they are operating efficiently.</li> </ul>		
	Damage to the Blacktip gas pipeline from sound pulses.	<ul> <li>Shallow gas investigations, using a mini-airgun or sparker system, will not be undertaken over the pipeline.</li> </ul>		
Seabed disturbance from geotechnical activities	Temporary and localised seabed turbidity. Smothering of seabed habitat by disturbed sediments.	<ul> <li>The vessel will not anchor during geotechnical investigations (it will remain on location using dynamic positioning).</li> <li>Very low volumes of cuttings and drilling fluids will be discharged during borehole sampling.</li> <li>Seabed grab sampling and coring activities are extremely localised.</li> <li>Cored holes are very narrow and will collapse in on themselves and small surface 'craters' will quickly fill in with sediments and recolonise with benthic fauna.</li> <li>Large bulky items will be securely fastened or stored on the vessel deck to prevent loss to sea.</li> <li>Any dropped objects will be recovered (where safe to do so).</li> </ul>		
Routine vessel o	lischarges and emissions			
Atmospheric emissions	Temporary reduction in air quality in the local air shed.	<ul> <li>Vessels &gt;400 gross tonnes will have in place a current International Air Pollution Prevention (IAPP) certificate and Ship Energy Efficiency Management Plan (SEEMP).</li> <li>Only marine-grade low sulphur diesel (no greater than 0.5% m/m) will be used.</li> <li>Waste incineration will not take place.</li> <li>All fuel-burning equipment will be maintained in accordance with planned maintenance systems.</li> </ul>		
Light glow	Attractant to fauna, temporary increase in predation rates on fauna attracted to lights.	<ul> <li>Vessel lighting will be kept to the minimum required but in accordance with navigational standards and personnel safety requirements for night-time work.</li> </ul>		



Hazard	Potential impacts & risks	Avoidance, management and mitigation measures
Discharge of treated sewage and	Temporary and localised reduction in water quality.	<ul> <li>Sewage and grey water will be treated in a MARPOL Annex IV- compliant sewage treatment plant prior to discharge (or taken back to port for disposal).</li> </ul>
grey water		<ul> <li>Vessels &gt;400 gross tonnes will have in place a current International Sewage Pollution Prevention (ISPP) certificate.</li> </ul>
		<ul> <li>In the event of a sewage treatment plant malfunction, untreated sewage will only be discharged when &gt; 12 nm from shore or will be offloaded onshore for treatment.</li> </ul>
Discharge of cooling water	Temporary and localised elevation in	<ul> <li>Low impact biocides (chlorine) are used in optimised concentrations in the cooling system.</li> </ul>
and reverse osmosis (brine)	surface water temperature and salinity levels.	<ul> <li>Engines and associated equipment that require cooling by water will be maintained in accordance with the planned maintenance system so that they are operating within accepted parameters.</li> </ul>
		<ul> <li>Only low-toxicity chemicals (ONCS 'Gold'/'Silver' (CHARM) or 'D'/'E' (non-CHARM)-rated) chemicals are used in the cooling and brine water systems.</li> </ul>
Discharge of putrescible	Temporary and localised increase in	<ul> <li>Putrescible waste will be macerated to &lt;25 mm prior to discharge (or taken back to shore for disposal).</li> </ul>
waste nutrient content of surface and near- surface water quality.	<ul> <li>In the event of macerator malfunction, un-macerated putrescible waste will take place will be discharged when &gt;12 nm of land or returned to shore.</li> </ul>	
	Temporary increase in scavenging behaviour of pelagic fish and seabirds.	<ul> <li>Non-putrescible galley waste will be returned to shore for disposal.</li> </ul>
Discharge of bilge water and deck	Temporary and localised reduction in water quality.	<ul> <li>Vessels &gt;400 gross tonnes will have in place a MARPOL Annex I- compliant oily water separator set to limit oil-in-water content to &lt;15 ppm prior to discharge.</li> </ul>
drainage		<ul> <li>Vessels &gt;400 gross tonnes will have a current International Oil Pollution Prevention (IOPP) certificate.</li> </ul>
		<ul> <li>No whole residual bilge oil is discharged overboard (residual oil from the oily water separator is pumped to tanks and disposed of onshore).</li> </ul>
		<ul> <li>Chemical storage areas will be bunded and drain to the bilge tank.</li> </ul>
		<ul> <li>Portable bunds and/or drip trays are used to collect spills or leaks from equipment that is not contained within a permanently bunded area (non-process areas).</li> </ul>
		<ul> <li>Deck cleaning detergents will be biodegradable.</li> </ul>
		<ul> <li>Spills to decks will be cleaned immediately using Shipboard Marine Pollution Emergency Plan (SMPEP) kits.</li> </ul>
Unplanned ever	nts	
Accidental overboard release of	Marine pollution (litter and a temporary and	<ul> <li>Vessels &gt;100 gross tonnes or certified to carry more than 15 people will have in place and implement a vessel-specific Garbage Management Plan.</li> </ul>
hazardous	localised reduction in	Vessel crew and visitors will be inducted into the waste



Hazard	Potential impacts & risks	Avoidance, management and mitigation measures
and/or non- hazardous waste from the vessels	water quality). Injury and entanglement of individual animals (such as seabirds and turtles) and smothering or pollution of benthic habitats.	<ul> <li>management procedures.</li> <li>A waste manifest will be maintained.</li> <li>Only small volumes of chemicals will be kept on board and will be stored in secured drums in bunded areas away from open drains.</li> <li>Bunded areas will drain through a closed system, processed through the oily water separator.</li> <li>Safety Data Sheets (SDS) will be available in appropriate locations.</li> <li>SMPEP kits will be available on board for rapid deck clean-up response.</li> </ul>
Introduction of invasive marine species from the vessel hulls and/or ballast water	Reduction in native marine species diversity and abundance. Displacement of native marine species. Socio-economic impacts on commercial fisheries. Reduction of conservation values of protected areas.	<ul> <li>Vessels will carry a low risk of invasive marine species introduction (as determined through a vessel contractor prequalification report).</li> <li>Vessels &gt;400 gross tonnes will carry a current International Antifouling System (IAFS) Certificate and comply with Marine Order Part 98 (Anti-fouling Systems).</li> <li>The vessel/s will comply with the:         <ul> <li>Australian Ballast Water Management Requirements (DAWR, 2020); and</li> <li>National Biofouling Guidance for the Petroleum Production &amp; Exploration Industry (AQIS, 2009).</li> </ul> </li> <li>Towed/submersible equipment will be cleaned (e.g., fouling is removed) prior to initial use in the project area.</li> </ul>
Damage to Blacktip subsea gas pipeline (e.g., dropped objects, anchoring)	Loss of pipeline integrity and lost field production.	<ul> <li>Vessel anchoring will not be permitted.</li> <li>EOG will consult with ENI Australia (pipeline operator) to understand the implications of operating over the pipeline.</li> <li>The geophysical investigations will be undertaken prior to geotechnical investigations in order to accurately locate the pipeline and put in place geotechnical exclusion buffer around it.</li> <li>EOG will ensure that the geotechnical vessel contractor has the coordinates of the Blacktip pipeline marked in its navigation system (confirmed during the geophysical survey) to ensure that no geotechnical work is conducted within a nominated buffer around the pipeline.</li> </ul>
Vessel strike or entanglement with megafauna (e.g., whales, dolphins, turtles)	Injury or death of individual animals.	<ul> <li>The Australian Guidelines for Whale and Dolphin Watching (DEWHA, 2005) for sea-faring activities will be implemented, which includes caution and no-approach zones around whales and dolphins.</li> <li>Vessel strike causing injury to or death of a cetacean is reported via the online National Ship Strike Database within 72 hours of the incident.</li> <li>Entanglement of megafauna in towed equipment is reported to the NT Marine Wildwatch on 1800 453 941 (or WA's Wildcare on 08-9474 9055) as soon as possible. No attempts to disentangle megafauna will be made by project personnel unless instructed</li> </ul>



Hazard	Potential impacts & risks	Avoidance, management and mitigation measures
		<ul> <li>by Wildwatch or Wildcare.</li> <li>Vessel crew will complete an environmental induction covering the above-listed requirements.</li> </ul>
Displacement of or interference with third- party vessels	Temporary loss of fishing grounds around the vessel safety zone. Trawling gear snagging on towed or submerged equipment.	<ul> <li>The project area is located in an area with low levels of shipping traffic and low fishing effort.</li> <li>A 'Notice to Mariners' will be issued.</li> <li>Standard maritime safety precautions will be in place, including: <ul> <li>Radar and other anti-collision monitoring equipment to detect other vessels.</li> <li>Display of lights and day shapes.</li> <li>The ability to quickly move off location to avoid other vessels.</li> <li>Warnings issued (radio, flares, lights and horns) to avoid collisions.</li> <li>The Vessel Master will be qualified in accordance with AMSA Marine Orders Part 3 (Seagoing qualifications) (e.g., International Convention of Standards of Watchkeeping for Seafarers, STCW95, GMDSS Proficiency).</li> </ul> </li> <li>The tail buoy on the shallow seismic streamer will have flashing lights and radar reflectors so it is visible to other marine users.</li> <li>The vessel master will sound the general alarm, manoeuvre the vessel to minimise the effects of the collision and implement all other measures as outlined in the vessel collision procedure.</li> <li>Vessel collisions will be reported to AMSA if that collision has or is likely to affect the safety, operation or seaworthiness of the vessel or involves serious injury to personnel.</li> </ul>
Diesel release due to a vessel-to- vessel collision	Temporary and localised reduction in water quality. Tainting of commercial fisheries species. Injury and/or death of marine fauna and seabirds. Pathological effects on fish larvae and plankton.	<ul> <li>As per 'displacement of or interference with third-party vessels', plus:</li> <li>No refuelling will take place on location.</li> <li>Vessel crew will be trained in spill response techniques in accordance with the SMPEP and vessel training matrix.</li> <li>Diesel spill trajectory modelling indicates a very small area of ecological impact in the event of the loss of a whole tank of fuel.</li> <li>An Oil Pollution Emergency Plan (OPEP) will be developed based on the spill modelling results.</li> <li>Vessel-specific SMPEP and project-specific OPEP will be implemented in the event of a large spill.</li> <li>EOG will report the spill to regulatory authorities within 2 hours of becoming aware of the spill.</li> </ul>

### **Beehive-1 Exploration Well**

**Information Flyer #2** 



01 December 2021

#### Update on the Pre-Drill Seabed Assessment

EOG Resources, Inc. (EOG) advises that the Beehive Pre-Drill Seabed Assessment (PDSA) Environment Plan (EP) is now available on the National Offshore Petroleum Safety and Environmental Management Authority's (NOPSEMA) website for public exhibition and comment at https://info.nopsema.gov.au/home/open\_for\_comment

The following updates have occurred since Information Flyer #1 was issued:

- EOG Resources Australia Block WA-488 Pty Ltd, a subsidiary of EOG, is now the sole titleholder of the WA-488-P Exploration Permit;
- The activity window has been amended and is now April to August 2022 (exact timing dependent on the receipt of EP acceptance, weather, and vessel/equipment availability), rather than February to June 2022 as previously stated; and
- The PDSA activity area has been reduced by 100 km<sup>2</sup> from 440 km<sup>2</sup> to an area of 340 km<sup>2</sup>.

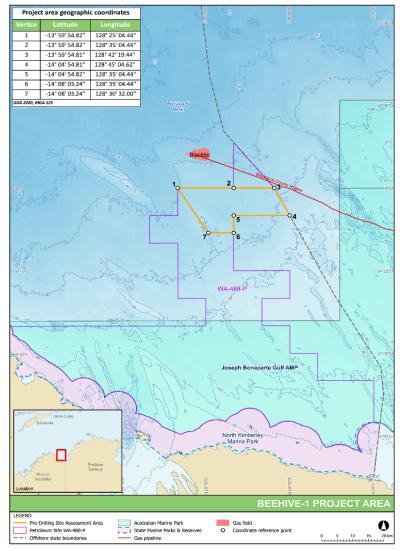


Figure 1. Updated Beehive PDSA location



#### How to Provide Feedback

EOG encourages you to provide feedback on the activity using the following contact details:

Email: australia@eogresources.com

Phone: 0409 772 170

EOG will respond to feedback in a timely fashion.

Background project information (and this information flyer) is also available on the EOG website at: https://www.eogresources.com/australia

#### **Ongoing Consultation**

Consultation with relevant persons will be ongoing throughout the project planning and during preparation of the Beehive-1 Drilling EP.

# **Appendix 3**

## **Stakeholder Communications**

(provided to NOPSEMA separately as sensitive information under Regulation 9(8) of the OPGGS(E))

# Appendix 4

# EPBC Act Protected Matters Search Tool (PMST) results



Australian Government

Department of Agriculture, Water and the Environment

# **EPBC** Act Protected Matters Report

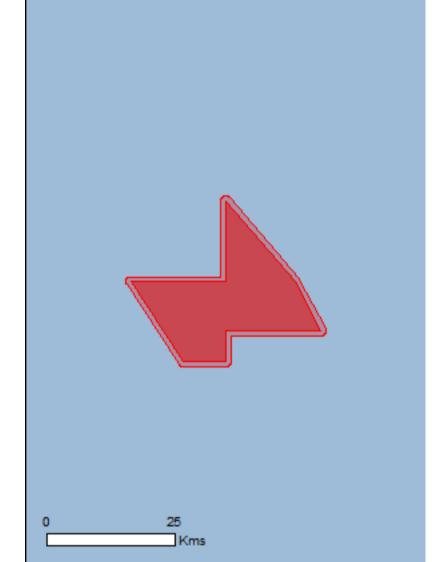
This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about <u>Environment Assessments</u> and the EPBC Act including significance guidelines, forms and application process details.

Report created: 26/07/21 19:44:21

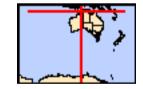
Summary Details Matters of NES Other Matters Protected by the EPBC Act Extra Information Caveat Acknowledgements



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

# **PDSA** area

Coordinates Buffer: 1.0Km



# Summary

## Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	19
Listed Migratory Species:	37

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	58
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

## **Extra Information**

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	None
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

# Details

## Matters of National Environmental Significance

## Commonwealth Marine Area

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside the Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area. Generally the Commonwealth Marine Area stretches from three nautical miles to two hundred nautical miles from the coast.

### Name

EEZ and Territorial Sea

### Marine Regions

If you are planning to undertake action in an area in or close to the Commonwealth Marine Area, and a marine bioregional plan has been prepared for the Commonwealth Marine Area in that area, the marine bioregional plan may inform your decision as to whether to refer your proposed action under the EPBC Act.

# Name North

North-west

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat may occur within area

### [Resource Information]

[Resource Information]

Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta	Endongorod	Spaciae or opening hebitat
Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area

Name	Status	Type of Presence
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Sharks		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
<u>Glyphis garricki</u> Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
<u>Pristis zijsron</u> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
<u>Rhincodon typus</u> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on	the EPBC Act - Threatened	d Species list.
Name Migratory Marine Birds	Threatened	Type of Presence
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<u>Balaenoptera borealis</u> Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
<u>Balaenoptera edeni</u> Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat
<u>Carcharhinus longimanus</u> Oceanic Whitetip Shark [84108]		may occur within area Species or species habitat
<u>Carcharodon carcharias</u> White Shark, Great White Shark [64470]	Vulnerable	may occur within area Species or species habitat
Caretta caretta	Vullerable	may occur within area
Loggerhead Turtle [1763] Chelonia mydas	Endangered	Species or species habitat likely to occur within area
Green Turtle [1765]	Vulnerable	Species or species habitat likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
<u>Eretmochelys imbricata</u> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat

<u>Isurus oxyrinchus</u> Shortfin Mako, Mako Shark [79073]

Isurus paucus Longfin Mako [82947]

<u>Lepidochelys olivacea</u> Olive Ridley Turtle, Pacific Ridley Turtle [1767]

Manta alfredi

Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]

Manta birostris

Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]

Megaptera novaeangliae Humpback Whale [38] vuillelable

Endangered

likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Vulnerable

Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Natator depressus	Vulnerable	Congregation or
Flatback Turtle [59257]	vunerable	Congregation or aggregation known to occur within area
<u>Orcinus orca</u> Killer Whale, Orca [46]		Species or species habitat
		may occur within area
Pristis clavata	Vulnarabla	Spanica ar openica habitat
Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis		
Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] <u>Pristis zijsron</u>	Vulnerable	Species or species habitat known to occur within area
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea		<b>.</b>
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidria malanataa		

Calidris melanotos Pectoral Sandpiper [858]

Species or species habitat may occur within area

Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]

Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within area

Pandion haliaetus Osprey [952]

## Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]	
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.			
Name	Threatened	Type of Presence	
Birds			
<u>Actitis hypoleucos</u> Common Sandpiper [59309]		Species or species habitat may occur within area	
<u>Anous stolidus</u> Common Noddy [825]		Species or species habitat may occur within area	
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area	
<u>Calidris canutus</u> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area	
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		Species or species habitat may occur within area	
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area	
<u>Fregata ariel</u> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area	
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area	
<u>Numenius madagascariensis</u> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	

Pandion haliaetus Osprey [952]

### Fish

Campichthys tricarinatus Three-keel Pipefish [66192]

### Choeroichthys brachysoma

Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]

Choeroichthys suillus Pig-snouted Pipefish [66198]

<u>Corythoichthys amplexus</u> Fijian Banded Pipefish, Brown-banded Pipefish [66199] Species or species habitat may occur within area

Name	Threatened	Type of Presence
<u>Corythoichthys flavofasciatus</u> Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
<u>Corythoichthys schultzi</u> Schultz's Pipefish [66205]		Species or species habitat may occur within area
<u>Doryrhamphus excisus</u> Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]	C	Species or species habitat may occur within area
<u>Doryrhamphus janssi</u> Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
<u>Halicampus brocki</u> Brock's Pipefish [66219]		Species or species habitat may occur within area
<u>Halicampus grayi</u> Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
<u>Halicampus spinirostris</u> Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
<u>Haliichthys taeniophorus</u> Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area
<u>Hippichthys penicillus</u> Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
<u>Hippocampus histrix</u> Spiny Seahorse, Thorny Seahorse [66236]		Species or species habitat may occur within area
<u>Hippocampus kuda</u> Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area

Hippocampus planifrons Flat-face Seahorse [66238]

Species or species habitat may occur within area

Hippocampus spinosissimus Hedgehog Seahorse [66239]

Micrognathus micronotopterus Tidepool Pipefish [66255]

Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]

Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]

Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]

#### Syngnathoides biaculeatus

Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]

Species or species habitat may occur within area

Name	Threatened	Type of Presence
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammals		
Dugong dugon Dugong [28]		Species or species habitat may occur within area
Reptiles		
Acalyptophis peronii Horned Seasnake [1114]		Species or species habitat may occur within area
<u>Aipysurus duboisii</u> Dubois' Seasnake [1116]		Species or species habitat may occur within area
<u>Aipysurus eydouxii</u> Spine-tailed Seasnake [1117]		Species or species habitat may occur within area
<u>Aipysurus laevis</u> Olive Seasnake [1120]		Species or species habitat may occur within area
<u>Astrotia stokesii</u> Stokes' Seasnake [1122]		Species or species habitat may occur within area
<u>Caretta caretta</u> Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Species or species habitat likely to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area

Dermochelys coriacea

Leatherback Turtle, Leathery Turtle, Luth [1768]

Disteira kingii Spectacled Seasnake [1123]

Disteira major Olive-headed Seasnake [1124]

Enhydrina schistosa Beaked Seasnake [1126]

Eretmochelys imbricata Hawksbill Turtle [1766]

<u>Hydrelaps darwiniensis</u> Black-ringed Seasnake [1100]

Hydrophis atriceps Black-headed Seasnake [1101] Endangered

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Vulnerable

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Hydrophis elegans		
Elegant Seasnake [1104]		Species or species habitat may occur within area
Librature relation are electrically		,
<u>Hydrophis mcdowelli</u> null [25926]		Species or species habitat
		may occur within area
<u>Hydrophis ornatus</u>		
Spotted Seasnake, Ornate Reef Seasnake [1111]		Species or species habitat
		may occur within area
Lapemis hardwickii		
Spine-bellied Seasnake [1113]		Species or species habitat
		may occur within area
Lepidochelys olivacea	<b>-</b>	
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat likely to occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Congregation or
	Vullerable	aggregation known to occur
Pelamis platurus		within area
Yellow-bellied Seasnake [1091]		Species or species habitat
		may occur within area
Whales and other Cetaceans	Statua	[Resource Information]
Name Mammals	Status	Type of Presence
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat
		may occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat
		may occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat may occur within area

Balaenoptera physalus Fin Whale [37]

Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]

<u>Grampus griseus</u> Risso's Dolphin, Grampus [64]

Megaptera novaeangliae Humpback Whale [38]

Orcinus orca Killer Whale, Orca [46]

Pseudorca crassidens False Killer Whale [48]

Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51] Vulnerable

Vulnerable

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Name	Status	Type of Presence
<u>Tursiops aduncus</u> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat may occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
<u>Tursiops truncatus s. str.</u> Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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

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

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

# Coordinates

-13.99833 128.41778,-13.99833 128.58444,-13.86083 128.58444,-13.99833 128.70528,-14.08167 128.75111,-14.08167 128.58444,-14.13417 128.50889,-13.99833 128.41778

# Acknowledgements

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

-Office of Environment and Heritage, New South Wales -Department of Environment and Primary Industries, Victoria -Department of Primary Industries, Parks, Water and Environment, Tasmania -Department of Environment, Water and Natural Resources, South Australia -Department of Land and Resource Management, Northern Territory -Department of Environmental and Heritage Protection, Queensland -Department of Parks and Wildlife, Western Australia -Environment and Planning Directorate, ACT -Birdlife Australia -Australian Bird and Bat Banding Scheme -Australian National Wildlife Collection -Natural history museums of Australia -Museum Victoria -Australian Museum -South Australian Museum -Queensland Museum -Online Zoological Collections of Australian Museums -Queensland Herbarium -National Herbarium of NSW -Royal Botanic Gardens and National Herbarium of Victoria -Tasmanian Herbarium -State Herbarium of South Australia -Northern Territory Herbarium -Western Australian Herbarium -Australian National Herbarium, Canberra -University of New England -Ocean Biogeographic Information System -Australian Government, Department of Defence Forestry Corporation, NSW -Geoscience Australia -CSIRO -Australian Tropical Herbarium, Cairns -eBird Australia -Australian Government – Australian Antarctic Data Centre -Museum and Art Gallery of the Northern Territory -Australian Government National Environmental Science Program

-Australian Institute of Marine Science

-Reef Life Survey Australia

-American Museum of Natural History

-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania

-Tasmanian Museum and Art Gallery, Hobart, Tasmania

-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Australian Government

Department of Agriculture, Water and the Environment

# **EPBC** Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 07/09/21 15:50:33

**Summary Details** Matters of NES Other Matters Protected by the EPBC Act **Extra Information** Caveat **Acknowledgements** 



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

# **Diesel spill EMBA - ecological**

**Coordinates** Buffer: 1.0Km

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# Summary

### Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	19
Listed Migratory Species:	38

### Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	64
Whales and Other Cetaceans:	14
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	2

### **Extra Information**

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	None
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	1

# Details

# Matters of National Environmental Significance

#### Commonwealth Marine Area

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside the Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area. Generally the Commonwealth Marine Area stretches from three nautical miles to two hundred nautical miles from the coast.

#### Name

EEZ and Territorial Sea

#### Marine Regions

If you are planning to undertake action in an area in or close to the Commonwealth Marine Area, and a marine bioregional plan has been prepared for the Commonwealth Marine Area in that area, the marine bioregional plan may inform your decision as to whether to refer your proposed action under the EPBC Act.

# Name North

North-west

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat may occur within area

#### [Resource Information]

[Resource Information]

Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta	Endongorod	Spaciae or opening hebitat
Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area

Name	Status	Type of Presence
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
Sharks		
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
<u>Glyphis garricki</u> Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat known to occur within area
<u>Pristis zijsron</u> Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
<u>Rhincodon typus</u> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on	the EPBC Act - Threatened	d Species list.
Name Migratory Marine Birds	Threatened	Type of Presence
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
<u>Balaenoptera borealis</u> Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
<u>Balaenoptera edeni</u> Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
<u>Balaenoptera physalus</u> Fin Whale [37]	Vulnerable	Species or species habitat
<u>Carcharhinus longimanus</u> Oceanic Whitetip Shark [84108]		may occur within area Species or species habitat
<u>Carcharodon carcharias</u> White Shark, Great White Shark [64470]	Vulnerable	may occur within area Species or species habitat
Caretta caretta	Vulliciable	may occur within area
Loggerhead Turtle [1763]	Endangered	Species or species habitat likely to occur within area
Green Turtle [1765]	Vulnerable	Species or species habitat known to occur within area
Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat likely to occur within area
Dugong dugon Dugong [28]		Species or species habitat may occur within area
<u>Eretmochelys imbricata</u> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat

<u>Isurus oxyrinchus</u> Shortfin Mako, Mako Shark [79073]

Isurus paucus Longfin Mako [82947]

<u>Lepidochelys olivacea</u> Olive Ridley Turtle, Pacific Ridley Turtle [1767]

Manta alfredi

Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]

Manta birostris

Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]

Megaptera novaeangliae Humpback Whale [38] vuillelable

Endangered

likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat known to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Vulnerable

Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Natator depressus Flatback Turtle [59257]	Vulnerable	Congregation or aggregation known to occur within area
<u>Orcinus orca</u> Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] Pristis zijsron	Vulnerable	Species or species habitat known to occur within area
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
<u>Rhincodon typus</u> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
<u>Sousa chinensis</u> Indo-Pacific Humpback Dolphin [50]		Species or species habitat may occur within area
Tursiops aduncus (Arafura/Timor Sea populations) Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat likely to occur within area
Migratory Wetlands Species		
<u>Actitis hypoleucos</u> Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<u>Calidris canutus</u> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area

Calidris ferruginea

Curlew Sandpiper [856]

Calidris melanotos

Pectoral Sandpiper [858]

Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within area

Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]

Critically Endangered

Species or species habitat may occur within area

Pandion haliaetus Osprey [952]

Species or species habitat may occur within area

### Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on t	he EPBC Act - Threatened	
Name	Threatened	Type of Presence
Birds		
<u>Actitis hypoleucos</u> Common Sandpiper [59309]		Species or species habitat may occur within area
<u>Anous stolidus</u> Common Noddy [825]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<u>Calidris canutus</u> Red Knot, Knot [855]	Endangered	Species or species habitat may occur within area
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat likely to occur within area
<u>Fregata ariel</u> Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
<u>Numenius madagascariensis</u> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Pandion haliaetus Osprey [952]

#### Fish

Campichthys tricarinatus Three-keel Pipefish [66192]

#### Choeroichthys brachysoma

Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]

Choeroichthys suillus Pig-snouted Pipefish [66198]

<u>Corythoichthys amplexus</u> Fijian Banded Pipefish, Brown-banded Pipefish [66199] Species or species habitat may occur within area

Name	Threatened	Type of Presence
Corythoichthys flavofasciatus Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200]		Species or species habitat may occur within area
Corythoichthys haematopterus Reef-top Pipefish [66201]		Species or species habitat may occur within area
<u>Corythoichthys schultzi</u> Schultz's Pipefish [66205]		Species or species habitat may occur within area
<u>Doryrhamphus excisus</u> Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]		Species or species habitat may occur within area
<u>Doryrhamphus janssi</u> Cleaner Pipefish, Janss' Pipefish [66212]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
<u>Halicampus brocki</u> Brock's Pipefish [66219]		Species or species habitat may occur within area
<u>Halicampus grayi</u> Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
<u>Halicampus spinirostris</u> Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
<u>Haliichthys taeniophorus</u> Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthyc parvicarinatus		

Hippichthys parvicarinatus Short-keel Pipefish, Short-keeled Pipefish [66230]

Species or species habitat may occur within area

Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]

Hippocampus histrix Spiny Seahorse, Thorny Seahorse [66236]

Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]

Hippocampus planifrons Flat-face Seahorse [66238]

Hippocampus spinosissimus Hedgehog Seahorse [66239]

Micrognathus micronotopterus Tidepool Pipefish [66255]

Species or species habitat may occur within area

Name	Threatened	Type of Presence
Solegnathus hardwickii		
Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus lettiensis		
Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Solenostomus cyanopterus		
Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus		
Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus		
Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
Trachyrhamphus longirostris		
Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammals		
Dugong dugon		
Dugong [28]		Species or species habitat may occur within area
Reptiles		
Acalyptophis peronii		
Horned Seasnake [1114]		Species or species habitat may occur within area
<u>Aipysurus duboisii</u>		
Dubois' Seasnake [1116]		Species or species habitat may occur within area
<u>Aipysurus eydouxii</u>		
Spine-tailed Seasnake [1117]		Species or species habitat may occur within area

Aipysurus laevis Olive Seasnake [1120]

#### Species or species habitat may occur within area

Astrotia stokesii Stokes' Seasnake [1122]

Loggerhead Turtle [1763]

Caretta caretta

Chelonia mydas

Green Turtle [1765]

Species or species habitat may occur within area

Endangered

Vulnerable

Species or species habitat likely to occur within area

Species or species habitat known to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within

Crocodylus porosus Salt-water Crocodile, Estuarine Crocodile [1774]

Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]

Disteira kingii Spectacled Seasnake [1123]

Disteira major Olive-headed Seasnake [1124] Endangered

Name	Threatened	Type of Presence
		area
Enhydrina schistosa		<b>•</b> • • • • • • •
Beaked Seasnake [1126]		Species or species habitat may occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat likely to occur within area
Hydrelaps darwiniensis		
Black-ringed Seasnake [1100]		Species or species habitat may occur within area
Hydrophis atriceps		
Black-headed Seasnake [1101]		Species or species habitat may occur within area
<u>Hydrophis elegans</u>		
Elegant Seasnake [1104]		Species or species habitat may occur within area
Hydrophis inornatus		
Plain Seasnake [1107]		Species or species habitat may occur within area
Hydrophis mcdowelli		
null [25926]		Species or species habitat may occur within area
<u>Hydrophis ornatus</u>		
Spotted Seasnake, Ornate Reef Seasnake [1111]		Species or species habitat may occur within area
Hydrophis pacificus		
Large-headed Seasnake, Pacific Seasnake [1112]		Species or species habitat may occur within area
Lapemis hardwickii		
Spine-bellied Seasnake [1113]		Species or species habitat may occur within area
Lepidochelys olivacea		
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Species or species habitat

Natator depressus

known to occur within area

Matator ucpressus	
Flatback Turtle [59257	7]

Pelamis platurus Yellow-bellied Seasnake [1091]

#### Vulnerable

Congregation or aggregation known to occur within area

Species or species habitat may occur within area

Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat may occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Species or species habitat may occur within area

Delphinus delphis       Species or species habitat         Common Dolphin, Short-beaked Common Dolphin [60]       Species or species habitat         Grampus griseus       Risso's Dolphin, Grampus [64]       Species or species habitat         Megaptera novaeangliae       Species or species habitat       may occur within area         Megaptera novaeangliae       Vulnerable       Species or species habitat         Humpback Whale [38]       Vulnerable       Species or species habitat         Orcinus orca       Species or species habitat       may occur within area         Pseudorca crassidens       Species or species habitat       may occur within area         Pseudorca crassidens       Species or species habitat       Ilikely to occur within area         Susa chinensis       Indo-Pacific Humpback Dolphin [50]       Species or species habitat         Indo-Pacific Humpback Dolphin [50]       Species or species habitat       may occur within area         Stenella attenuata       Spotted Dolphin, Pantropical Spotted Dolphin [51]       Species or species habitat       may occur within area         Iursiops aduncus       Indian Ocean Bottlenose Dolphin, Spotted Bottlenose       Species or species habitat       may occur within area         Iursiops aduncus       Indian Ocean Bottlenose Dolphin (Arafura/Timor Sea populations)       Species or species habitat       likely to occur within area </th <th>Name</th> <th>Status</th> <th>Type of Presence</th>	Name	Status	Type of Presence
Grampus griseus       Risso's Dolphin, Grampus [64]       Species or species habitat may occur within area         Megaptera novaeangliae       Vulnerable       Species or species habitat may occur within area         Humpback Whale [38]       Vulnerable       Species or species habitat likely to occur within area         Orcinus orca       Species or species habitat likely to occur within area         Killer Whale, Orca [46]       Species or species habitat may occur within area         Pseudorca crassidens       Species or species habitat may occur within area         False Killer Whale [48]       Species or species habitat likely to occur within area         Sousa chinensis       Indo-Pacific Humpback Dolphin [50]       Species or species habitat may occur within area         Stenella attenuata       Species or species habitat may occur within area       may occur within area         India Ocean Bottlenose Dolphin, Spotted Bottlenose       Species or species habitat may occur within area         Tursiops aduncus       (Arafura/Timor Sea populations)       Species or species habitat may occur within area         Tursiops aduncus (Arafura/Timor Sea populations)       Species or species habitat may occur within area         Dolphin [68418]       Species or species habitat likely to occur within area         Tursiops aduncus (Arafura/Timor Sea populations)       Species or species habitat may occur within area         Species Dolphin (68418]	Delphinus delphis		
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Bottlenose Dolphin [68417] Species or species habitat may occur within area	Spotted Bottlenose Dolphin (Arafura/Timor Sea		• •
Bottlenose Dolphin [68417] Species or species habitat may occur within area	Tursiops truncatus sustru		
Australian Marine Parks [Resource Information]			• •
	Australian Marine Parks		[Resource Information ]

Name Joseph Bonaparte Gulf Joseph Bonaparte Gulf

### Multiple Use Zone (IUCN VI) Special Purpose Zone (IUCN VI)

Label

### Extra Information

### Key Ecological Features (Marine)

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Carbonate bank and terrace system of the Sahul	North-west

[Resource Information]

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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

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

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

# Coordinates

-13.587194 128.644038,-13.565836 128.797847,-13.683285 128.808833,-13.725979 129.006587,-13.886013 128.951655,-13.992641 129.204341,-14.141837 129.171382,-14.237697 129.02856,-14.280288 128.81982,-14.322872 128.600093,-14.258993 128.402339,-14.120529 128.259517,-13.98198 128.16064,-13.896678 128.149654,-13.843348 128.281489,-13.747323 128.336421,-13.661935 128.138667,-13.629906 128.226558,-13.661935 128.380366,-13.651259 128.556148,-13.587194 128.655025,-13.587194 128.644038

# Acknowledgements

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

-Office of Environment and Heritage, New South Wales -Department of Environment and Primary Industries, Victoria -Department of Primary Industries, Parks, Water and Environment, Tasmania -Department of Environment, Water and Natural Resources, South Australia -Department of Land and Resource Management, Northern Territory -Department of Environmental and Heritage Protection, Queensland -Department of Parks and Wildlife, Western Australia -Environment and Planning Directorate, ACT -Birdlife Australia -Australian Bird and Bat Banding Scheme -Australian National Wildlife Collection -Natural history museums of Australia -Museum Victoria -Australian Museum -South Australian Museum -Queensland Museum -Online Zoological Collections of Australian Museums -Queensland Herbarium -National Herbarium of NSW -Royal Botanic Gardens and National Herbarium of Victoria -Tasmanian Herbarium -State Herbarium of South Australia -Northern Territory Herbarium -Western Australian Herbarium -Australian National Herbarium, Canberra -University of New England -Ocean Biogeographic Information System -Australian Government, Department of Defence Forestry Corporation, NSW -Geoscience Australia -CSIRO -Australian Tropical Herbarium, Cairns -eBird Australia -Australian Government – Australian Antarctic Data Centre -Museum and Art Gallery of the Northern Territory -Australian Government National Environmental Science Program

-Australian Institute of Marine Science

-Reef Life Survey Australia

-American Museum of Natural History

-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania

-Tasmanian Museum and Art Gallery, Hobart, Tasmania

-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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Australian Government

Department of Agriculture, Water and the Environment

# **EPBC** Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 17/08/21 14:36:10

<u>Summary</u> **Details** Matters of NES Other Matters Protected by the EPBC Act **Extra Information** Caveat

**Acknowledgements** 



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

# Diesel spill EMBA - socio-economic

**Coordinates** Buffer: 1.0Km

2	
	~

# Summary

### Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	None
Listed Threatened Species:	46
Listed Migratory Species:	64

### Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A <u>permit</u> may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	110
Whales and Other Cetaceans:	25
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	3

### **Extra Information**

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	7
Regional Forest Agreements:	None
Invasive Species:	19
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	2

# Details

### Matters of National Environmental Significance

National Heritage Properties		[Resource Information]
Name	State	Status
Natural		
The West Kimberley	WA	Listed place
Wetlands of International Importance (Ramsar)		[Resource Information]
Name		Proximity
Ord river floodplain		Within 10km of Ramsar

### Commonwealth Marine Area

Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside the Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area. Generally the Commonwealth Marine Area stretches from three nautical miles to two hundred nautical miles from the coast.

[Resource Information]

[Resource Information]

#### Name

EEZ and Territorial Sea

#### Marine Regions

If you are planning to undertake action in an area in or close to the Commonwealth Marine Area, and a marine bioregional plan has been prepared for the Commonwealth Marine Area in that area, the marine bioregional plan may inform your decision as to whether to refer your proposed action under the EPBC Act.

Name	
<u>North</u>	
North-west	
Listed Threatened Creasian	[Decourse Information]
Listed Threatened Species	[Resource Information]

Listed Inreatened Species		[ Resource Information ]
Name	Status	Type of Presence
Birds		
Anous tenuirostris melanops		
Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area

<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Species or species habitat likely to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
<u>Charadrius mongolus</u> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
<u>Erythrotriorchis radiatus</u> Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
<u>Erythrura gouldiae</u> Gouldian Finch [413]	Endangered	Species or species habitat likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Falcunculus frontatus whitei Crested Shrike-tit (northern), Northern Shrike-tit [26013]	Vulnerable	Species or species habitat likely to occur within area
<u>Limosa lapponica baueri</u> Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar- tailed Godwit [86432]	Critically Endangered	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Papasula abbotti Abbott's Booby [59297]	Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<u>Tyto novaehollandiae kimberli</u> Masked Owl (northern) [26048]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
<u>Antechinus bellus</u> Fawn Antechinus [344]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera borealis Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
<u>Conilurus penicillatus</u> Brush-tailed Rabbit-rat, Brush-tailed Tree-rat, Pakooma [132]	Vulnerable	Species or species habitat may occur within area
<u>Dasyurus hallucatus</u> Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat likely to occur within area
<u>Megaptera novaeangliae</u> Humpback Whale [38]	Vulnarabla	Species or species habitat
	Vulnerable	known to occur within area

Name	Status	Type of Presence
Petrogale concinna canescens Nabarlek (Top End) [87606]	Endangered	Species or species habitat may occur within area
Petrogale concinna monastria Nabarlek (Kimberley) [87607]	Endangered	Species or species habitat likely to occur within area
Phascogale pirata Northern Brush-tailed Phascogale [82954]	Vulnerable	Species or species habitat likely to occur within area
Saccolaimus saccolaimus nudicluniatus Bare-rumped Sheath-tailed Bat, Bare-rumped Sheathtail Bat [66889]	Vulnerable	Species or species habitat likely to occur within area
Trichosurus vulpecula arnhemensis Northern Brushtail Possum [83091]	Vulnerable	Species or species habitat likely to occur within area
<u>Xeromys myoides</u> Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat known to occur within area
Reptiles		
<u>Acanthophis hawkei</u> Plains Death Adder [83821]	Vulnerable	Species or species habitat may occur within area
Aipysurus apraefrontalis Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
<u>Aipysurus foliosquama</u> Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<u>Eretmochelys imbricata</u> Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Breeding known to occur within area
Sharks Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Glyphis garricki Northern River Shark, New Guinea River Shark [82454]	Endangered	Species or species habitat known to occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] Pristis zijsron	Vulnerable	Species or species habitat known to occur within area
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Listed Migratory Species * Species is listed under a different scientific name on	the EPBC Act - Threatener	[Resource Information]
Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
<u>Apus pacificus</u> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Breeding known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding known to occur within area
<u>Sterna dougallii</u> Roseate Tern [817]		Breeding likely to occur within area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area
<u>Sula leucogaster</u> Brown Booby [1022]		Breeding known to occur within area
Migratory Marine Species		
Anoxypristis cuspidata Narrow Sawfish, Knifetooth Sawfish [68448]		Species or species habitat likely to occur within area
<u>Balaenoptera borealis</u> Sei Whale [34]	Vulnerable	Species or species habitat likely to occur within area
<u>Balaenoptera edeni</u> Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species

Name	Threatened	Type of Presence
		habitat may occur within area
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat may occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area
		KHOWH to occur within area
<u>Chelonia mydas</u> Green Turtle [1765]	Vulnerable	Foraging, feeding or related
		behaviour known to occur within area
<u>Crocodylus porosus</u> Salt-water Crocodile, Estuarine Crocodile [1774]		Species or species habitat
		likely to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<u>Dugong dugon</u> Dugong [28]		Species or species habitat
		known to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
<u>Isurus oxyrinchus</u> Shortfin Mako, Mako Shark [79073]		Species or species habitat
		likely to occur within area
Isurus paucus		
Longfin Mako [82947]		Species or species habitat likely to occur within area
Lepidochelys olivacea		,, ,
Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related
		behaviour known to occur within area
Manta alfredi Reef Mente Rey, Cenetel Mente Rey, Inchere Mente		Spaciae or opening hebitat
Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat likely to occur within area
Manta birostris		Creation or creation habitat
Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat likely to occur within area
Megaptera novaeangliae		
Humpback Whale [38]	Vulnerable	Species or species habitat
		known to occur within area
<u>Natator depressus</u> Flatback Turtle [59257]	Vulnerable	Breeding known to occur
	Vallorabio	within area
<u>Orcaella heinsohni</u> Australian Snubfin Dolphin [81322]		Species or species habitat
		known to occur within area
Orcinus orca		
Killer Whale, Orca [46]		Species or species habitat may occur within area
Physeter macrocephalus		
Sperm Whale [59]		Species or species habitat
		may occur within area
Pristis clavata Dwarf Sawfish, Queensland Sawfish [68447]	Vulnerable	Species or species habitat
อพลก บลพาอก, ฉนออกอเลกน บลพาอก [00447]		known to occur within area

Name	Threatened	Type of Presence
Pristis pristis		
Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756] <u>Pristis zijsron</u>	Vulnerable	Species or species habitat known to occur within area
Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus		
Whale Shark [66680]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<u>Sousa chinensis</u>		
Indo-Pacific Humpback Dolphin [50]		Species or species habitat known to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat known to occur within area
Migratory Terrestrial Species		
Cecropis daurica		
Red-rumped Swallow [80610]		Species or species habitat may occur within area
Cuculus optatus		
Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat may occur within area
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat

Acrocephalus orientalis Oriental Reed-Warbler [59570]

Actitis hypoleucos Common Sandpiper [59309]

Arenaria interpres Ruddy Turnstone [872]

Calidris acuminata Sharp-tailed Sandpiper [874]

Calidris alba Sanderling [875]

Calidris canutus Red Knot, Knot [855]

<u>Calidris ferruginea</u> Curlew Sandpiper [856] Species or species habitat may occur within area

may occur within area

Species or species habitat known to occur within area

Species or species habitat likely to occur within area

Species or species habitat known to occur within area

Species or species habitat likely to occur within area

Endangered

Species or species habitat known to occur within area

Critically Endangered

Species or species habitat known to occur

Name	Threatened	Type of Presence
Colidria malanataa		within area
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		Species or species habitat may occur within area
Calidris tenuirostris		
Great Knot [862]	Critically Endangered	Species or species habitat likely to occur within area
Charadrius leschenaultii		
Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus		
Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat likely to occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
<u>Glareola maldivarum</u>		
Oriental Pratincole [840]		Species or species habitat may occur within area
Limnodromus semipalmatus		
Asian Dowitcher [843]		Species or species habitat may occur within area
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa		
Black-tailed Godwit [845]		Species or species habitat likely to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius phaeopus		
Whimbrel [849]		Species or species habitat likely to occur within area

Pandion haliaetus

Osprey [952]

Pluvialis squatarola Grey Plover [865] Breeding known to occur within area

Species or species habitat likely to occur within area

[Resource Information]

### Other Matters Protected by the EPBC Act

#### Commonwealth Land

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

Name

Defence - MT GOODWIN RADAR SITE

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific nar	me on the EPBC Act - Threa	tened Species list.
Name	Threatened	Type of Presence
Birds		
Acrocephalus orientalis		
Oriental Reed-Warbler [59570]		Species or species

Name	Threatened	Type of Presence
		habitat may occur within area
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat known to occur within area
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
Anous tenuirostris melanops		
Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres		
Ruddy Turnstone [872]		Species or species habitat likely to occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris alba		
Sanderling [875]		Species or species habitat likely to occur within area
Calidris canutus		
Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area

Calidris melanotos Pectoral Sandpiper [858]

Calidris tenuirostris Great Knot [862]

Calonectris leucomelas

Streaked Shearwater [1077]

Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]

Vulnerable

Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]

Charadrius veredus **Oriental Plover, Oriental Dotterel [882]** 

Chrysococcyx osculans Black-eared Cuckoo [705] Species or species habitat may occur within area

Species or species habitat Critically Endangered likely to occur within area

> Species or species habitat known to occur within area

> Species or species habitat likely to occur within area

Endangered

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur

Name	Threatened	Type of Presence
		within area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Breeding known to occur
Enclose to an income		within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat
		likely to occur within area
<u>Glareola maldivarum</u>		
Oriental Pratincole [840]		Species or species habitat
		may occur within area
Haliaeetus leucogaster		On a size, an an a size, habitat
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
		KNOWN to occur within area
Hirundo daurica		
Red-rumped Swallow [59480]		Species or species habitat
		may occur within area
Hirundo rustica		
Barn Swallow [662]		Species or species habitat
		may occur within area
Larus novaehollandiae		
Silver Gull [810]		Breeding known to occur
		within area
Limnodromus semipalmatus		
Asian Dowitcher [843]		Species or species habitat
		may occur within area
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat
		known to occur within area
Limosa limosa		
Black-tailed Godwit [845]		Species or species habitat
		likely to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat
		may occur within area
Motacilla cinerea		<b>.</b>

Grey Wagtail [642]

Species or species habitat may occur within area

Motacilla flava Yellow Wagtail [644]

Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]

Numenius phaeopus Whimbrel [849]

Pandion haliaetus Osprey [952]

Papasula abbotti Abbott's Booby [59297]

Pluvialis squatarola Grey Plover [865]

Rhipidura rufifrons Rufous Fantail [592] Species or species habitat likely to occur within area

Critically Endangered

Species or species habitat known to occur within area

Species or species habitat likely to occur within area

Breeding known to occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within

Endangered

Name	Threatened	Type of Presence
Destrutule hanghalansia (sanau lata)		area
<u>Rostratula benghalensis (sensu lato)</u> Painted Snipe [889]	Endangered*	Species or species habitat
	Endangered	likely to occur within area
Sterna albifrons		
Little Tern [813]		Species or species habitat
		may occur within area
Sterna anaethetus		
Bridled Tern [814]		Breeding known to occur
		within area
<u>Sterna bengalensis</u> Lesser Crested Tern [815]		Breeding known to occur
		within area
Sterna dougallii		
Roseate Tern [817]		Breeding likely to occur within area
Sula leucogaster		
Brown Booby [1022]		Breeding known to occur
Fish		within area
Bhanotia fasciolata		
Corrugated Pipefish, Barbed Pipefish [66188]		Species or species habitat
		may occur within area
Campichthys tricarinatus		
Three-keel Pipefish [66192]		Species or species habitat
Three-keel Pipefish [66192]		Species or species habitat may occur within area
Choeroichthys brachysoma		may occur within area
<u>Choeroichthys brachysoma</u> Pacific Short-bodied Pipefish, Short-bodied Pipefish		may occur within area Species or species habitat
Choeroichthys brachysoma		may occur within area
<u>Choeroichthys brachysoma</u> Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194] <u>Choeroichthys suillus</u>		may occur within area Species or species habitat may occur within area
<u>Choeroichthys brachysoma</u> Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]		may occur within area Species or species habitat may occur within area Species or species habitat
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194] Choeroichthys suillus Pig-snouted Pipefish [66198]		may occur within area Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194] Choeroichthys suillus Pig-snouted Pipefish [66198] Corythoichthys amplexus		may occur within area Species or species habitat may occur within area Species or species habitat may occur within area
Choeroichthys brachysoma Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194] Choeroichthys suillus Pig-snouted Pipefish [66198]		may occur within area Species or species habitat may occur within area Species or species habitat
<ul> <li><u>Choeroichthys brachysoma</u></li> <li>Pacific Short-bodied Pipefish, Short-bodied Pipefish [66194]</li> <li><u>Choeroichthys suillus</u></li> <li>Pig-snouted Pipefish [66198]</li> <li><u>Corythoichthys amplexus</u></li> <li>Fijian Banded Pipefish, Brown-banded Pipefish</li> </ul>		may occur within area Species or species habitat may occur within area Species or species habitat may occur within area Species or species habitat

Reticulate Pipefish, Yellow-banded Pipefish, Network Pipefish [66200] Species or species habitat may occur within area

Corythoichthys haematopterus Reef-top Pipefish [66201]

<u>Corythoichthys intestinalis</u> Australian Messmate Pipefish, Banded Pipefish [66202]

Corythoichthys schultzi Schultz's Pipefish [66205]

Cosmocampus banneri Roughridge Pipefish [66206]

Doryrhamphus dactyliophorus Banded Pipefish, Ringed Pipefish [66210]

Doryrhamphus excisus Bluestripe Pipefish, Indian Blue-stripe Pipefish, Pacific Blue-stripe Pipefish [66211]

Doryrhamphus janssi Cleaner Pipefish, Janss' Pipefish [66212] Species or species habitat may occur within area

Species or species habitat may occur within

Name	Threatened	Type of Presence
		area
Festucalex cinctus		
Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris		
Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus brocki		
Brock's Pipefish [66219]		Species or species habitat may occur within area
Halicampus dunckeri		
Red-hair Pipefish, Duncker's Pipefish [66220]		Species or species habitat may occur within area
<u>Halicampus grayi</u>		
Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Halicampus spinirostris		
Spiny-snout Pipefish [66225]		Species or species habitat may occur within area
Haliichthys taeniophorus		
Ribboned Pipehorse, Ribboned Seadragon [66226]		Species or species habitat may occur within area
Hippichthys cyanospilos		
Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys parvicarinatus		
Short-keel Pipefish, Short-keeled Pipefish [66230]		Species or species habitat may occur within area
Hippichthys penicillus		
Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus angustus		
Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area

Hippocampus histrix

Spiny Seahorse, Thorny Seahorse [66236]

<u>Hippocampus kuda</u> Spotted Seahorse, Yellow Seahorse [66237]

Hippocampus planifrons Flat-face Seahorse [66238]

Hippocampus spinosissimus Hedgehog Seahorse [66239]

Micrognathus micronotopterus Tidepool Pipefish [66255]

Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]

Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273] Species or species habitat may occur within area

Name	Threatened	Type of Presence
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
<u>Trachyrhamphus bicoarctatus</u> Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
<u>Trachyrhamphus longirostris</u> Straightstick Pipefish, Long-nosed Pipefish, Straight Stick Pipefish [66281]		Species or species habitat may occur within area
Mammals		
Dugong dugon Dugong [28]		Species or species habitat known to occur within area
Reptiles		
Acalyptophis peronii Horned Seasnake [1114]		Species or species habitat may occur within area
Aipysurus apraefrontalis Short-nosed Seasnake [1115]	Critically Endangered	Species or species habitat likely to occur within area
<u>Aipysurus duboisii</u> Dubois' Seasnake [1116]		Species or species habitat may occur within area
Aipysurus eydouxii Spine-tailed Seasnake [1117]		Species or species habitat may occur within area
Aipysurus foliosquama Leaf-scaled Seasnake [1118]	Critically Endangered	Species or species habitat may occur within area
<u>Aipysurus laevis</u> Olive Seasnake [1120]		Species or species habitat may occur within area

<u>Astrotia stokesii</u> Stokes' Seasnake [1122]

Caretta caretta Loggerhead Turtle [1763]

Chelonia mydas Green Turtle [1765]

<u>Crocodylus johnstoni</u> Freshwater Crocodile, Johnston's Crocodile, Johnstone's Crocodile [1773]

<u>Crocodylus porosus</u> Salt-water Crocodile, Estuarine Crocodile [1774]

<u>Dermochelys coriacea</u> Leatherback Turtle, Leathery Turtle, Luth [1768]

Disteira kingii Spectacled Seasnake [1123] Species or species habitat may occur within area

Species or species habitat known to occur within area

Endangered

Vulnerable

Foraging, feeding or related behaviour known to occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Breeding likely to occur within area

Species or species habitat may occur within area

Endangered

Name	Threatened	Type of Presence
Disteira major		
Olive-headed Seasnake [1124]		Species or species habitat may occur within area
Emydocephalus annulatus		
Turtle-headed Seasnake [1125]		Species or species habitat may occur within area
Enhydrina schistosa		
Beaked Seasnake [1126]		Species or species habitat may occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitat known to occur within area
Hydrelaps darwiniensis		
Black-ringed Seasnake [1100]		Species or species habitat may occur within area
Hydrophis atriceps		
Black-headed Seasnake [1101]		Species or species habitat may occur within area
<u>Hydrophis coggeri</u>		
Slender-necked Seasnake [25925]		Species or species habitat may occur within area
<u>Hydrophis elegans</u>		
Elegant Seasnake [1104]		Species or species habitat may occur within area
<u>Hydrophis inornatus</u>		
Plain Seasnake [1107]		Species or species habitat may occur within area
Hydrophis mcdowelli		
null [25926]		Species or species habitat may occur within area
Hydrophis ornatus		
Spotted Seasnake, Ornate Reef Seasnake [1111]		Species or species habitat may occur within area
<u>Hydrophis pacificus</u>		

Large-headed Seasnake, Pacific Seasnake [1112]

Species or species habitat may occur within area

Lapemis hardwickii Spine-bellied Seasnake [1113]

Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]

Natator depressus Flatback Turtle [59257]

Parahydrophis mertoni Northern Mangrove Seasnake [1090]

Pelamis platurus Yellow-bellied Seasnake [1091]

Species or species habitat may occur within area

Foraging, feeding or related behaviour known to occur within area

Breeding known to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera borealis		
Sei Whale [34]	Vulnerable	Species or species

Endangered

Vulnerable

Name	Status	Type of Presence
		habitat likely to occur within area
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Balaenoptera physalus		
Fin Whale [37]	Vulnerable	Species or species habitat likely to occur within area
Delphinus delphis		
Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Feresa attenuata		
Pygmy Killer Whale [61]		Species or species habitat may occur within area
Globicephala macrorhynchus		
Short-finned Pilot Whale [62]		Species or species habitat may occur within area
<u>Grampus griseus</u>		
Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Kogia breviceps		
Pygmy Sperm Whale [57]		Species or species habitat may occur within area
Kogia simus		
Dwarf Sperm Whale [58]		Species or species habitat may occur within area
Megaptera novaeangliae		
Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcaella brevirostris		
Irrawaddy Dolphin [45]		Species or species habitat

Orcinus orca Killer Whale, Orca [46]

Peponocephala electra Melon-headed Whale [47]

Physeter macrocephalus Sperm Whale [59]

Pseudorca crassidens False Killer Whale [48]

<u>Sousa chinensis</u> Indo-Pacific Humpback Dolphin [50]

<u>Stenella attenuata</u> Spotted Dolphin, Pantropical Spotted Dolphin [51]

<u>Stenella coeruleoalba</u> Striped Dolphin, Euphrosyne Dolphin [52] Species or species habitat may occur within area

known to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Species or species habitat known to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within

Name	Status	Type of Presence
		area
Stenella longirostris		
Long-snouted Spinner Dolphin [29]		Species or species habitat may occur within area
Steno bredanensis		
Rough-toothed Dolphin [30]		Species or species habitat may occur within area
Tursiops aduncus		
Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops aduncus (Arafura/Timor Sea populations)		
Spotted Bottlenose Dolphin (Arafura/Timor Sea populations) [78900]		Species or species habitat known to occur within area
Tursiops truncatus s. str.		
Bottlenose Dolphin [68417]		Species or species habitat may occur within area
Ziphius cavirostris		
Cuvier's Beaked Whale, Goose-beaked Whale [56]		Species or species habitat may occur within area

Australian Marine Parks	[Resource Information]
Name	Label
Joseph Bonaparte Gulf	Multiple Use Zone (IUCN VI)
Joseph Bonaparte Gulf	Special Purpose Zone (IUCN VI)
Kimberley	Multiple Use Zone (IUCN VI)

### Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Balanggarra	WA
Keep River	NT
Lesueur Island	WA
Marri-Jabin (Thamurrurr - Stage 1)	NT

Pelican Island	WA
Unnamed WA44677	WA
Uunguu	WA

#### Invasive Species

[Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Passer montanus		
Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina		
Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus		
Domestic Cattle [16]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Bubalus bubalis Water Buffalo, Swamp Buffalo [1]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Equus asinus Donkey, Ass [4]		Species or species habitat likely to occur within area
Equus caballus Horse [5]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Plants		
Brachiaria mutica Para Grass [5879]		Species or species habitat likely to occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat

Mimosa pigra Mimosa, Giant Mimosa, Giant Sensitive Plant, ThornySensitive Plant, Black Mimosa, Catclaw Mimosa, Bashful Plant [11223] Parkinsonia aculeata Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean [12301]

Species or species habitat likely to occur within area

may occur within area

Pennisetum polystachyon Mission Grass, Perennial Mission Grass, Missiongrass, Feathery Pennisetum, Feather Pennisetum, Thin Napier Grass, West Indian Pennisetum, Blue Buffel Grass [21194] Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]

#### Reptiles

Hemidactylus frenatus Asian House Gecko [1708]

Ramphotyphlops braminus Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258] Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

### Key Ecological Features (Marine)

Key Ecological Features are the parts of the marine ecosystem that are considered to be important for the biodiversity or ecosystem functioning and integrity of the Commonwealth Marine Area.

Name	Region
Ancient coastline at 125 m depth contour	North-west
Carbonate bank and terrace system of the Sahul	North-west

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

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

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

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

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

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

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

# Coordinates

-12.122943 130.146939,-12.412799 130.092007,-12.820198 130.081021,-13.002244 129.949185,-13.173459 130.004117,-13.312483 130.157925,-13.408684 130.168912,-13.472797 130.11398,-13.504847 129.982144,-13.38731 129.872281,-13.494164 129.839322,-13.675706 129.795377,-13.77176 129.762418,-13.921099 129.6965,-13.995732 129.6965,-14.059685 129.586636,-14.134273 129.4548,-14.315314 129.377896,-14.453659 129.344937,-14.538751 129.443814,-14.698211 129.553677,-14.793832 129.630582,-14.825696 129.597623,-14.931875 129.553677,-14.868174 129.081265,-14.825696 129.597623,-14.931875 129.553677,-14.868174 129.081265,-14.825696 128.938443,-14.804454 128.762662,-14.761963 128.652798,-14.793832 128.389127,-14.73009 128.268277,-14.623811 128.081509,-14.432381 127.883755,-14.208837 127.696988,-14.006392 127.532193,-13.899771 127.367398,-13.77176 127.015835,-13.761089 126.851041,-13.7931 126.664273,-13.761089 126.411587,-13.7931 125.68649,-13.7931 125.3569,-13.96375 124.719693,-13.953088 124.291226,-13.739746 123.917691,-13.333865 125.060269,-13.087866 125.653531,-13.023652 126.455533,-13.023652 127.202603,-13.141365 127.686002,-13.280408 127.905728,-13.365933 128.213345,-13.248328 128.531949,-12.916592 128.817593,-12.509347 129.180142,-12.294748 129.498746,-12.198121 129.839322,-12.122943 130.146939

# Acknowledgements

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-Office of Environment and Heritage, New South Wales -Department of Environment and Primary Industries, Victoria -Department of Primary Industries, Parks, Water and Environment, Tasmania -Department of Environment, Water and Natural Resources, South Australia -Department of Land and Resource Management, Northern Territory -Department of Environmental and Heritage Protection, Queensland -Department of Parks and Wildlife, Western Australia -Environment and Planning Directorate, ACT -Birdlife Australia -Australian Bird and Bat Banding Scheme -Australian National Wildlife Collection -Natural history museums of Australia -Museum Victoria -Australian Museum -South Australian Museum -Queensland Museum -Online Zoological Collections of Australian Museums -Queensland Herbarium -National Herbarium of NSW -Royal Botanic Gardens and National Herbarium of Victoria -Tasmanian Herbarium -State Herbarium of South Australia -Northern Territory Herbarium -Western Australian Herbarium -Australian National Herbarium, Canberra -University of New England -Ocean Biogeographic Information System -Australian Government, Department of Defence Forestry Corporation, NSW -Geoscience Australia -CSIRO -Australian Tropical Herbarium, Cairns -eBird Australia -Australian Government – Australian Antarctic Data Centre -Museum and Art Gallery of the Northern Territory -Australian Government National Environmental Science Program

-Australian Institute of Marine Science

-Reef Life Survey Australia

-American Museum of Natural History

-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania

-Tasmanian Museum and Art Gallery, Hobart, Tasmania

-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

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