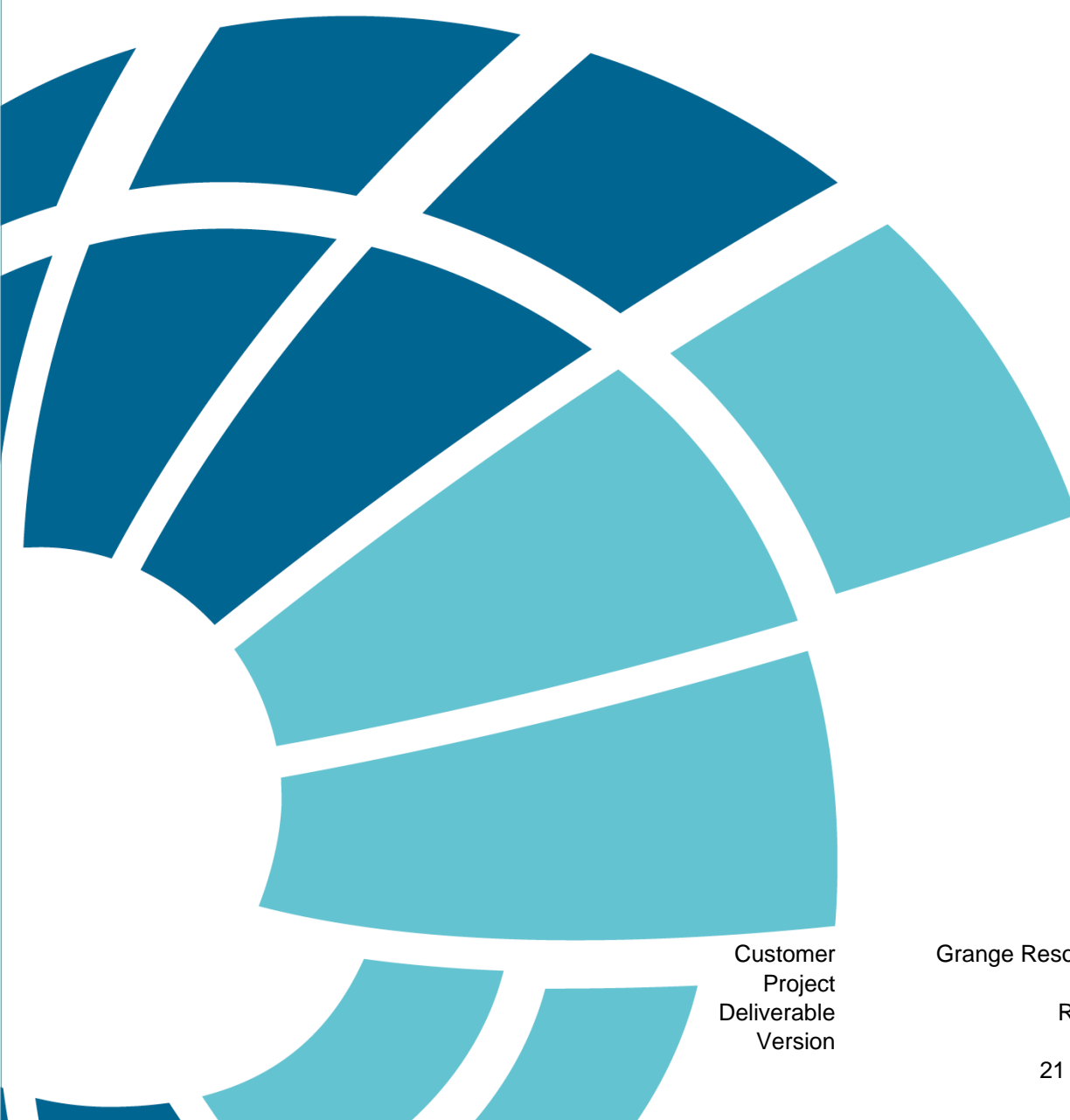


# SouthDown Joint Venture Magnetite Transshipping Project – Marine Fauna Desktop Study



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## Acronyms

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BC Act	Western Australian Biodiversity Conservation Act 2016
DAWE	Australian Department of Agriculture, Water and the Environment
DBCA	Western Australian Department of Biodiversity, Conservation and Attractions
DPIRD	Department of Primary Industries and Regional Development
DWER	Western Australian Department of Water and Environmental Regulation
EIA	Environmental impact assessment
EP Act	Environmental Protection Act 1986
EPA	Environmental Protection Authority
EPBC Act	Commonwealth Environmental Protection and Biodiversity Conservation Act 1999
ERD	Environmental Review Document
KGS	King George Sound
MNES	Matters of National Environmental Significance
NSW	New South Wales
NT	Northern Territory
PRH	Princess Royal Harbour
Qld	Queensland
SA	South Australia
SDJV	Southdown Joint Venture
SPA	Southern Port Authority
WA	Western Australia

## 1 Introduction

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### 1.1 Project background

The Port of Albany (hereafter, 'the Port') is on the southern coast of Western Australia with infrastructure in Princess Royal Harbour (PRH) and King George Sound (KGS; Figure 1.1). The Port is an industrial port operated by Southern Port Authority (hereafter, 'the Proponent') under the Port Authority Act 1999, exporting bulk products such as grain, woodchips and silica sand, and importing fertiliser, fuel and timber products.

The Port has undergone growth in the past decades to meet the potential shipping needs of the Southdown Magnetite Project run by the Southdown Joint Venture (SDJV; Grange Resources Limited and Sojitz Corporation). The SDJV proposes to construct and operate an open pit magnetite mine at the Southdown Magnetite deposit located ~90 km north-east of Albany, Western Australia (hereafter, 'the Proposal'). The Proposal will include pumping magnetite as a slurry via a 104 km-long buried pipeline to newly installed land-based facilities at the Port. The loadout facility will be located on unused land within the Port and will include the construction of a new loading facility at Berth 5, including a filtration plant, a concentrate stockpile, and conveyor system. These new facilities will be constructed and operated by the SDJV. The magnetite concentrate will then be loaded onto transshipping vessels and then barged to larger Cape size vessels (~175 thousand tonnes) located at anchorage sites D, W, Y and Z in KGS (Figure 1.1). The magnetite is intended for export to southeast Asia at a target rate of 5 million tonnes per annum concentrate for 30 years. Large vessels regularly transit through the shipping channel and KGS, however, the transshipping operations involved in the Proposal may have potential impacts and risks to marine fauna, and it is anticipated that approvals under the following state and federal legislation may be required.

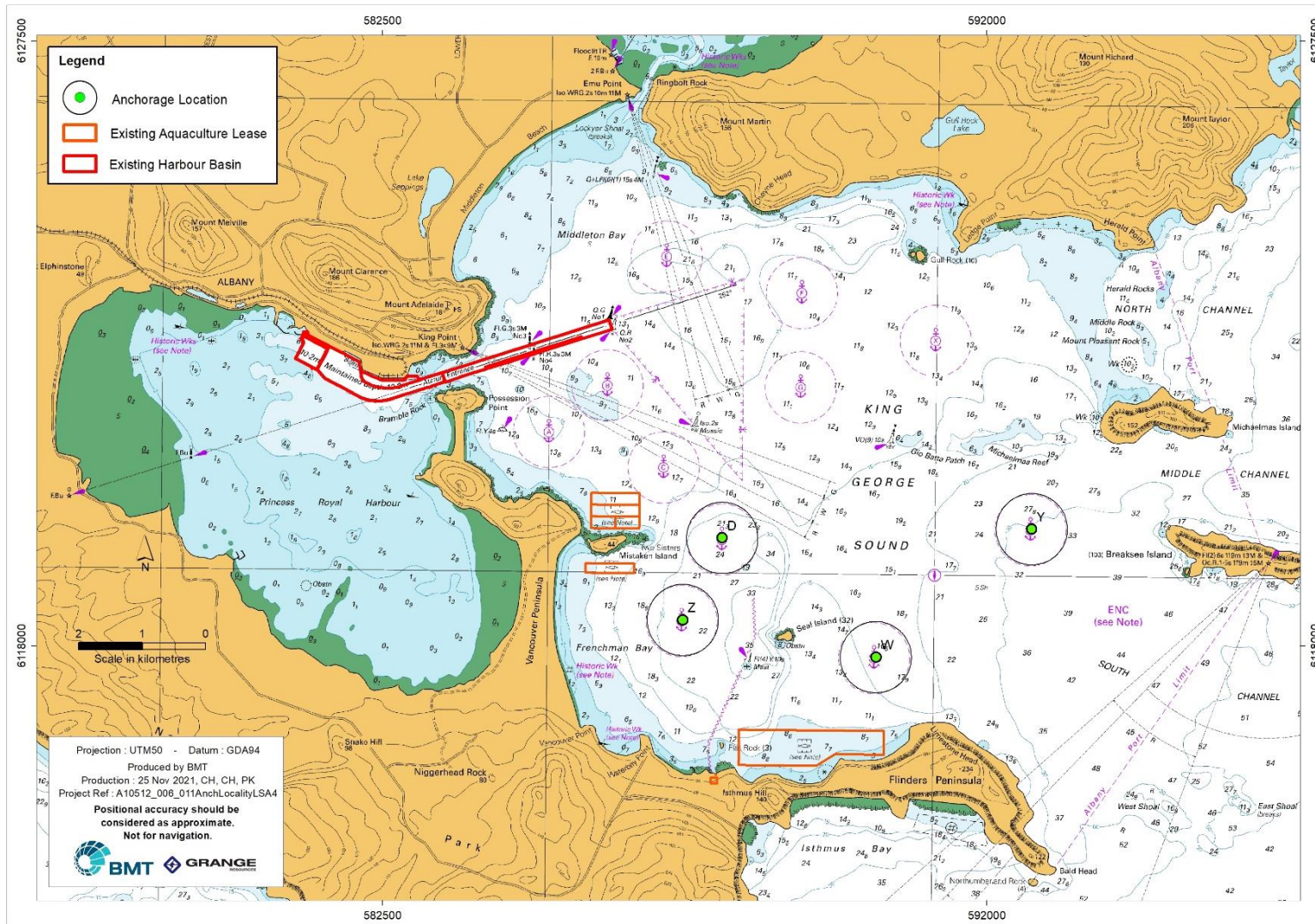


Figure 1.1 Port of Albany and proposed anchorage sites in King George Sound

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## 1.2 Environmental approval pathways

The Project proposal will be referred to the Environmental Protection Authority (EPA) under Section 38(1) of the Environmental Protection Act 1986 (EP Act) Part IV to determine the level of assessment. The EPA applies a Significance Framework to make decisions through the environmental impact assessment (EIA) process, based on the concept of significance established under the EP Act. One of the principles outlined in the EP Act is the conservation of biological diversity and ecological integrity, relevant to marine fauna.

## 1.3 Regional setting

The Port is located in the Great Southern region of Western Australia, ~420 km south-east of Perth. The region experiences a Mediterranean climate with mild, dry summers with average temperatures of 23°C, and mild, wet winters with average temperatures of 16°C (BoM 2021). The annual rainfall is high with an average maximum of 925 mm (BoM 2021). The region is dominated by easterly winds in summer and westerly winds in winter. Tides are relatively weak and vary from diurnal to semi-diurnal throughout the year with a spring tidal range of approximately 1.1 m.

The Port is located on the north shore of PRH, a large harbour with a narrow channel connecting with the marine waters of KGS. The PRH is shallow in depth with gently sloping sandy margins that supports subtidal *Posidonia australis*, *P. sinuosa* and *Amphibolis antarctica* seagrass meadows (Bastyan 1996). The shallow intertidal sandbanks and mudflats off the western and southern shores of PRH are rich feeding areas for water birds (Albany Port Authority 2007). The north-east of PRH does not support significant areas of shallow inter-tidal sandbanks and mudflats. The waters of PRH are generally well mixed vertically, weakly stratified, and has a salinity close to that of marine waters (35 ppt) (Mills & D'Adamo 1993, Waterways Commission 1995).

King George Sound is a salt-water environment that is well protected from the high-energy wave climate of the south-west. Freshwater plumes exiting Oyster Harbour often extend as far as Breaksea and Michaelmas Islands and occasionally beyond in winter during periods of high river flow (Hillman et al. 1991). Seagrass species of varying densities are also present in KGS in depths up to 16 m (Oceanica 2011). Numerous limestone reef systems (including Gio Batta Patch and Michaelmas Reef) exist in KGS that support macroalgal communities and a rich and diverse fauna consisting of encrusting sponges, bryozoans, ascidians and soft corals (EPA 2010). Commercial (purse-seine fishery for pilchards, and net fishing) and recreational fishing are permitted in KGS and PRH under the Fish Resources Management Act 1994. Other commercial fishing activities in KGS include trap, octopus and wetlining.

Existing aquaculture farms leased by the Department of Primary Industries and Regional Development (DPIRD) operate in Oyster Harbour and KGS. These sites are used to cultivate mussels (*Mytilus edulis*), rock oysters (*Saccostrea glomerata*) and Akoya pearl oysters (*Pinctada imbricata*), which are farmed by collecting wild spat that are then attached to long lines to grow-out to market size (Ecologia 2007, DPIRD 2021). The anchorage sites and transshipping operations are proposed to be developed within KGS adjacent to proposed aquaculture sites to the north and south of Mistaken Island.

## 1.4 Purpose of this document

The purpose of this document is to conduct a desktop assessment of available information to provide a comprehensive listing of marine fauna known or likely to occur within, or regularly pass through, the Proposal area (KGS and PRH). Where relevant, this report will document any known uses of the Proposal area by marine fauna (e.g., foraging, migrating, calving, nursing, spawning, roosting and nesting), and identify any critical windows of environmental sensitivity for marine fauna in the proximity of the Proposal area. The comprehensive listing will include the identification of:



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- Matters of National Environmental Significance (MNES) and Other Matters (species and communities) protected by the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act 1999) relevant to the marine components of the Proposal
- marine species important to fisheries (commercial and recreational) that are likely to occur in the Proposal area.

This document forms part of an overarching Environmental Review Document (ERD) to support the assessment of the Proposal under the EPBC Act.

## 2 Conservation Significant Marine Fauna

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### 2.1 Relevant legislation and guidelines

In line with relevant state and federal legislation, a comprehensive desktop review was conducted to identify conservation significant marine fauna species that are either known to occur within, likely to occur within, or regularly pass through the Proposal area. The relevant legislations and guidelines specific to marine fauna include:

- **Commonwealth EPBC Act 1999** – Protected marine fauna that are listed into categories Critically Endangered, Endangered, Vulnerable, Conservation Dependent, Extinct, or Extinct in the Wild. Migratory species identified in an international agreement approved by the Minister for Environment are categorized as MNES
- **Western Australian Biodiversity Conservation Act 2016 (BC Act)** – Threatened marine fauna categorised into Threatened Fauna conservation categories that align with those detailed in the EPBC Act
- **Department of Biodiversity, Conservation and Attractions (DBCA) Priority Species** – DBCA maintains a list of ‘Priority’ species (P1–P4) that are of conservation interest
- **Western Australian Fish Resources Management Act 1994** – Regulates fishing, aquaculture and other aquatic resources in WA.

### 2.2 Database searches

A range of database searches were performed to identify conservation significant marine fauna species that are either known to occur within, likely to occur within, or regularly pass through the Proposal area. These databases include:

- Australian Department of Agriculture, Water and the Environment (DAWE) Protected Matters Search Tool (DAWE 2021a)
- DBCA Threatened and Priority Fauna List
- Atlas of Living Australia.

The search parameters used in the DAWE Protected Matters Search Tool (DAWE 2021a) included PRH and the Port boundary limit in KGS that runs through Herald Point to Michaelmas Island to midway through Breaksea Island to Flinders Peninsula. For the Atlas of Living Australia search tool, KGS was searched with a 10 km radius.

The results of the database searches that list the conservation significant marine fauna species, which include marine mammals, marine reptiles, sharks and rays, finfish and marine birds, is provided in Table 2.1. It was also determined if the marine fauna species had a potential critical window of environmental sensitivity, based on the existing state of knowledge (Section 3), and if there was a likelihood of this occurring within the Proposal area (Table 2.1). Critical windows of environmental sensitivity may include times of the year or particular locations where key species or ecological communities or critical processes (e.g. feeding, breeding, nursing or resting) may be particularly vulnerable to pressures from anthropogenic activities (EPA 2021).

**BMT (OFFICIAL)****EPBC Act 1999**

A Protected Matters Report (Annex A) search conducted on 8 November 2021 identified 120 species protected under the EPBC Act, including MNES and Other Matters Protected by the EPBC Act (Table 2.1).

Of the 120 species, 73 marine fauna species are protected as MNES, 39 of which are Threatened species (four Critically Endangered, 11 Endangered, 22 Vulnerable and 2 Conservation Dependent), and 34 of which are Migratory marine species (not including those Migratory marine species already listed under Threatened species; Table 2.1). The remaining 47 species are listed as Other Matters protected by the EPBC Act – 38 of which are Listed Marine Species, and nine of which are Whales and Other Cetaceans (not including those already listed under MNES; Table 2.2).

**BC Act 2016**

Five marine species potentially occurring in the Proposal area are listed under Schedule 1 – Fauna that are rare or are likely to become extinct as critically endangered fauna (Table 2.1). Four marine species are listed under Schedule 2 (fauna that are rare or are likely to become extinct as endangered fauna) and six marine species under Schedule 3 (fauna that are rare or are likely to become extinct as vulnerable fauna; Table 2.1). Thirty-nine marine birds potentially occurring in the Proposal area are listed under Schedule 5 in which migratory birds are protected under an internal agreement (Table 2.1). The full report generated from the Threatened and Priority Fauna List is provided in Annex B.

**DBCA Priority Fauna**

A search of Priority Fauna was completed on 9 November 2021. There were no marine fauna species protected as MNES listed as DBCA Priority Fauna that potentially occur in the Proposal area.

**Atlas of Living Australia**

A search for marine fish species reported a total of 266 species of fish from 114 families were within a 10 km radius of KGS.

**2.3 Likelihood of occurrence assessment**

The likelihood of conservation significant marine species identified in the database searches occurring at or adjacent to the Proposal area was determined through the assessment of the 1) habitat present in the Proposal area compared to the habitat typically associated with the species; and 2) typical species behaviour (e.g. foraging behaviour, migration, calving, nursing, spawning, roosting and nesting). The results of the assessment are presented in Table 2.1 and Table 2.2.

Table 2.1 Conservation significant marine fauna species identified in King George Sound and Princess Royal Harbour as defined by State and Commonwealth legislation

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
<b>Marine mammals (seals, whales, dolphins)</b>						
Australian Sea Lion ( <i>Neophoca cinerea</i> )	Endangered	Vulnerable	Breeding range generally extends from Houtman Abrolhos WA to The Pages Island in South Australia (SA). Prefer the sheltered side of islands to use as rookeries and haul-out sites and avoid exposed rocky headlands (Campbell 2005). Known breeding colony and haul-out site at Haul-off Rock ~80 km north-east of PRH. The waters around Bald Island east of Cheynes beach are identified as a Biologically Important Area for foraging by male Australian sea lions (DSEWPaC 2011). Haul-out/resting sites located at Coffin Island adjacent to the proposal area and at Breaksea and Seal Islands within the proposal area. Foraging and feeding documented in KGS and PRH	Critical habitat found within the Proposal area year-round	Species or species habitat known to occur within area	Likely
Southern Right Whale ( <i>Eubalaena australis</i> )	Endangered, migratory	Vulnerable (Schedule 3)	Principally found around the southern coastline between Sydney and Perth with major calving areas at Doubtful Island Bay in WA to Head of Bight in SA. Feeding habitat is thought to be in deeper offshore waters (Bannister et al. 1997). KGS and adjacent waters are regularly used for calving, nursing and resting (Bannister 2001)	Female-calf pairs and unaccompanied individuals present in the proposal area between May–October	Breeding known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Humpback Whale (Megaptera novaeangliae)	Vulnerable, migratory	Conservation Dependent (Schedule 6)	Known calving, migration and resting areas in between southern Kimberley to Albany. The migratory habitat is primarily coastal water <200 m in depth and within 20 km of the coast (DAWE 2021b). KGS and adjacent waters are used during the northern migration May–September	Timing of peak abundance in KGS and adjacent waters occurs between June–August. Sightings recorded from May–November	Species or species habitat known to occur within area	Likely
Blue Whale (Balaenoptera musculus) and Pygmy Blue Whale (Balaenoptera musculus brevicauda)	Endangered, migratory	Endangered (Schedule 2)	Blue whales, principally pygmy blue whales use coastal and offshore waters in the Albany area for migration and foraging. Pygmy blue whales migrate west along the southern WA coastline between January and June. Seasonally present in the proposal area and adjacent waters	Documented sighting records of individuals in KGS and adjacent waters annually between February and June	Species or species habitat known to occur within area	Likely
Sei Whale (Balaenoptera borealis)	Vulnerable, migratory	Endangered (Schedule 2)	Australian Antarctic and temperate cool waters are important feeding grounds (Horwood 1997), while breeding occurs in tropical and subtropical waters (DAWE 2021b). Movements and distributions of sei whales are unpredictable and not well documented	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Fin Whale (Balaenoptera physalus)	Vulnerable, migratory	Endangered (Schedule 2)	Fin whales migrate through WA waters, with earliest arrival of the animals recorded on the WA coast, at Cape Leeuwin in April (Aulich et al. 2019). Opportunistic sighting records evidence fin whales in coastal and offshore waters in the Albany region April-May. Observed in SA waters between	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			November and May, and acoustics have been heard off the Rottneest Trench between January and April 2000 (DAWE 2021b). Australian Antarctic waters are important feeding grounds, and there are no known mating or calving areas in Australian waters			
Bryde's Whale ( <i>Balaenoptera edeni</i> )	Migratory	–	Found year-round in waters between 40° S and 40° N, primarily in temperatures exceeding 16.3 °C (DAWE 2021b). They are more likely to occur along the east and west coasts of Australia and possibly less abundant along the cooler southern coast	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Pygmy Right Whale ( <i>Caperea marginata</i> )	Migratory	–	Distributed between 32° S and 47° S, but not uniformly spread around the Australian coast, with few WA records. Have primarily been recorded in areas associated with upwellings and with high zooplankton abundance (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Dusky Dolphin ( <i>Lagenorhynchus obscurus</i> )	Migratory	–	Not well surveyed in Australian waters. The distribution is primarily assumed from 13 records. Given the lack of understanding of the species' distribution in Australian waters, no key localities have yet been identified (Bannister et al. 1996)	May use habitat during winter, however no calving areas found within the Proposal area	Species or species habitat may occur within area	Unlikely
Killer Whale/Orca ( <i>Orcinus orca</i> )	Migratory	–	Considered a regular visitor to State waters in WA. The Bremer Sub-Basin, south-western Australia, ~160 km east of the proposal area supports the largest	No critical habitat or feeding grounds	Species or species habitat may occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			documented aggregation of killer whales in Australian waters. Opportunistic sighting in coastal and offshore waters adjacent to the proposal area	found within the Proposal area		
<b>Marine reptiles</b>						
Loggerhead Turtle ( <i>Caretta caretta</i> )	Endangered, migratory	Endangered (Schedule 2)	Occurs in the waters of coral and rocky reefs, seagrass beds and muddy bays throughout eastern, northern and western Australia (Limpus 1995). In WA, nesting occurs from Shark Bay to the North West Cape (DAWE 2021b)	Unsuitable habitat (cold waters) found within the Proposal area	Breeding likely to occur within area	Unlikely
Green Turtle ( <i>Chelonia mydas</i> )	Vulnerable, migratory	Vulnerable (Schedule 3)	Forage and migrate across tropical and temperate Australia. Forage benthic habitats such as tropical tidal and sub-tidal coral and rocky reef habitat or inshore seagrass beds. Key nesting areas are located in tropical waters in WA (DoEE 2017)	Documented sightings in KGS. Possible use of habitat for feeding but periods unknown, habitat not used for nesting	Species or species habitat may occur within area	Unlikely
Leatherback Turtle ( <i>Dermochelys coriacea</i> )	Endangered, migratory	Vulnerable (Schedule 3)	Pelagic feeder found in tropical, subtropical and temperate waters throughout the world. No major nesting has been recorded in Australia although scattered isolated nesting occurs in Queensland (Qld) and the Northern Territory (NT) (DoEE 2017)	Possible use of habitat but periods unknown	Breeding likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
<b>Sharks and rays</b>						
Great white shark (Carcharodon carcharias)	Vulnerable, migratory	Vulnerable (Schedule 3)	White sharks are known to frequent coastal waters along the south coast as evidenced by acoustic detections (McAuley et al. 2017). Acoustic data collated since 2009 provides evidence for white sharks being present more consistently across seasons off the south coast of WA. These sharks' frequent regions with seal colonies (DAWE 2021b)	Acoustic detection at receivers in KGS at Frenchman's Bay and Middleton Beach evidence presence in the proposal area	Foraging, feeding or related behaviour known to occur within area	Likely
Grey nurse shark ( <i>Carcharias taurus</i> )	Vulnerable	Vulnerable (Schedule 3)	The west coast population has a broad inshore distribution, primarily in sub-tropical to cool temperate waters. Numerous sightings have been reported between Albany and Esperance (Chidlow et al. 2006), hovering over the seabed, rocky caves and in the vicinity of inshore rocky reefs and islands (Pollard et al 1996)	No critical habitat found within the Proposal area, could occur offshore to the Proposal area however period unknown	Species or species habitat likely to occur within area	Unlikely
Whale shark (Rhincodon typus)	Vulnerable, migratory	Schedule 7	Known to occur throughout Australia excluding east of Cape Arid in WA to Melbourne in Victoria (DAWE 2021b), but most commonly seen in waters of northern WA. Ningaloo Reef is the main known aggregation site of Whale Sharks in Australian waters, which may be due to seasonal concentrations of krill and other zooplankton (Taylor 1996)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely



Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
School shark ( <i>Galeorhinus galeus</i> )	Conservation Dependent	–	Occurs throughout the temperate coastal waters of southern Australia from Perth to Moreton Bay in southern Qld (Pogonoski et al. 2002). It is found over continental shelves to inshore areas, which are used as important birthing and nursery sites (TSSC 2009)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Reef Manta Ray ( <i>Mobula alfredi</i> )	Migratory	–	Lives in tropical marine waters and occasionally in temperate seas between Bremer Bay in WA to the tropical north of the country to Sydney (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat known to occur within area	Unlikely
Giant Manta Ray ( <i>Manta birostris</i> )	Migratory	–	Lives in tropical marine waters and occasionally in temperate seas between Bremer Bay in WA to the tropical north of the country and south to the southern coast of New South Wales (Australian Museum 2021a)	Species present in offshore waters in the Albany area seasonally (summer/early autumn). No critical habitat or feeding grounds found within the Proposal area	Species or species habitat known to occur within area	Unlikely
Oceanic Whitetip Shark ( <i>Carcharhinus longimanus</i> )	Migratory	–	An oceanic deep-water species which sometimes comes close to shore, usually over water depths ~150 m (Fishbase 2021)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Mackerel Shark ( <i>Lamna nasus</i> )	Migratory	–	Occurs in waters from southern Qld to south-west Australia (Last & Stevens 2009), typically occurring in oceanic waters off the continental shelf,	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			although they occasionally enter coastal waters (Francis et al. 2002).			
<b>Finfish</b>						
Southern Blue Fin Tuna ( <i>Thunnus maccoyii</i> )	Conservation Dependent	–	A highly migratory species ranging between northern WA to central Qld. Southern bluefin tuna seasonally use the inshore waters of the Albany area. Juveniles (1–2 years) inhabit inshore waters in WA and SA (Honda et al. 2010). There is a single known spawning ground between Java and northern WA	Juveniles forage in inshore coastal waters in the Albany area seasonally (December–April) (Fujioka et al. 2010). No other critical habitat found within the Proposal area	Species or species habitat known to occur within area	Unlikely
Balston's Pygmy Perch ( <i>Nannatherina balstoni</i> )	Vulnerable	Vulnerable (Schedule 3)	Restricted to near-coastal streams, lakes and wetlands between upper Margaret River and the Goodga River (near Albany), living for three years and breeding from early winter to late winter/early spring (DWER 2021)	Unsuitable habitat (freshwater) found within the Proposal area	Species or species habitat may occur within area	Unlikely
<b>Birds – Wetland birds</b>						
Great Knot ( <i>Calidris tenuirostris</i> )	Critically Endangered, Migratory	Critically Endangered (Schedule 1)	Recorded around the entirety of the Australian coast, with a few scattered records inland. The species typically prefers sheltered coastal habitats, with large intertidal mudflats or sandflats. The species is much less common in south-west Australia (DAWE 2021B)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Red Knot ( <i>Calidris canutus</i> )	Endangered, Migratory	Protected Migratory Birds Schedule 5	Common in all the main suitable habitats around the coast of Australia, but is less numerous in south-west Australia. It inhabits intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Northern Siberian Bar-tailed Godwit ( <i>Limosa lapponica menzbieri</i> )	Critically Endangered	Critically Endangered (Schedule 1)	Has been recorded in the coastal areas of all Australian states. In WA it is widespread around the coast from Eyre to Derby. During the non-breeding period (it does not breed in Australia), the distribution is predominately along the north coasts of WA (Garnett et al. 2011). It occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, salt lakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (Higgins & Davies 1996)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Bar-tailed Godwit ( <i>Limosa lapponica</i> )	Migratory	Protected Migratory Birds Schedule 5	Has been recorded in coastal areas of all Australian states. The typical habitat of the godwit is primarily coastal habitats such as large intertidal sandflats, banks, mudflats,	Critical habitat or feeding grounds found adjacent to	Species or species habitat known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			estuaries, inlets, harbours, coastal lagoons and bays (DAWE 2021b)	the Proposal area in spring and summer		
Black-tailed Godwit ( <i>Limosa limosa</i> )	Migratory	Protected Migratory Birds Schedule 5	The species is commonly found along coastal habitat: in sheltered bays, estuaries and lagoons with large intertidal mudflats or sandflats, or spits and banks of mud, sand or shell-grit; occasionally recorded on rocky coasts or coral islets. The use of habitat often depends on the stage of the tide. It is also found in shallow and sparsely vegetated, near-coastal, wetlands; such as saltmarsh, salt flats, river pools, swamps, lagoons and floodplains (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Curlew Sandpiper ( <i>Calidris ferruginea</i> )	Critically Endangered, Migratory	Critically Endangered (Schedule 1)	Mainly occur on intertidal mudflats in sheltered coastal areas (e.g., estuaries, bays, inlets and lagoons), around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Marsh Sandpiper ( <i>Tringa stagnatilis</i> )	Migratory	Protected Migratory Birds Schedule 5	Found on coastal and permanent or ephemeral inland wetlands throughout Australia of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats and is also seen at sewage farms and saltworks (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Common Sandpiper ( <i>Actitis hypoleucos</i> )	Migratory	Protected Migratory Birds Schedule 5	It is widespread along all coastlines and inland areas of Australia. It utilises a wide range of coastal and inland wetlands with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. It has been recorded in estuaries and deltas of streams, banks farther upstream, around lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties. Sandpipers forage in shallow water and on bare soft mud at the edges of wetlands and typically roosts on rocks or in roots or branches of vegetation, especially mangroves (Higgins & Davies 1996)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Terek Sandpiper ( <i>Xenus cinereus</i> )	Migratory	Protected Migratory Birds Schedule 5	Has a primarily coastal distribution, with occasional records inland. It is more widespread and common in northern and eastern Australia than southern Australia. In WA, it is rarely seen on the south coast, only occasionally around Eyre and Albany. It mostly forages in the open, on soft wet intertidal mudflats or in sheltered estuaries, embayments, harbours or lagoons (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Sharp-tailed Sandpiper ( <i>Calidris acuminata</i> )	Migratory	Protected Migratory Birds Schedule 5	Preference for muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. They use intertidal mudflats in sheltered bays, inlets, estuaries	Critical habitat or feeding grounds found adjacent to the Proposal area	Roosting known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			or seashores, and swamps and creeks lined with mangroves. In WA, they are widespread from Cape Arid to Carnarvon, around coastal and subcoastal plains of Pilbara Region to south-west and east Kimberley Division (DAWE 2021b)			
Pectoral Sandpiper ( <i>Calidris melanotos</i> )	Migratory	Protected Migratory Birds Schedule 5	In WA, the species is rarely recorded. It has been observed at the Nullarbor Plain, Reid, Stoke's Inlet, Grassmere Lake, Warden Lake, Dalyup and Yellilup Swamp, Swan River, Bengier Swamp, Guraga Lake, Wittecarra, Harding River, coastal Gascoyne, the Pilbara and the Kimberley (Higgins & Davies 1996). It prefers shallow fresh to saline wetlands. The species is found at coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains and artificial wetlands	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Eastern Curlew ( <i>Numenius madagascariensis</i> )	Critically Endangered, Migratory	Critically Endangered (Schedule 1)	It is most commonly associated with sheltered coasts, especially estuaries, bays, harbours, inlets and coastal lagoons, with large intertidal mudflats or sandflats, often with beds of seagrass. Curlews are recorded from Eyre to Peel Inlet (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Little Curlew ( <i>Numenius minutus</i> )	Migratory	Protected Migratory	It spends the non-breeding season in northern Australia from Port Hedland in WA to the Qld coast. The species is recorded	Critical habitat or feeding grounds found adjacent to	Roosting likely to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
		Birds Schedule 5	in Australia between September and April and there are few winter records (Blakers et al. 1984). Sites of international importance within WA include: Roebuck Plains, Anna Plains, WA, Derby Sewage Ponds, and Parry floodplain, Wyndham (Bamford et al. 2008)	the Proposal area in spring and summer		
Lesser Sand Plover ( <i>Charadrius mongolus</i> )	Endangered, Migratory	Protected Migratory Birds Schedule 5	Widespread in coastal regions in all states but primarily in northern and eastern Australia on large intertidal sandflats or mudflats in sheltered bays, harbours and estuaries, and occasionally sandy ocean beaches, coral reefs, wave-cut rock platforms and rocky outcrops (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Greater Sand Plover ( <i>Charadrius leschenaultii</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	It occurs in coastal areas in all states, though the greatest numbers occur in north-west Australia. They primarily occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, and sandy estuarine lagoons (Bamford 1988) and inshore reefs, rock platforms, small rocky islands or sand cays on coral reefs (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Grey Plover ( <i>Pluvialis squatarola</i> )	Migratory	Protected Migratory Birds Schedule 5	In non-breeding grounds in Australia, they occur almost entirely in coastal areas, where they usually inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			on rocky coasts with wave-cut platforms or reef-flats, or on reefs within muddy lagoons (DAWE 2021b)			
Double-banded Plover ( <i>Charadrius bicinctus</i> )	Migratory	Protected Migratory Birds Schedule 5	Found in both coastal and inland areas on littoral, estuarine and fresh or saline terrestrial wetlands, and saltmarsh, grasslands and pasture (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Pacific Golden Plover ( <i>Pluvialis fulva</i> )	Migratory	Protected Migratory Birds Schedule 5	In WA, the species is seldom recorded along the southern or south-western coastal region, but is more widespread along the Pilbara and Kimberley coasts between North-West Cape and the NT border (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Common Greenshank ( <i>Tringa nebularia</i> )	Migratory	Protected Migratory Birds Schedule 5	Does not breed in Australia however, the species occurs in all types of wetlands and has the widest distribution of any shorebird in Australia. It occurs around most of the coast from Cape Arid in the south to Carnarvon in the north-west (Higgins & Davies 1996)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Species or species habitat known to occur within area	Likely
Sanderling ( <i>Calidris alba</i> )	Migratory	Protected Migratory Birds Schedule 5	In WA they are found along most of the coast from Eyre to Derby, and also around Wyndham. They are more often recorded on the south and southwest coasts, north to southern Shark Bay (DAWE 2021b). They are seen on open sandy beaches exposed to open sea-swell, and on exposed sandbars and spits and shingle	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely



Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			banks, where they forage in the wave-wash zone and amongst wrack. They are also seen on beaches that may contain wave-washed rocky outcrops			
Swinhoe's Snipe ( <i>Gallinago megala</i> )	Migratory	Protected Migratory Birds Schedule 5	Few definite records exist for this species in Australia. During the non-breeding season, it occurs in dense clumps of grass and rushes round the edges of fresh and brackish wetlands, including swamps, billabongs, river pools, small streams and sewage ponds. They are also found in drying claypans and inundated plains pitted with crab holes (Higgins & Davies 1996)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting likely to occur within area	Likely
Pin-tailed Snipe ( <i>Gallinago stenura</i> )	Migratory	Protected Migratory Birds Schedule 5	Its distributions are not well understood, but there are confirmed records in south-west WA. During non-breeding period, it occurs most often in or at the edges of shallow freshwater swamps, ponds and lakes with emergent, sparse to dense cover of grass/sedge or other vegetation. It is also found in drier, more open wetlands such as claypans in more arid parts of species' range, and in sewage ponds; not normally in saline or inter-tidal wetlands (Higgins & Davies 1996)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting likely to occur within area	Likely
Red-necked Stint ( <i>Calidris ruficollis</i> )	Migratory	Protected Migratory Birds Schedule 5	Distributed along most of the Australian coastline with large densities on the Victorian and Tasmanian coasts. It is mostly found in sheltered inlets, bays,	Critical habitat or feeding grounds found adjacent to	Roosting known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores (DAWE 2021b)	the Proposal area in spring and summer		
Ruddy Turnstone ( <i>Arenaria interpres</i> )	Migratory	Protected Migratory Birds Schedule 5	Widespread along coastal areas, with occasional records of inland populations, from Tasmania to Darwin during its non-breeding period of the year (Bamford et al. 2008)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Grey-tailed Tattler ( <i>Tringa brevipes</i> )	Migratory	Protected Migratory Birds Schedule 5	Has a primarily northern coastal distribution with few scattered records along the south coast near the Eyre Bird Observatory, Point Malcolm, Rossiter Bay, Shark Lake Nature Reserve and surrounding swampland. It is often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats between Augusta and Cervantes (DAWE 2021b)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Osprey ( <i>Pandion haliaetus</i> )	Migratory	–	The breeding range extends Australia-wide however, is rare to uncommon in southern WA. It occurs in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia, requiring extensive areas of open fresh, brackish or saline water for foraging (Marchant & Higgins 1993). Adults mostly	Critical habitat or feeding grounds found within the Proposal area. Active nests present in the area and foraging activity occurs in the area year-round	Breeding known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			reside around breeding territories. They forage more widely but continue to make intermittent visits to their breeding grounds outside of breeding season			
Whimbrel (Numenius phaeopus)	Migratory	Protected Migratory Birds Schedule 5	It is a regular migrant to Australia with a primarily coastal distribution and scattered inland records in all regions. It is found in all states but it has occasionally been seen on the south coast of WA. It is often found feeding and roosting on the intertidal mudflats of sheltered coasts and in harbours, lagoons, estuaries and river deltas, often those with mangroves, but also open, unvegetated mudflats. It is occasionally found on sandy or rocky beaches, on coral or rocky islets, or on intertidal reefs and platforms (DAWE 2021b)	Possible critical habitat or feeding grounds found adjacent to the Proposal area	Roosting known to occur within area	Likely
<b>Birds – Marine birds</b>						
Southern Giant-Petrel ( <i>Macronectes giganteus</i> )	Endangered, Migratory	Protected Migratory Birds Schedule 5	A marine bird that occurs in Antarctic to subtropical waters and is widespread throughout the Southern Ocean. It breeds on six subantarctic and Antarctic islands in Australian territory: Macquarie Island, Heard Island and McDonald Island in the Southern Ocean, and Giganteus Island, Hawker Island, and Frazier Island in the Australian Antarctic Territories (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Northern Giant Petrel ( <i>Macronectes halli</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	A marine and oceanic seabird that breeds in the sub-Antarctic, and visits areas off the Australian mainland mainly during the winter months (May–October)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Soft-plumaged Petrel ( <i>Pterodroma mollis</i> )	Vulnerable	–	Generally found over temperate and subantarctic waters in southern Indian Ocean. The species is a regular and quite common visitor to southern Australian seas, but is more common in the west than in the south and south-east (Marchant & Higgins 1990). It is often sighted between June–September but sightings have occurred in most months	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Blue Petrel ( <i>Halobaena caerulea</i> )	Vulnerable	–	It breeds on offshore stacks near Macquarie Island where 500–600 breeding pairs occur (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Shy Albatross ( <i>Thalassarche cauta</i> )	Endangered, Migratory	Protected Migratory Birds Schedule 5	Most commonly observed over the shelf waters around Tasmania and south-eastern Australia (DAWE 2021b). Recorded in offshore waters adjacent to the proposal area	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely
Northern Royal Albatross ( <i>Diomedea sanfordi</i> )	Endangered, Migratory	Protected Migratory Birds Schedule 5	A marine, pelagic and aerial seabird (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Tristan Albatross ( <i>Diomedea dabbenena</i> )	Endangered, Migratory	Critically Endangered (Schedule 1)	A marine, pelagic seabird that forages in open water from Perth to the Nullarbor in SA, sleeping and resting on ocean waters when not breeding (Marchant & Higgins 1990)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Southern Royal Albatross ( <i>Diomedea epomophora</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	A marine and pelagic bird. In October during the non-breeding season, it has a wide and possibly circumpolar distribution ranging north to about 35°S. It is moderately common throughout the year in offshore waters of southern Australia, mostly off south-eastern New South Wales (NSW), Victoria and Tasmania. Off SA, they are mostly seen May–September	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely
Black-browed Albatross ( <i>Thalassarche melanophris</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	Recorded sightings in offshore waters and in coastal waters within and adjacent to the proposal area. Sightings are common in the proposal area when strong frontal systems pass through the area. It is a marine species that inhabits Antarctic, subantarctic and temperate waters and occasionally enters the tropics. Individuals are mostly confined to subantarctic and Antarctic waters surrounding these islands in the breeding season	Critical habitat or feeding grounds found within the Proposal area	Species or species habitat known to occur within area. Foraging, feeding and related behaviour known to occur in the area	Likely
Wandering Albatross ( <i>Diomedea exulans</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	Recorded sightings in offshore waters adjacent to the proposal area. A marine, pelagic and aerial seabird (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Sooty Albatross ( <i>Phoebastria fusca</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	Recorded sightings of occasional presence in offshore waters adjacent to the proposal area. A marine and pelagic seabird (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat likely to occur within area	Unlikely
White-capped Albatross ( <i>Thalassarche steadi</i> )	Vulnerable, Migratory	–	A marine species that occurs in subantarctic and subtropical waters. It is most common off the coast of south-east Australia throughout the year (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely
Indian Yellow-nosed Albatross ( <i>Thalassarche carteri</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	It is a marine bird located in subtropical and warmer subantarctic waters. Forages mostly in the southern Indian Ocean where it is abundant off WA (Marchant & Higgins 1990). It occupies inshore and offshore waters particularly during calm seas and light winds. It also breeds on islands in the southern Indian Ocean (DAWE 2021b). Recorded sightings in offshore waters and in coastal waters within and adjacent to the proposal area. Sightings in the Proposal area are common when strong frontal systems pass over the area	Critical habitat or feeding grounds found within the Proposal area	Species or species habitat known to occur within area. Foraging, feeding or related behaviour known to occur within area	Likely
Antipodean Albatross ( <i>Diomedea antipodensis</i> )	Vulnerable, Migratory	–	Marine, pelagic and aerial, sleeping and resting on ocean waters when not breeding (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Campbell Albatross ( <i>Thalassarche impavida</i> )	Vulnerable, Migratory	Protected Migratory Birds Schedule 5	Recorded sightings in offshore waters adjacent to the proposal area. A non-breeding visitor to Australian waters, most commonly seen foraging over the oceanic continental slopes off Tasmania, Victoria and NSW	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Australian Fairy Tern ( <i>Sternula nereis nereis</i> )	Vulnerable	–	Occurs along the coasts of Victoria, Tasmania, SA and WA, as far north as the Dampier Archipelago. It nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation. It has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine islands, wetlands and mainland coastline. The bird roosts on beaches at night (Higgins & Davies 1996). It may migrate within southern WA and Tasmania, where are seen less frequently during the winter months	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour known to occur within area	Unlikely
Bridled Tern ( <i>Onychoprion anaethetus</i> )	Migratory	Protected Migratory Birds Schedule 5	Widespread and breed on offshore islands in western, northern and north-eastern Australia extending from Cape Leeuwin in the south- west to northern Australia. They forage in offshore, continental shelf waters and is only rarely recorded along mainland coasts (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour likely to occur within area	Unlikely
Caspian Tern ( <i>Hydroprogne caspia</i> )	Migratory	Protected Migratory	It has a widespread occurrence along the coastal and inland from the Great Australian Bight to the Dampier Peninsula.	No critical habitat or feeding grounds	Breeding known to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
		Birds Schedule 5	It is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins. They also use artificial wetlands, including reservoirs, sewage ponds and saltworks. In offshore areas the species prefers sheltered situations, particularly near islands, and is rarely seen beyond reefs (DAWE 2021b)	found within the Proposal area		
Greater Crested Tern ( <i>Thalasseus bergii</i> )	Migratory	Protected Migratory Birds Schedule 5	Has a widespread occurrence along the Australian coastline, breeding colonies on small offshore islands	No critical habitat or feeding grounds found within the Proposal area	Breeding known to occur within area	Unlikely
Fairy Prion (southern) ( <i>Pachyptila turtur subantarctica</i> )	Vulnerable	–	Breeds on two rock stacks on Macquarie Island, on the nearby Bishop and Clerk Island, and a number of other subantarctic islands outside of Australia. There are 80 – 250 breeding pairs in Australia and a global population of 80 000 (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat likely to occur within area	Unlikely
Fork-tailed Swift ( <i>Apus pacificus</i> )	Migratory	Protected Migratory Birds Schedule 5	Almost exclusively aerial, they mostly occur over inland plains but sometimes above foothills or in coastal areas (DAWE 2021b). This species is known to forage high above the tree canopy but is rarely recorded lower, so it is independent of terrestrial habitats	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat likely to occur within area	Unlikely



Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Sooty Shearwater ( <i>Ardenna grisea</i> )	Migratory	Protected Migratory Birds Schedule 5	It breeds on islands off NSW and Tasmania, and occurs off the coast of south-east Qld and is a moderately common migrant and visitor to Victoria and SA (Marchant & Higgins 1990). It forages in pelagic sub-tropical, sub-Antarctic and Antarctic water, and may forage inshore occasionally, especially during rough weather (DAWE 2021b)	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat may occur within area	Unlikely
Flesh-footed Shearwater ( <i>Ardenna carneipes</i> )	Migratory	Protected Migratory Birds Schedule 5	A locally common visitor to waters of the continental shelf and continental slope off southern Australia. Pairs breed on 41 islands off the coast of south-western WA (Burbidge & Fuller 1996). Within the proposal area, nesting occurs on Breaksea Island, and on Shelter, Coffin and Eclipse Islands adjacent to the proposal area	Critical habitat and feeding grounds occur within the Proposal area. Arrive from northern hemisphere September–October for breeding. Young birds return to their natal island to breed	Breeding known to occur within area. Foraging known to occur in the area involving large aggregations of several hundred birds. Large rafting (resting) flocks common in the proposal area	Likely

**Notes:**

1. EPBC Act = Environment Protection and Biodiversity Conservation Act 1999, BC Act = Biodiversity Conservation Act 2016
2. Species listed under the BC Act fall under one of the following categories: Schedule 1 – Fauna that is rare or is likely to become extinct as critically endangered fauna, Schedule 2 – Fauna that is rare or is likely to become extinct as endangered fauna, Schedule 3 – Fauna that is rare or is likely to become extinct as vulnerable fauna, Schedule 4 – Fauna presumed to be extinct, 5 Schedule – Migratory birds protected under an international agreement, Schedule 6 – Fauna that is of special conservation need as conservation dependent fauna, and Schedule 7 – Other specifically protected fauna
3. – = no listing

Table 2.2 Other Matters identified in King George Sound and Princess Royal Harbour as defined by State and Commonwealth legislation

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
<b>Whales and Other Cetaceans</b>						
Minke Whale ( <i>Balaenoptera acutorostrata</i> )	Marine – Other	–	Known to occur as far north as 11° S in the western Pacific off Australia and up the west coast to similar low latitudes. The southern distribution extends down to ~41° S, but it is unlikely that this species normally migrates to such high latitudes of the Antarctic (Best 1985). It is more likely that it is distributed closer inshore. Annual migration patterns include seasonal presence in WA coastal waters	No critical habitat or feeding grounds found within the Proposal area. Occasional opportunistic sightings within and adjacent to the Proposal area	Species or species habitat known to occur within area	Likely
Common Dolphin ( <i>Delphinus delphis</i> )	Marine – Other	–	Found in offshore waters, appearing in two main locations around Australia, with one cluster in the southern south-eastern Indian Ocean and in the Tasman Sea (DAWE 2021b). Occurrence within the proposal area documented year-round	A high ratio of dependent calves, and recorded births recorded in the proposal area. Spatially referenced behavioural observations show ecologically critical activities (calving, foraging) occur within the Proposal area	Species or species habitat known to occur within area Breeding known to occur within the area	Likely
Risso's Dolphin ( <i>Grampus griseus</i> )	Marine – Other	–	Occurs on steep sections of the upper continental slope usually in waters deeper than 1000 m in tropical and warm temperate latitudes. They also show a	No critical habitat or feeding grounds found within the Proposal area.	Species or species habitat likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			marked preference for warm temperate to tropical conditions, although they sometimes extend their range into cooler latitudes in summer, therefore generally found in waters with temperatures ranging between 15–30°C (DAWE 2021b)	Sightings are uncommon, single photographic record of presence within the Proposal area		
Bottlenose Dolphin ( <i>Tursiops truncatus s. str.</i> )	Marine – Other	–	Primarily found in offshore waters in WA and within the region	Critical habitat in the Proposal area and area adjacent year-round	Species or species habitat likely to occur within area	Likely
Indian Ocean Bottlenose Dolphin ( <i>Tursiops aduncus</i> )	Marine – Other	–	It is restricted to inshore areas such as bays and estuaries, nearshore waters, open coast environments, and shallow offshore waters including coastal areas around oceanic islands (Hale et al. 2000). They have been confirmed to occur in estuarine and coastal waters of eastern, western and northern Australia. Reside in WA waters year-round. Photo-identification (2017–2021) studies have confirmed that the Indo-Pacific bottlenose dolphins found in the proposal area are resident	Critical habitat in the Proposal area and area adjacent year-round. Spatially referenced behavioural observations show foraging, feeding, breeding and calving within the proposal area	Species or species habitat known to occur within area	Likely
New Zealand Fur-seal ( <i>Arctocephalus forsteri</i> )	Marine – Other	Other specially protected fauna	Prefers rocky parts of islands with jumbled terrain and boulders (DAWE 2021b). This species has a breeding colony at Haul-off Rock, located ~80 km to the north-east of PRH. Also sighted on the northern side of Breaksea Island in KGS. In WA, all 20 known breeding colonies located on the	Critical habitat found within the Proposal area year-round. Foraging and haul-out occur within the proposal area year-round	Species or species habitat known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			south coast. Breeding colonies located adjacent to the proposal area at Eclipse, Bald and Coffin Islands, and Haul-off rock. Haul out areas within the proposal area include Breaksea and Seal Islands, and the rock wall within the Part exclusion zone			
<b>Finfish</b>						
Javelin Pipefish ( <i>Lissocampus runa</i> )	Marine – Other	–	The Syngnathidae species generally live in protected bays and estuaries in temperate marine waters. They tend to camouflage themselves against algae, algal beds, rocky reefs and seagrass. The seadragons and seahorses can occur on kelp-covered rocky reefs ranging from shallow estuaries to deep offshore reefs (Australian Museum 2021c, Kuitert 2001)	Possible critical habitat in the Proposal area year-round	Species or species habitat may occur within area	Likely
Australian Smooth Pipefish ( <i>Lissocampus caudalis</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Brush-tail Pipefish ( <i>Leptoichthys fistularius</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Rhino Pipefish ( <i>Histiogamphelus cristatus</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Spotted Pipefish ( <i>Stigmatopora argus</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Widebody Pipefish ( <i>Stigmatopora nigra</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Gale's Pipefish ( <i>Campichthys galei</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Hairy Pipefish ( <i>Urocampus carinirostris</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Mother-of-pearl Pipefish ( <i>Vanacampus margaritifer</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Red Pipefish ( <i>Notiocampus ruber</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Longsnout Pipefish ( <i>Vanacampus poecilolaemus</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Bonyhead Pipefish ( <i>Nannocampus subosseus</i> )	Marine – Other	–		Possible critical habitat in the		Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
				Proposal area year-round		
Port Phillip Pipefish ( <i>Vanacampus phillipi</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Southern Pygmy Pipehorse ( <i>Acentronura australe</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Sawtooth Pipefish ( <i>Maroubra perserrata</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Upside-down Pipefish ( <i>Heraldia nocturna</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Pugnose Pipefish ( <i>Pugnaso curtirostris</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Gunther's Pipehorse ( <i>Solegnathus lettiensis</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Leafy Seadragon ( <i>Phycodurus eques</i> )	Marine – Other	P2 – Poorly known species		Possible critical habitat in the Proposal area year-round		Likely
Common Seadragon ( <i>Phyllopteryx taeniolatus</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
Short-head Seahorse ( <i>Hippocampus breviceps</i> )	Marine – Other	–		Possible critical habitat in the Proposal area year-round		Likely
<b>Birds – Marine birds</b>						
Little Penguin ( <i>Eudyptula minor</i> )	Marine – Other	–	It is distributed between Perth and the central coast of NSW and they feed at sea throughout the year (Australian Museum 2021d). Numerous colonies have been identified in WA, including the islands around KGS Michelmas Island, Mistaken Island, Seal Island and Breaksea Island (Cannell 2001). Colonies located at Shelter, Coffin and Eclipse Islands adjacent to the proposal area. Major colony located at Breaksea Island	Critical habitat and feeding grounds found within the Proposal area	Breeding known to occur within area. Foraging known to occur within the area	Likely
Fairy Prion ( <i>Pachyptila turtur</i> )	Marine – Other	–	A small seabird known to occur in the south-west marine region. It occurs mainly offshore but are known to move inshore during stormy weather. Diet comprises	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat likely to occur within area	Unlikely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
			primarily of crustaceans, fish and squid (BirdLife International 2021)			
Great Skua ( <i>Stercorarius skua</i> )	Marine – Other	–	A large seabird that lives primarily offshore	No critical habitat or feeding grounds found within the Proposal area	Species or species habitat known occur within area	Unlikely
Pacific Gull ( <i>Larus pacificus</i> )	Marine – Other	–	Prefers sandy or less often, rocky coasts and sandy beaches. In WA, it occurs occasionally in harbours but mostly on exposed coasts and offshore islands. It usually avoids human habitation but is occasionally seen on farmland and rubbish tips near the coast but rarely inland. It can be found roosting or loafing in elevated situations such as rocky headlands or on structures such as wharves and jetties	No critical habitat or feeding grounds found within the Proposal area	Breeding known to occur within area	Unlikely
White-bellied Sea-Eagle ( <i>Haliaeetus leucogaster</i> )	Marine – Other	–	This species is normally seen perched high in a tree, or soaring over waterways and adjacent land. Birds form permanent pairs that inhabit territories throughout the year (Australian Museum 2021b)	No critical habitat or feeding grounds found within the Proposal area. Foraging and feeding behaviour known to occur in the proposal area	Species or species habitat known to occur within area	Unlikely
Great-winged Petrel ( <i>Pterodroma macroptera</i> )	Marine – Other	–	Major breeding colonies at Coffin and Eclipse Islands adjacent to the proposal area. Minor colony at Breaksea Island within the proposal area	No critical habitat or feeding grounds found within the Proposal area. Breeding habitat	Breeding known to occur within area	Unlikely



Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
				within the proposal area (Breaksea Island)		
Silver Gull ( <i>Chroicocephalus novaehollandiae</i> )	Marine – Other	–	Abundant across coastal Australia, including inland areas around waterways and rivers	No critical habitat or feeding grounds found within the Proposal area	Breeding known to occur within area	Unlikely
White-faced Storm-Petrel ( <i>Pelagodroma marina</i> )	Marine – Other	–	Regular visitors to the south-west marine region, feeding on small fish, cephalopods and crustaceans along the edge of the continental shelf and over open waters (DSEWPC 2012b). In WA, they breed in the many islands offshore from the Houtman Abrolhos Islands to Daw Island off Esperance (Johnstone & Darnell 2008)	No critical habitat or feeding grounds found within the Proposal area	Breeding known to occur within area	Unlikely
Little Shearwater ( <i>Puffinus assimilis</i> )	Marine – Other	–	Sedentary and shy seabird that feeds offshore, breeding in winter around the Kermadec Islands off southwest Australia	No critical habitat or feeding grounds found within the Proposal area	Foraging, feeding or related behaviour known to occur within area	Unlikely
<b>Birds – Wetland Birds</b>						
Hooded Dotterel ( <i>Thinornis cucullatus</i> )	Marine – Other	–	Endemic to southern Australia where it typically inhabits sandy ocean beaches, nesting just above the high tide mark. In WA, it is also found on saline lakes	Possible critical habitat or feeding grounds found adjacent to the Proposal area, period unknown	Species or species habitat known to occur within area	Likely

Species (common and scientific name)	Conservation Status		Habitat Description	Period of habitat use within Proposal area	Presence/known use	Likelihood of interaction with Proposal
	EP Act	BC Act				
Red-capped Plover ( <i>Charadrius ruficapillus</i> )	Marine – Other	–	Found in wetlands, especially in arid areas, and prefers saline and brackish waters (DAWE 2021b), foraging quickly along the ground (eBird 2021)	Critical habitat or feeding grounds found adjacent to the Proposal area in spring and summer	Roosting known to occur within area	Likely
Pied Stilt ( <i>Himantopus himantopus</i> )	Marine – Other	–	Favours wetlands with open shallow water, often brackish; breeds on bare ground near water, often in noisy colonies and feeds by wading in water (eBird 2021)	Possible critical habitat or feeding grounds found adjacent to the Proposal area, period unknown	Roosting known to occur within area	Likely
Red-necked Avocet ( <i>Recurvirostra novaehollandiae</i> )	Marine – Other	–	Usually seen on or near water both on the coast and inland. Wades in shallow water and readily swims in deeper water (eBird 2021)	Possible critical habitat or feeding grounds found adjacent to the Proposal area, period unknown	Roosting known to occur within area	Likely

**Notes:**

1. EPBC Act = Environment Protection and Biodiversity Conservation Act 1999, BC Act = Biodiversity Conservation Act 2016
2. Species listed under the BC Act fall under one of the following categories: Schedule 1 – Fauna that is rare or is likely to become extinct as critically endangered fauna, Schedule 2 – Fauna that is rare or is likely to become extinct as endangered fauna, Schedule 3 – Fauna that is rare or is likely to become extinct as vulnerable fauna, Schedule 4 – Fauna presumed to be extinct, 5 Schedule – Migratory birds protected under an international agreement, Schedule 6 – Fauna that is of special conservation need as conservation dependent fauna, and Schedule 7 – Other specifically protected fauna
3. – = no listing

### 3 State of Knowledge for Conservation Significant Marine Fauna

The likelihood of occurrence assessment determined that the following conservation significant marine species are known to occur or have a high potential to occur in the Proposal area:

- Four marine mammals (Australian sea lion, Southern Right Whale, Humpback Whale, Pygmy Blue Whale)
- Great White Shark
- twenty-seven wetland birds from 11 genera (*Actitis*, *Arenaria*, *Calidris*, *Charadrius*, *Gallinago*, *Limosa*, *Numenius*, *Pandion*, *Pluvialis*, *Tringa*, and *Xenus*), and
- three marine birds (Black-browed Albatross, Indian Yellow-nosed Albatross, Flesh-footed Shearwater).

#### 3.1 Marine mammals

Four species of baleen whale are considered regular users of WA waters as their annual migration patterns include seasonal presence in coastal waters: the humpback (*Megaptera novaeangliae*), southern right (*Eubalaena australis*), pygmy blue (*Balaenoptera musculus breviceauda*) and dwarf minke (*Balaenoptera acutorostrata*) whale (State government, unpubl. data). The south coast, from Geographe Bay to Eucla, is recognised by the IUCN Marine Mammal Protected Areas Taskforce as an important area for marine mammals in terms of their biology, ecology and population structure (IUCN MMPATF 2021).

#### 3.2 Australian sea lion

The Australian sea lion (*Neophoca cinerea*) is an endemic and endangered species that is found in Australian waters from the Houtman Abrolhos Islands in WA to The Pages in SA (Campbell 2005). They use offshore islands along the south coast of WA as breeding rookeries (Campbell 2005), and their year-round haul-out areas are primarily beaches and rocky shores (Orsini et al. 2006). A high rate of natal site fidelity (natal philopatry) among females suggests they have a restricted home range as well as limited gene flow with other regions (Campbell 2005). Although an average foraging range may extend up to 60 km from their birth colonies, male Australian sea lions have been documented with increased dispersal ranges between 97 and 180 km (Hamer et al. 2011, Goldsworthy et al. 2014). Australian sea lions are benthic foragers, diving up to 90 m deep and their prey consists of cephalopods, crustaceans and fish (Campbell 2005).

Due to the long and asynchronous breeding cycles, it is difficult to know population information across the ~32 breeding sites identified in WA (Goldsworthy et al. 2014, Goldsworthy et al. 2021). A recent assessment of Australian sea lion pup abundance (based on data from seven sites in WA and 23 sites in South Australia) shows an estimated decline in pup abundance of 64% between 1977 and 2019 (Goldsworthy et al. 2021).

Around Albany, Haul-off Rock is a Biologically Important Area for Australia sea lions (Sutton and Day 2021), a well-known breeding and haul-out site located ~80 km north east of PRH (Gales et al. 1994). Bald Island and Coffin Island, ~40 km and ~22 km east of the proposal area respectively, are important haul out locations. Seal Cove, located on the northern side of Breaksea Island, and Seal Island in KGS, have also been documented as a resting area for the New Zealand fur seals and Australian sea lions. Seal Cove is located on the border of Port limits therefore, sightings of individuals within the Proposal area may be frequent throughout the year. A low number of individuals have been sighted displaying

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foraging behaviour in KGS and PRH year-round. Any management should therefore be adaptive, in that it will be required if sea lions are observed in the Proposal area for haul out and/or foraging activities.

### 3.3 Southern Right Whale

The Southern Right Whale (*Eubalaena australis*) is listed as Endangered and as a Migratory species under the EPBC Act 1999. The Australian Southern Right Whale population is distributed along the southern coastline from Perth to Sydney. The southern coast between Cape Leeuwin (WA) and Ceduna (South Australia) is the main wintering and calving ground of Australia's western sub-population of southern right whales. In WA, individuals use coastal waters close to beaches along the coast between Twilight Cove in the east and Augusta in the west for calving, nursing, breeding and avoidance of predators. The feeding habitat is very poorly known, but it is assumed that the Southern Right Whale moves to deeper offshore waters in the Southern Ocean.

The rate of recovery has been monitored off southern Australia since 1993 in an annual survey led by WA Museum. The most recent population size estimate in Australia is ~3500 individuals, with the southwestern subpopulation comprising of ~3200 individuals with an increasing trend of ~6% (Bannister 2017, Smith et al. 2019, DAWE 2021b). Female southern right whales show calving site fidelity, generally returning to the same location to give birth and nurse offspring (DSEWPC 2012a). On average, southern right whales have a single calf every three years. KGS is a known resting, breeding and calving grounds of the Southern Right Whale, in which females approach the coast in waters to depths less than 10 m between May and October and remain in the calving grounds for 2–3 months. Southern Right Whales tend to remain near shore for long periods that lead to repeat sightings.

Due to their seasonal occurrence, recreational tourism is known to operate whale watching tours from Albany during late-autumn to mid-spring (late May to early October). Given that PRH and KGS are known critical habitats for the Southern Right Whales, any potential impacts that may arise due to the Proposal activities will be assessed and mitigated as part of the Environmental Review Document (ERD).

### 3.4 Humpback Whale

Humpback whales (*Megaptera novaeangliae*) are listed as Conservation Dependent and Migratory species under the EPBC Act 1999 and the Bonn Convention. Most populations of humpback whales have recovered strongly. There have been no recent assessments of the west coast Australian population however, their population is thought to be recovering at a rate of approximately 11% annually from pre-whaling population sizes (Bejder et al. 2015). Humpback whales migrate annually through WA waters between May and October with a high percentage of the population found between 1 and 5 nautical miles offshore. Along their migratory route, sheltered bays are used opportunistically as resting areas.

In Albany, timing of peak abundance occurs between June and August, with sighting of individuals recorded as early as March and as late as November. Humpback whales have been sighted in the shelter waters of KGS during their annual northern migration with newborn calves. This suggests that humpback whales may be giving birth within waters close to Albany. In recent years, a small number of neonates have been recorded annually within the Proposal area (Alexander, unpubl. data). A reasonably defined migration path exists near the Proposal area, traversing from Breaksea Island to Baldhead, then following the coastline from Limestone Head, around Frenchmans Bay to Mistaken Island and back out to sea past the islands.

### 3.5 Pygmy Blue Whale

Two blue whale species occur in southern Australia, the pygmy blue whale (*Balaenoptera musculus breviceuda*) and Antarctic blue whale (*B. musculus*). The total east Indian Ocean blue whale population estimated in 2010 was 662–1559 (McCauley & Jenner 2010). Blue whales, principally pygmy blue

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whales, use offshore and coastal waters in southern Australia for migration and foraging. The migratory habits of pygmy blue whales along the WA southern coastline are now reasonably well understood. Satellite tracking data from pygmy blue whales tagged off Western Australia and in the Bonney Upwelling off South Australia (Double et al. 2014, Owen et al. 2016) have identified migratory pathways of pygmy blue whales, extending from near King Island in southeast Australia up to the Banda and Molucca Seas. Two seasonally important aggregation areas have been identified: the Perth Canyon (WA) and the Bonney Upwelling, Eastern Great Australian Bight Upwelling (Kangaroo Island canyons). The south coast is an important corridor connecting these aggregation areas. Pygmy blue whales migrate west along the southern WA coastline between January and June. Photo identification and recorded sightings show blue whales transiting coastal waters in the Albany area including KGS from February to June (Alexander unpubl. data).

### 3.6 Sharks

#### Great White Shark

The great white shark (*Carcharodon carcharias*) is listed as a Vulnerable species under Commonwealth EP Act 1999 and WA BC Act 2016 due a declining population resulting from commercial fishing and mortality from nets and drumlines. Two populations exist in Australia, with the southern-western population extending from western Victoria to the WA coast and occupying temperate, cooler water (Bruce et al. 2018). Great white sharks occur along all of the southern WA coast and occasionally at least as far north as Karratha (DAWE 2021b).

Great white sharks are known to frequent inshore waters around rocky reefs, surf beaches and shallow coastal bays (less than 5 m) to outer continental shelf and slope areas (depths less than 100 m), frequenting waters in and around seal colonies (DAWE 2021b). Acoustic data collated since 2009 have shown great white sharks consistently present across seasons off the south coast of WA, including in the Albany area (McAuley et al. 2017). Presence in the Proposal area is evidenced by acoustic detections at receivers located at Frenchman's Bay and Middleton Beach in KGS (SharkSmart WA 2022). As there is a known breeding colony and haul-out site of Australian sea lions on Haul-off Rock (Gales et al. 1994), ~80 km north-east from PRH, it is probable for great white sharks to pass through the Proposal area.

Great white sharks have been caught by commercial fishers around the Proposal area (Malcolm et al. 2001). Catch and release of great white sharks for tagging purposes have also been undertaken within and adjacent to KGS.

### 3.7 Birds

#### Wetland birds

A range of wetland birds (both migratory and residential) have been reported in Australia utilising coastal habitats, including sheltered bays, estuaries and lagoons with large intertidal mudflats or sandflats, or spits and banks of mud, sand or shell-grit, and occasionally on rocky coasts or coral islets. Some species are usually seen in flocks foraging near the edge of water or in shallow water depending on the tidal stage and roosting in adjacent freshwater habitats (DAWE 2021b).

On the southern end of PRH, Rushy Point in Little Grove is a native bushland adjacent a tidal mudflat. During spring and summer, this site has been known to attract a variety of species, with recorded observations of the migratory Bar-tailed Godwit (*Limosa lapponica*), Eastern Curlew (*Numenius madagascariensis*), Sandpipers (*Calidris ferruginea*, *Actitis hypoleucos*, *Calidris acuminata*), Great and Red Knot (*Calidris tenuirostris* and *C. canutus*), Plovers (*Charadrius mongolus*, *C. leschenaultia*, *Pluvialis squatarola*, *P. fulva*), Greenshank (*Tringa nebularia*), Sanderling (*Calidris alba*), and Red-necked Stint (*Calidris ruficollis*) (Birdlife 2013, eBird 2021). Sightings of the Osprey have also been documented in Rushy Point during spring (eBird 2021). Osprey sightings occur year-round within and adjacent to the

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Proposal area. Foraging and feeding behaviour have been documented within the Proposal area, and active nests are also located within the Proposal area. Although numerous sightings of wetland birds have been documented, it is unlikely that these wetland birds will occur in the nearshore marine environment of the Proposal area, and furthermore, these species are not known to use the Proposal area as a resting place.

**Marine birds**

The Black-browed Albatross (*Thalassarche melanophris*) and Indian Yellow-nosed Albatross (*T. carteri*) are large marine birds that are often seen foraging and feeding on fish, molluscs and crustaceans in offshore waters in the southern Indian Ocean and in coastal waters (DAWE 2021b). During the breeding season, the adults of both species are mostly confined to subantarctic and Antarctic waters surrounding their breeding islands (DAWE 2021b). Both albatross species have been previously sighted in the Proposal areas when a strong frontal system pass over the area. The Flesh-footed Shearwater (*Ardenna carneipes*) breeds between August and May on ~60 islands across the southern Indian Ocean, between Bunbury to east of South Australia (Powell et al. 2007). They nest and roost in burrows in the ground on offshore islands, and feed alone or in congregations with other shearwaters on small fish, cephalopods, and crustaceans (Gould et al. 1997). Although these three marine birds have been occasionally sighted in KGS and surroundings areas (eBird 2021), they are unlikely to remain in the nearshore marine environment of the Proposal area.

## 4 State of Knowledge for other Marine Fauna of Significance

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### 4.1 Dwarf Minke Whale

Similar to other baleen whale species, dwarf minke whale (*Balaenoptera acutorostrata*) migration patterns include seasonal presence in WA coastal waters (State government, unpubl. data). Recorded opportunistic sightings show occasional dwarf minke whales present in coastal waters in the Albany area (Alexander, unpubl. data).

### 4.2 Common dolphin

In WA, common dolphins (*Delphinus delphis*) are considered a regular visitor to State waters. Recent genetic sampling off Albany and Esperance determined that common dolphins in KGS were genetically distinct from those sampled at other sites in southern Australia (Bilgmann et al. 2014, Barceló et al. 2021).

Within the Proposal area, vessel-based surveys and opportunistic photo identification between 2017 and 2020 documented consistent spatial and temporal use of KGS by common dolphins. Spatially referenced behavioural observations and photo identification have shown high site fidelity and the occurrence of ecologically critical activities (calving, foraging) within the Proposal area (Alexander 2020, unpubl. data).

### 4.3 Bottlenose dolphin

Two bottlenose dolphin species are known to occur in WA waters: Common bottlenose dolphins (*Tursiops truncatus*) and Indian Ocean Bottlenose Dolphin (*T. truncatus*). Common bottlenose dolphins generally occur in the offshore environment while Indo-Pacific bottlenose dolphins reside in WA coastal waters year-round, primarily found in nearshore areas with reefs, sand or seagrass (DAWE 2021b), or in water depths of less than 30 m (Reeves et al. 2002). In Australia, Indo-Pacific bottlenose dolphins show significant levels of residency, site fidelity and philopatry and occur in small discrete populations with restricted geographic ranges (Ross 2006). Resident populations in WA are known at Perth Mandurah and Bunbury and Albany.

In Albany, preliminary studies have confirmed that a small resident population of Indo-Pacific bottlenose dolphins use a range of habitats within the Proposal area year-round (Alexander 2020, unpubl. data). Photo-identification and spatially referenced behavioural observations show that ecologically critical activities such as foraging and calving occur within the Proposal area.

### 4.4 New Zealand fur seal

The Proposal area and adjacent waters provide foraging and haul-out habitat for New Zealand fur seals year-round. Breeding colonies are located at Haul-off Rock (Shaughnessy 1999), and Eclipse, Bald and Coffin Islands adjacent to the Proposal area. Within the Proposal area, these seals share the haul-out site Seal Cove on Breaksea Island in KGS with the Australian sea lion. They also regularly occupy haul-out sites on Seal Island in KGS, and the rock wall within the Albany Port exclusion zone in PRH. Foraging, feeding and related behaviours are regularly observed within the Proposal area.

### 4.5 Seahorses and Pipefish

The Syngnathidae family that consists of seahorses and pipefish, generally live in protected bays and estuaries (Australian Museum 2015c) in temperate marine waters (Kuitert 2000). They can camouflage themselves against macroalgae and macroalgal beds, rocky reefs and seagrass (Australian Museum 2015c; Kuitert 2000). The seadragons and seahorses can occur on kelp-covered rocky reefs (Australian Museum 2015c) ranging from shallow estuaries to deep offshore reefs (Kuitert 2000). The leafy sea dragon is endemic to waters off southern Australia and is listed as Priority Fauna by DBCA and

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is deemed 'in urgent need of further survey'. The pipefish occur in similar habitats, from seagrass beds and macroalgal areas on rocky reefs (Kuitert 2000).

Although there have no sightings documented of seahorses in Albany, the Proposal area contains suitable habitat for both seahorses and pipefish and seems likely they will occur within the Proposal area.

#### 4.6 Little Penguin

Little penguins (*Eudyptula minor*) are distributed between Perth and the central coast of NSW, with Penguin Island holding the largest breeding population of ~700 pairs (DSEWPC 2012b). The next largest colony of little penguins is Breaksea Island in KGS, with approximately 500 individuals (Cannell 2001). Colonies are also present on Shelter (also known locally as Muttonbird Island), Coffin and Eclipse Islands adjacent to the Proposal area. These penguins breed in summer (November–December), however the penguins of Mistaken Island have been known to breed approximately six weeks later than those in the Perth region (B. Cannell, 2020, pers. comm.). Their diet generally consists of pilchards and anchovies; however, it can change depending on the availability of prey without affecting their breeding success (Chiaradia et al. 2003). Little penguins have also been reported on Michaelmas Island; however, there are no estimates of their abundance (Cannell 2001). The annual cycle of the penguins in the Albany region are not well known, however, aggregations of little penguins are regularly observed in KGS, and occasionally in PRH. Foraging and related behaviours have been documented in groups of little penguins within the Proposal area, therefore encounters within the Proposal area are considered likely.

#### 4.7 Wetland birds

Four species of wetland birds that have no EPBC Act listing, are considered to possibly have critical habitat or feeding grounds adjacent to the Proposal area. Many of these birds favour wetland areas with open shallow saline and brackish waters, feeding either along the shore or wading in water (eBird 2021). Similar to the wetland birds reported in Section 0, some of these birds have been sighted during spring and summer at Rushy Point in Little Grove, a native bushland adjacent a tidal mudflat. It is unlikely that these wetland birds will occur in the nearshore marine environment of the Proposal area, and furthermore, these species are not known to use the Proposal area as a resting place.



## 5 Marine Species Important to Fisheries

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### 5.1 Finfish

The Mediterranean climate and sheltered waters provided by PRH and KGS make it a popular place for recreational and commercial fishing activities. No marine park or reserve exists within the area. Recreationally, nearshore/estuarine and pelagic finfish species are targeted, while Blue Swimmer crabs and abalone form the invertebrate recreational catch (Gaughan & Santoro 2019).

Two of the predominant commercial fisheries that exist in the Proposal area include:

- South Coast Purse-Seine Managed Fishery that targets pilchards (*Sardinops sagax*) in KGS (Norriss & Blazeski 2020). The purse-seine fishery for pilchards comprises approximately 97% of the total fish catch in the Albany area
- South Coast Nearshore and Estuarine Managed Fishery that targets Australian herring (*Arripis georgianus*) in PRH (Duffy et al. 2020).

Pilchards are small pelagic fish that eat planktonic crustaceans, mollusc larvae and phytoplankton. They occupy a pivotal position of energy transfer in the food web as the main link between primary (phytoplankton) and secondary (zooplankton) production and larger predators (Department of Fisheries 2003). Pilchard spawning season in WA varies with location, however in Albany, there are two spawning seasons: June/July and December/January (Fletcher & Tregonning 1992). Commercial fishing for pilchards in Albany occurs in late summer and early autumn (J. Froud, pers. comm, Fisheries Management Officer, Department of Fisheries 7 June 2006). Few pilchard eggs and larvae have been found within KGS and PRH, suggesting that spawning occurs outside the Proposal area (Fletcher & Tregonning 1992).

### 5.2 Mussels and oysters

Another significant commercial fishery near the Proposal area is the aquacultural production of mussels (*Mytilus edulis*), rock oysters (*Saccostrea glomerata*) and Akoya pearl oysters (*Pinctada imbricata*) that current exist in Oyster Harbour and KGS. The farms in Oyster Harbour are exposed to elevated nutrient levels associated with nearby terrestrial run-off and provide mussels and oysters with the necessary planktonic food to promote growth (Gaughan & Santoro 2019). Wild spat is collected and then attached to long lines to grow-out to market size. Mussels and oysters are semi-sessile epibenthic bivalves that are anchored to a substrate via byssus threads secreted from glands in the animal's foot allowing a limited degree of movement.

There are current developments to increase the number of aquaculture zones in the Proposal area, specifically the proposed addition of two farm lease areas to the east of Vancouver Peninsula on the north and south of Mistaken Island, and one lease area north of Limekilns Point in Shoal Bay in PRH (DPIRD 2021). The activities resulting from the Proposal (i.e. underwater noise, wind-blown dust, light pollution) is not predicted to have an impact on proposed mussel and oyster farms. It is possible however, that wind-blown dust generated from the transshipping of magnetite concentrate to a cape size vessel may increase nearby water column turbidity and affect nearby proposed farms, specifically Mistaken Island. Although these shellfish are accustomed to increases in natural turbidity caused by wave and tidal actions, a sudden increase in water column turbidity may cause stress (Hutchinson et al. 2016). Therefore, measures to manage the potential increase of suspended solids in the water column should be considered in the ERD.

## 6 Summary and Conclusion

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As part of the ERD to support the assessment of the Proposal under the EPBC Act, the purpose of this report was to conduct a desktop assessment of available information to provide a comprehensive listing of marine fauna known or likely to occur within, or regularly pass through, PRH and KGS, and where relevant document any known uses of the area by them (e.g. foraging, migrating, calving, nursing, spawning, roosting and nesting).

A total of 120 species were identified as MNES and Other Matters protected by the EPBC Act. Of these, five marine fauna species (Australian sea lion, Southern Right Whale, Humpback Whale, Pygmy Blue Whale and Great White Shark) and numerous wetland and marine bird species were identified to likely occur within the Proposal area. Other marine fauna (Other Matters) identified as potentially occurring within the Proposal area included the Dwarf Minke Whale, Common dolphin, Bottlenose dolphin, New Zealand fur seal (known to occur on Breaksea Island), seahorses and pipefish, Little Penguin, and four wetland birds. Marine species important to commercial and recreational fisheries that occur in PRH and KGS and potentially within the Proposal area included finfish species, mussels and oysters.

On review of the state of knowledge, the Proposal area is likely to contain critical habitat (foraging, calving, nursing and nesting) for the Australian sea lion, Southern Right Whale, Humpback whale, Pygmy Blue Whale, Bottlenose dolphin, and New Zealand fur seal. To effectively manage the potential risk of impacts to marine fauna associated with the proposed activities in the Proposal area, they should be assessed in the ERD in line with the EP Act. Once the mitigation measures are applied, the potential risk of significant impacts to MNES and Other Matters could be considered negligible.

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## **Annex A Environment Protection and Biodiversity Conservation Act 1999 Protected Matters Search Tool Report**

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# 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. Please see the caveat for interpretation of information provided here.

Report created: 08-Nov-2021

[Summary](#)

[Details](#)

[Matters of NES](#)

[Other Matters Protected by the EPBC Act](#)

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

# Summary

## Matters of National Environment 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 [Administrative Guidelines on Significance](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance (Ramsar)</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	2
<a href="#">Listed Threatened Species:</a>	63
<a href="#">Listed Migratory Species:</a>	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

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 [permit](#) 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.

<a href="#">Commonwealth Lands:</a>	10
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	91
<a href="#">Whales and Other Cetaceans:</a>	14
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None
<a href="#">Habitat Critical to the Survival of Marine Turtles:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	9
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Nationally Important Wetlands:</a>	1
<a href="#">EPBC Act Referrals:</a>	16
<a href="#">Key Ecological Features (Marine):</a>	None
<a href="#">Biologically Important Areas:</a>	12
<a href="#">Bioregional Assessments:</a>	None
<a href="#">Geological and Bioregional Assessments:</a>	None

# Details

## Matters of National Environmental Significance

### Listed Threatened Ecological Communities

[\[ Resource Information \]](#)

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.

Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
<a href="#">Proteaceae Dominated Kwongan Shrublands of the Southeast Coastal Floristic Province of Western Australia</a>	Endangered	Community may occur within area
<a href="#">Subtropical and Temperate Coastal Saltmarsh</a>	Vulnerable	Community likely to occur within area

### Listed Threatened Species

[\[ Resource Information \]](#)

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Calyptorhynchus banksii naso</a> Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Cereopsis novaehollandiae grisea</a> Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Dasyornis longirostris</a> Western Bristlebird [515]	Endangered	Species or species habitat likely to occur within area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea dabbenena</a> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Falco hypoleucos</a> Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
<a href="#">Halobaena caerulea</a> Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Limosa lapponica menzbieri</a> Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Pachyptila turtur subantarctica</a> Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Phoebetria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Psophodes nigrogularis nigrogularis</a> Western Heath Whipbird [64449]	Endangered	Species or species habitat likely to occur within area
<a href="#">Pterodroma mollis</a> Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
<a href="#">Sternula nereis nereis</a> Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Thalassarche carteri</a> Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Zanda baudinii listed as Calyptorhynchus baudinii</a> Baudin's Black-Cockatoo, Long-billed Black-cockatoo [87736]	Endangered	Breeding known to occur within area
<a href="#">Zanda latirostris listed as Calyptorhynchus latirostris</a> Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Species or species habitat known to occur within area

## FISH

<a href="#">Nannatherina balstoni</a> Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thunnus maccoyii</a> Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area

## INSECT

<a href="#">Trioza barrettae</a> Banksia brownii plant louse [87805]	Endangered	Species or species habitat known to occur within area
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## MAMMAL

<a href="#">Balaenoptera borealis</a> Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<a href="#">Balaenoptera physalus</a> Fin Whale [37]	Vulnerable	Species or species habitat may occur within area



Scientific Name	Threatened Category	Presence Text
<a href="#">Dasyurus geoffroi</a> Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Endangered	Breeding known to occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Neophoca cinerea</a> Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat likely to occur within area
<a href="#">Parantechinus apicalis</a> Dibbler [313]	Endangered	Species or species habitat known to occur within area
<a href="#">Pseudocheirus occidentalis</a> Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat known to occur within area
<b>OTHER</b>		
<a href="#">Westralunio carteri</a> Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat may occur within area
<b>PLANT</b>		
<a href="#">Banksia brownii</a> Brown's Banksia, Feather-leaved Banksia [8277]	Endangered	Species or species habitat known to occur within area
<a href="#">Banksia verticillata</a> Granite Banksia, Albany Banksia, River Banksia [8333]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Caladenia granitora</a> [65292]	Endangered	Species or species habitat may occur within area
<a href="#">Caladenia harringtoniae</a> Harrington's Spider-orchid, Pink Spider-orchid [56786]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Calectasia cyanea</a> Blue Tinsel Lily [7669]	Critically Endangered	Species or species habitat likely to occur within area
<a href="#">Chordifex abortivus</a> Manypeaks Rush [64868]	Endangered	Species or species habitat may occur within area
<a href="#">Diuris drummondii</a> Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat may occur within area
<a href="#">Drakaea micrantha</a> Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Isopogon uncinatus</a> Albany Cone Bush, Hook-leaf Isopogon [20871]	Endangered	Species or species habitat known to occur within area
<a href="#">Kennedia glabrata</a> Northcliffe Kennedia [16452]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Sphenotoma drummondii</a> Mountain Paper-heath [21160]	Endangered	Species or species habitat may occur within area
<b>REPTILE</b>		
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<b>SHARK</b>		
<a href="#">Carcharias taurus (west coast population)</a> Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Galeorhinus galeus</a> School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat may occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

### Listed Migratory Species [ [Resource Information](#) ]

Scientific Name	Threatened Category	Presence Text
<b>Migratory Marine Birds</b>		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardenna carneipes</a> Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Breeding known to occur within area
<a href="#">Ardenna grisea</a> Sooty Shearwater [82651]		Species or species habitat may occur within area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea dabbenena</a> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Hydroprogne caspia</a> Caspian Tern [808]		Breeding known to occur within area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
<a href="#">Onychoprion anaethetus</a> Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
<a href="#">Phoebetria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Thalassarche carteri</a> Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
<b>Migratory Marine Species</b>		
<a href="#">Balaenoptera borealis</a> Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<a href="#">Balaenoptera physalus</a> Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
<a href="#">Caperea marginata</a> Pygmy Right Whale [39]		Species or species habitat may occur within area
<a href="#">Carcharhinus longimanus</a> Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
<a href="#">Carcharodon carcharias</a> White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
<a href="#">Eubalaena australis as Balaena glacialis australis</a> Southern Right Whale [40]	Endangered	Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Lagenorhynchus obscurus</a> Dusky Dolphin [43]		Species or species habitat may occur within area
<a href="#">Lamna nasus</a> Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Mobula alfredi as Manta alfredi</a> Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat known to occur within area
<a href="#">Mobula birostris as Manta birostris</a> Giant Manta Ray [90034]		Species or species habitat known to occur within area
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Rhincodon typus</a> Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
<b>Migratory Terrestrial Species</b>		
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
<b>Migratory Wetlands Species</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat known to occur within area
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]		Roosting known to occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Roosting known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Calidris alba</a> Sanderling [875]		Roosting known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area
<a href="#">Charadrius bicinctus</a> Double-banded Plover [895]		Roosting known to occur within area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]		Roosting known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area
<a href="#">Pluvialis squatarola</a> Grey Plover [865]		Roosting known to occur within area
<a href="#">Thalasseus bergii</a> Greater Crested Tern [83000]		Breeding known to occur within area
<a href="#">Tringa brevipes</a> Grey-tailed Tattler [851]		Roosting known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]		Roosting known to occur within area



## Other Matters Protected by the EPBC Act

### Commonwealth Lands

[ [Resource Information](#) ]

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.

#### Commonwealth Land Name

State

#### Defence

Defence - ALBANY TRAINING DEPOT [50136]

WA

Defence - ALBANY TRAINING DEPOT [50137]

WA

Defence - ALBANY TRAINING DEPOT ; AIRTC ALBANY [50115]

WA

Defence - ALBANY TRAINING DEPOT ; AIRTC ALBANY [50116]

WA

#### Unknown

Commonwealth Land - [51036]

WA

Commonwealth Land - [51035]

WA

Commonwealth Land - [51398]

WA

Commonwealth Land - [51034]

WA

Commonwealth Land - [51399]

WA

Commonwealth Land - [51033]

WA

### Listed Marine Species

[ [Resource Information](#) ]

Scientific Name

Threatened Category

Presence Text

#### Bird

[Actitis hypoleucos](#)

Common Sandpiper [59309]

Species or species habitat known to occur within area

[Apus pacificus](#)

Fork-tailed Swift [678]

Species or species habitat likely to occur within area overfly marine area

[Ardenna carneipes as Puffinus carneipes](#)

Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]

Breeding known to occur within area

[Ardenna grisea as Puffinus griseus](#)

Sooty Shearwater [82651]

Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Arenaria interpres</a> Ruddy Turnstone [872]		Roosting known to occur within area
<a href="#">Bubulcus ibis as Ardea ibis</a> Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Roosting known to occur within area
<a href="#">Calidris alba</a> Sanderling [875]		Roosting known to occur within area
<a href="#">Calidris canutus</a> Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area overfly marine area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area
<a href="#">Calidris ruficollis</a> Red-necked Stint [860]		Roosting known to occur within area overfly marine area
<a href="#">Calidris tenuirostris</a> Great Knot [862]	Critically Endangered	Roosting known to occur within area overfly marine area
<a href="#">Cereopsis novaehollandiae grisea</a> Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Species or species habitat known to occur within area overfly marine area
<a href="#">Chalcites osculans as Chrysococcyx osculans</a> Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
<a href="#">Charadrius bicinctus</a> Double-banded Plover [895]		Roosting known to occur within area overfly marine area
<a href="#">Charadrius leschenaultii</a> Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Charadrius mongolus</a> Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
<a href="#">Charadrius ruficapillus</a> Red-capped Plover [881]		Roosting known to occur within area overfly marine area
<a href="#">Chroicocephalus novaehollandiae as Larus novaehollandiae</a> Silver Gull [82326]		Breeding known to occur within area
<a href="#">Diomedea antipodensis</a> Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea dabbenena</a> Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
<a href="#">Diomedea epomophora</a> Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea exulans</a> Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Diomedea sanfordi</a> Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Eudyptula minor</a> Little Penguin [1085]		Breeding known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Gallinago megala</a> Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area
<a href="#">Gallinago stenura</a> Pin-tailed Snipe [841]		Roosting likely to occur within area overfly marine area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
<a href="#">Halobaena caerulea</a> Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
<a href="#">Himantopus himantopus</a> Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area overfly marine area
<a href="#">Hydroprogne caspia as Sterna caspia</a> Caspian Tern [808]		Breeding known to occur within area
<a href="#">Larus pacificus</a> Pacific Gull [811]		Breeding known to occur within area
<a href="#">Limosa lapponica</a> Bar-tailed Godwit [844]		Species or species habitat known to occur within area
<a href="#">Limosa limosa</a> Black-tailed Godwit [845]		Roosting known to occur within area overfly marine area
<a href="#">Macronectes giganteus</a> Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
<a href="#">Macronectes halli</a> Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Numenius minutus</a> Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area
<a href="#">Numenius phaeopus</a> Whimbrel [849]		Roosting known to occur within area
<a href="#">Onychoprion anaethetus as Sterna anaethetus</a> Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
<a href="#">Pachyptila turtur</a> Fairy Prion [1066]		Species or species habitat likely to occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Pelagodroma marina</a> White-faced Storm-Petrel [1016]		Breeding known to occur within area
<a href="#">Phoebetria fusca</a> Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Pluvialis fulva</a> Pacific Golden Plover [25545]		Roosting known to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Pluvialis squatarola</a> Grey Plover [865]		Roosting known to occur within area overfly marine area
<a href="#">Pterodroma macroptera</a> Great-winged Petrel [1035]		Breeding known to occur within area
<a href="#">Pterodroma mollis</a> Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
<a href="#">Puffinus assimilis</a> Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
<a href="#">Recurvirostra novaehollandiae</a> Red-necked Avocet [871]		Roosting known to occur within area overfly marine area
<a href="#">Stercorarius skua as Catharacta skua</a> Great Skua [823]		Species or species habitat may occur within area
<a href="#">Thalassarche carteri</a> Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Thalassarche cauta</a> Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
<a href="#">Thalassarche impavida</a> Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche melanophris</a> Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
<a href="#">Thalassarche steadi</a> White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Thalasseus bergii as Sterna bergii</a> Greater Crested Tern [83000]		Breeding known to occur within area
<a href="#">Thinornis cucullatus as Thinornis rubricollis</a> Hooded Dotterel, Hooded Plover [87735]		Species or species habitat known to occur within area overfly marine area
<a href="#">Tringa brevipes as Heteroscelus brevipes</a> Grey-tailed Tattler [851]		Roosting known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area overfly marine area
<a href="#">Tringa stagnatilis</a> Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area overfly marine area
<a href="#">Xenus cinereus</a> Terek Sandpiper [59300]		Roosting known to occur within area overfly marine area

## Fish

<a href="#">Acentronura australe</a> Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
<a href="#">Campichthys galei</a> Gale's Pipefish [66191]		Species or species habitat may occur within area
<a href="#">Heraldia nocturna</a> Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
<a href="#">Hippocampus breviceps</a> Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
<a href="#">Histiogamphelus cristatus</a> Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
<a href="#">Leptoichthys fistularius</a> Brushtail Pipefish [66248]		Species or species habitat may occur within area
<a href="#">Lissocampus caudalis</a> Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
<a href="#">Lissocampus runa</a> Javelin Pipefish [66251]		Species or species habitat may occur within area
<a href="#">Maroubra perserrata</a> Sawtooth Pipefish [66252]		Species or species habitat may occur within area
<a href="#">Nannocampus subosseus</a> Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
<a href="#">Notiocampus ruber</a> Red Pipefish [66265]		Species or species habitat may occur within area
<a href="#">Phycodurus eques</a> Leafy Seadragon [66267]		Species or species habitat may occur within area
<a href="#">Phyllopteryx taeniolatus</a> Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
<a href="#">Pugnaso curtirostris</a> Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
<a href="#">Solegnathus lettiensis</a> Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
<a href="#">Stigmatopora argus</a> Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area



Scientific Name	Threatened Category	Presence Text
<a href="#">Stigmatopora nigra</a> Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
<a href="#">Urocampus carinirostris</a> Hairy Pipefish [66282]		Species or species habitat may occur within area
<a href="#">Vanacampus margaritifer</a> Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
<a href="#">Vanacampus phillipi</a> Port Phillip Pipefish [66284]		Species or species habitat may occur within area
<a href="#">Vanacampus poecilolaemus</a> Longsnout Pipefish, Australian Longsnout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area

#### Mammal

<a href="#">Arctocephalus forsteri</a> Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat likely to occur within area
<a href="#">Neophoca cinerea</a> Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat likely to occur within area

#### Reptile

<a href="#">Caretta caretta</a> Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
<a href="#">Chelonia mydas</a> Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
<a href="#">Dermochelys coriacea</a> Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area

#### Whales and Other Cetaceans

[ [Resource Information](#) ]

Current Scientific Name	Status	Type of Presence
Mammal		

Current Scientific Name	Status	Type of Presence
<a href="#">Balaenoptera acutorostrata</a> Minke Whale [33]		Species or species habitat may occur within area
<a href="#">Balaenoptera borealis</a> Sei Whale [34]	Vulnerable	Species or species habitat may occur within area
<a href="#">Balaenoptera edeni</a> Bryde's Whale [35]		Species or species habitat may occur within area
<a href="#">Balaenoptera musculus</a> Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
<a href="#">Balaenoptera physalus</a> Fin Whale [37]	Vulnerable	Species or species habitat may occur within area
<a href="#">Caperea marginata</a> Pygmy Right Whale [39]		Species or species habitat may occur within area
<a href="#">Delphinus delphis</a> Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Endangered	Breeding known to occur within area
<a href="#">Grampus griseus</a> Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
<a href="#">Lagenorhynchus obscurus</a> Dusky Dolphin [43]		Species or species habitat may occur within area
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area

Current Scientific Name	Status	Type of Presence
<a href="#">Orcinus orca</a> Killer Whale, Orca [46]		Species or species habitat may occur within area
<a href="#">Tursiops aduncus</a> Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
<a href="#">Tursiops truncatus s. str.</a> Bottlenose Dolphin [68417]		Species or species habitat may occur within area

## Extra Information

State and Territory Reserves			[ <a href="#">Resource Information</a> ]
Protected Area Name	Reserve Type	State	
Breaksea Island	Nature Reserve	WA	
Gull Rock	National Park	WA	
Michaelmas Island	Nature Reserve	WA	
Mistaken Island	Nature Reserve	WA	
Seal Island (WA32199)	Nature Reserve	WA	
Torndirrup	National Park	WA	
Unnamed WA33308	5(1)(h) Reserve	WA	
Unnamed WA44690	5(1)(h) Reserve	WA	
Voyagers Park	5(1)(h) Reserve	WA	

Nationally Important Wetlands		[ <a href="#">Resource Information</a> ]
Wetland Name	State	
<a href="#">Oyster Harbour</a>	WA	

EPBC Act Referrals				[ <a href="#">Resource Information</a> ]
Title of referral	Reference	Referral Outcome	Assessment Status	
<a href="#">Controlled action</a>				
<a href="#">Albany Heritage Park Link Trail, WA</a>	2019/8480	Controlled Action	Assessment Approach	
<a href="#">Albany Heritage Park Trail Network Concept Plan</a>	2017/7943	Controlled Action	Completed	

Title of referral	Reference	Referral Outcome	Assessment Status
<b>Controlled action</b>			
<a href="#">Albany Port Authority dredging project</a>	2006/2540	Controlled Action	Post-Approval
<a href="#">Albany Ring Road Stages 2 and 3B, WA</a>	2020/8769	Controlled Action	Proposed Decision
<a href="#">Emu Point Residential Area Project</a>	2010/5479	Controlled Action	Completed
<a href="#">Southdown Magnetite Mine</a>	2006/2544	Controlled Action	Completed
<b>Not controlled action</b>			
<a href="#">Albany Port Maintenance Dredging, Albany, WA</a>	2014/7246	Not Controlled Action	Completed
<a href="#">Anzac Centre Development, Albany, WA</a>	2012/6571	Not Controlled Action	Completed
<a href="#">Anzac Interpretive Centre Development, Albany, WA</a>	2013/6903	Not Controlled Action	Completed
<a href="#">Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia</a>	2015/7522	Not Controlled Action	Completed
<a href="#">INDIGO Central Submarine Telecommunications Cable</a>	2017/8127	Not Controlled Action	Completed
<a href="#">Protected Harbour Development</a>	2006/3091	Not Controlled Action	Completed
<a href="#">Scuttling of the HMAS Perth</a>	2001/171	Not Controlled Action	Completed
<a href="#">Seismic Survey, Bremer Basin, Mentelle Basin and Zeewyck Sub-basin</a>	2004/1700	Not Controlled Action	Completed
<b>Not controlled action (particular manner)</b>			
<a href="#">INDIGO Marine Cable Route Survey (INDIGO)</a>	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
<b>Referral decision</b>			
<a href="#">Albany Port Maintenance Dredging</a>	2010/5527	Referral Decision	Completed
<b>Biologically Important Areas</b>			
Scientific Name		Behaviour	Presence
<b>Seabirds</b>			
<a href="#">Ardena carneipes</a>			
Flesh-footed Shearwater [82404]		Foraging (in high	Known to occur

Scientific Name	Behaviour	Presence
<a href="#">Eudyptula minor</a> Little Penguin [1085]	Foraging (provisioning young)	Known to occur
<a href="#">Hydroprogne caspia</a> Caspian Tern [808]	Foraging (provisioning young)	Known to occur
<a href="#">Larus pacificus</a> Pacific Gull [811]	Foraging (in high numbers)	Known to occur
<a href="#">Onychoprion anaethetus</a> Bridled Tern [82845]	Foraging (in high numbers)	Known to occur
<a href="#">Puffinus assimilis tunneyi</a> Little Shearwater [59363]	Foraging (in high numbers)	Known to occur
<a href="#">Sternula nereis</a> Fairy Tern [82949]	Foraging (in high numbers)	Known to occur
<b>Sharks</b>		
<a href="#">Carcharodon carcharias</a> White Shark [64470]	Foraging	Known to occur
<b>Whales</b>		
<a href="#">Balaenoptera musculus brevicauda</a> Pygmy Blue Whale [81317]	Distribution	Known to occur
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Calving buffer	Known to occur
<a href="#">Eubalaena australis</a> Southern Right Whale [40]	Seasonal calving habitat	Known to occur
<a href="#">Megaptera novaeangliae</a> Humpback Whale [38]	Migration (north)	Known to occur

# Caveat

## 1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

## 2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

## 3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and 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

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

Where little information is available for a 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 detailed distribution mapping methods are used to update these distributions

## 4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

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

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

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

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

# 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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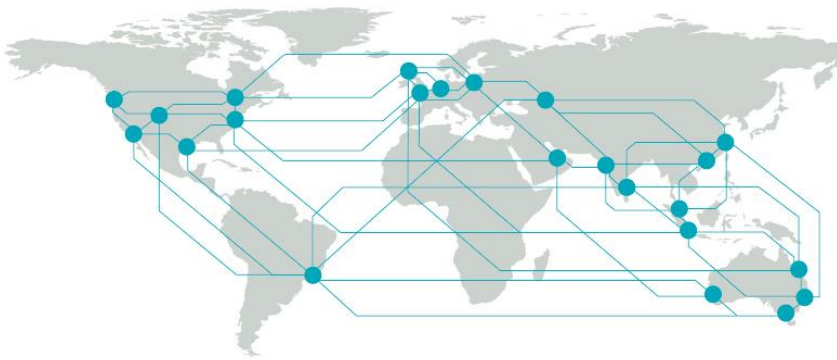
## **Annex B Department of Biodiversity, Conservation and Attractions Threatened and Priority Fauna List**

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Scientific name	Common name	Class	WA Status (ranking)	EPBC Status (ranking)	South West	WA list name
<i>Actitis hypoleucos</i>	common sandpiper	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Anous stolidus</i>	common noddy	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Anous tenuirostris melanops</i>	Australian lesser noddy	BIRD	EN	VU	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Apus pacificus</i>	fork-tailed swift	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Arctocephalus forsteri</i>	New Zealand fur-seal, long-nosed fur-seal	MAMMAL	OS		X	Other Specially Protected under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 7)
<i>Arctocephalus tropicalis</i>	Subantarctic fur-seal	MAMMAL	VU	EN	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Ardenna carneipes</i>	flesh-footed shearwater, fleshy-footed shearwater	BIRD	VU	MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Ardenna pacifica</i>	wedge-tailed shearwater	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Ardenna tenuirostris</i>	short-tailed shearwater	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Arenaria interpres</i>	ruddy turnstone	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Atrichornis clamosus</i>	noisy scrub-bird, tjimiluk	BIRD	EN	EN	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Austroassiminea lethae</i>	Cape Leeuwin freshwater snail	INVERTEBRATE	VU		X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Balaenoptera borealis</i>	sei whale	MAMMAL	EN	VU & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Balaenoptera musculus</i>	blue whale	MAMMAL	EN	EN & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Balaenoptera physalus</i>	fin whale	MAMMAL	EN	VU & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Bertmainius opimus</i>	western pygmy trapdoor spider	INVERTEBRATE	P3		X	Priority
<i>Bertmainius tingle</i>	Tingle pygmy trapdoor spider	INVERTEBRATE	EN	EN	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Bettongia penicillata ogilbyi</i>	woylie, brush-tailed bettong	MAMMAL	CR	EN	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Botaurus poicilloptilus</i>	Australasian bittern	BIRD	EN	EN	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Bothriembryon irvineanus</i>	Irvine's bothriembryontid land snail (Cape Naturaliste)	INVERTEBRATE	P2		X	Priority
<i>Cacatua pastinator pastinator</i>	Muir's corella	BIRD	CD		X	Conservation Dependent under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 6)
<i>Calidris acuminata</i>	sharp-tailed sandpiper	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Calidris alba</i>	sanderling	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Calidris canutus</i>	red knot	BIRD	EN	EN & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Calidris ferruginea</i>	curlew sandpiper	BIRD	CR	CR & MI	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Calidris melanotos</i>	pectoral sandpiper	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Calidris ruficollis</i>	red-necked stint	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Calidris subminuta</i>	long-toed stint	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Calidris tenuirostris</i>	great knot	BIRD	CR	CR & MI	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Calyptorhynchus banksii naso</i>	forest red-tailed black cockatoo	BIRD	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Calyptorhynchus baudinii</i>	Baudin's cockatoo	BIRD	MI	EN	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Calyptorhynchus latirostris</i>	Carnaby's cockatoo	BIRD	EN	EN	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Carcharias taurus</i>	grey nurse shark	FISH	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Carcharodon carcharias</i>	great white shark	FISH	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Caretta caretta</i>	loggerhead turtle	REPTILE	EN	EN & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Cereopsis novaehollandiae grisea</i>	Recherche Cape Barren goose	BIRD	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Charadrius bicinctus</i>	double-banded plover	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Charadrius leschenaultii</i>	greater sand plover, large sand plover	BIRD	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Charadrius mongolus</i>	lesser sand plover	BIRD	EN	EN & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Chelonia mydas</i>	green turtle	REPTILE	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Cherax tenuimanus</i>	Margaret River hairy marron	INVERTEBRATE	CR	CR	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Chlidonias leucopterus</i>	white-winged black tern, white-winged tern	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Ctenotus delii</i>	Dell's skink, Darling Range southwest Ctenotus	REPTILE	P4		X	Priority
<i>Ctenotus ora</i>	Coastal Plains skink	REPTILE	P3		X	Priority
<i>Dasyurus geoffroi</i>	chuditch, western quoll	MAMMAL	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Dermochelys coriacea</i>	leatherback turtle	REPTILE	VU	EN & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Diomedea amsterdamensis</i>	Amsterdam albatross	BIRD	CR	#N/A	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Diomedea dabbenena</i>	Tristan albatross	BIRD	CR	EN & MI	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Diomedea epomophora</i>	southern royal albatross	BIRD	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Diomedea exulans</i>	wandering albatross	BIRD	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Diomedea sanfordi</i>	northern royal albatross	BIRD	EN	EN & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Elanus scriptus</i>	letter-winged kite	BIRD	P4		X	Priority
<i>Elapognathus minor</i>	short-nosed snake	REPTILE	P2		X	Priority
<i>Engaewa pseudoreducta</i>	Margaret River burrowing crayfish	INVERTEBRATE	CR	CR	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Engaewa reducta</i>	Dunsborough burrowing crayfish	INVERTEBRATE	EN	CR	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Eubalaena australis</i>	southern right whale	MAMMAL	VU	EN & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Falco peregrinus</i>	peregrine falcon	BIRD	OS		X	Other Specially Protected under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 7)
<i>Falsistrellus mackenziei</i>	western false pipistrelle, western falsistrelle	MAMMAL	P4		X	Priority
<i>Galaxiella munda</i>	mud minnow, western dwarf galaxias	FISH	VU		X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Galaxiella nigrostriata</i>	black-stripe minnow, black-striped dwarf galaxias	FISH	EN		X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)

<i>Geocrinia alba</i>	white-bellied frog	AMPHIBIAN	CR	EN	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Geocrinia vitellina</i>	orange-bellied frog	AMPHIBIAN	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Geotria australis</i>	pouched lamprey	FISH	P3		X	Priority
<i>Glacidorbis occidentalis</i>	Jarraah forest freshwater snail	INVERTEBRATE	P3		X	Priority
<i>Hirundapus caudacutus</i>	white-throated needletail	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Hydromys chrysogaster</i>	water-rat, rakali	MAMMAL	P4		X	Priority
<i>Hydroprogne caspia</i>	Caspian tern	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Idiosoma sigillatum</i>	Swan Coastal Plain shield-backed trapdoor spider	INVERTEBRATE	P3		X	Priority
<i>Isoodon fusciventer</i>	quenda, southwestern brown bandicoot	MAMMAL	P4		X	Priority
<i>Ixobrychus dubius</i>	Australian little bittern	BIRD	P4		X	Priority
<i>Ixobrychus flavicollis australis</i> (southwest subpop.)	black bittern (southwest subpop.)	BIRD	P2		X	Priority
<i>Kawaniphila pachomai</i>	grey vernal katydid (southwest)	INVERTEBRATE	P1		X	Priority
<i>Leipoa ocellata</i>	malleefowl	BIRD	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Lepidogalaxias salamandroides</i>	salamanderfish	FISH	EN		X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Lerista lineata</i>	Perth slider, lined skink	REPTILE	P3		X	Priority
<i>Limicola falcinellus</i>	broad-billed sandpiper	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Limnodromus semipalmatus</i>	Asian dowitcher	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Limosa lapponica</i>	bar-tailed godwit	BIRD	U or CR at subs	U or CR at subs	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Limosa lapponica baueri</i>	bar-tailed godwit (Western Alaskan)	BIRD	(& MI at sp. lev	(& MI at sp. lev	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Limosa lapponica menzbieri</i>	bar-tailed godwit (Northern Siberian)	BIRD	(& MI at sp. lev	(& MI at sp. lev	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Limosa limosa</i>	black-tailed godwit	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Macronectes giganteus</i>	southern giant petrel	BIRD	MI	EN & MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Macronectes halli</i>	northern giant petrel	BIRD	MI	VU & MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Megaptera novaeangliae</i>	humpback whale	MAMMAL	CD	VU & MI	X	Conservation Dependent under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 6)
<i>Myrmecobius fasciatus</i>	numbat, walpurti	MAMMAL	EN	EN	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Nannatherina balstoni</i>	Balston's pygmy perch	FISH	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Natator depressus</i>	flatback turtle	REPTILE	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Neophoca cinerea</i>	Australian sea-lion	MAMMAL	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Ninox connivens connivens</i> (southwest subpop.)	barking owl (southwest subpop.)	BIRD	P3		X	Priority
<i>Notamacropus eugenii derbianus</i>	tammar wallaby	MAMMAL	P4		X	Priority
<i>Notamacropus irma</i>	western brush wallaby	MAMMAL	P4		X	Priority
<i>Numenius madagascariensis</i>	eastern curlew	BIRD	CR	CR & MI	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Numenius phaeopus</i>	whimbrel	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Oceanites oceanicus</i>	Wilson's storm-petrel	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Onychoprion anaethetus</i>	bridled tern	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Oxyura australis</i>	blue-billed duck	BIRD	P4		X	Priority
<i>Pachysaga strobila</i>	Vasse pachysaga (Busselton-Donnybrook)	INVERTEBRATE	P1		X	Priority
<i>Pandion cristatus</i>	osprey, eastern osprey	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Pezoparus flaviventris</i>	western ground parrot	BIRD	CR	CR	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Phaethon rubricauda</i>	red-tailed tropicbird	BIRD	MI & P4	MI	X	Priority
<i>Phascogale calura</i>	red-tailed phascogale, kenngoos	MAMMAL	CD	VU	X	Conservation Dependent under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 6)
<i>Phascogale tapoatafa wambenger</i>	south-western brush-tailed phascogale, wambenger	MAMMAL	CD		X	Conservation Dependent under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 6)
<i>Phoebastria fusca</i>	sooty albatross	BIRD	EN	VU & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Phoebastria palpebrata</i>	light-mantled albatross	BIRD	MI & P4	MI	X	Priority
<i>Phycodurus eques</i>	leafy sea dragon	FISH	P2		X	Priority
<i>Physeter macrocephalus</i>	sperm whale	MAMMAL	VU	MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Plegadis falcinellus</i>	glossy ibis	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Pluvialis fulva</i>	Pacific golden plover	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Pluvialis squatarola</i>	grey plover	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Pseudacheirus occidentalis</i>	western ringtail possum, ngwayir	MAMMAL	CR	CR	X	Critically Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 1)
<i>Puffinus huttoni</i>	Hutton's shearwater	BIRD	EN		X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Setonix brachyurus</i>	quokka	MAMMAL	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Stenella longirostris</i>	spinner dolphin	MAMMAL	P4		X	Priority
<i>Stercorarius antarcticus lonnbergi</i>	brown skua, Subantarctic skua	BIRD	P4		X	Priority
<i>Stercorarius parasiticus</i>	Arctic jaeger, Arctic skua	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Stercorarius pomarinus</i>	pomarine jaeger, pomarine skua	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Sterna hirundo</i>	Common Tern	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Sternula nereis nereis</i>	fairy tern	BIRD	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Thalassarche carteri</i>	Indian yellow-nosed albatross	BIRD	EN	VU & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Thalassarche cauta cauta</i>	shy albatross	BIRD	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Thalassarche cauta stearnsi</i>	white-capped albatross	BIRD	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Thalassarche chlororhynchus</i>	Atlantic yellow-nosed albatross	BIRD	VU	MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)

<i>Thalassarche chrysostoma</i>	grey-headed albatross	BIRD	VU	EN & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Thalassarche impavida</i>	Campbell albatross	BIRD	VU	VU & MI	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Thalassarche melanophris</i>	black-browed albatross	BIRD	EN	VU & MI	X	Endangered under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 2)
<i>Thalasseus bergii</i>	crested tern	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Thinornis rubricollis</i>	hooded plover, hooded dotterel	BIRD	P4		X	Priority
<i>Trichosternus relictus</i>	a ground beetle (Margaret River)	INVERTEBRATE	P3		X	Priority
<i>Tringa brevipes</i>	grey-tailed tattler	BIRD	MI & P4	MI	X	Priority
<i>Tringa glareola</i>	wood sandpiper	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Tringa nebularia</i>	common greenshank, greenshank	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Tringa stagnatilis</i>	marsh sandpiper, little greenshank	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)
<i>Tyto novaehollandiae novaehollandiae</i>	masked owl (southwest)	BIRD	P3		X	Priority
<i>Westralunia carteri</i>	Carter's freshwater mussel	INVERTEBRATE	VU	VU	X	Vulnerable under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 3)
<i>Xenus cinereus</i>	Terek sandpiper	BIRD	MI	MI	X	Migratory under the Biodiversity Conservation Act 2016 (Wildlife Conservation (Specially Protected Fauna) Notice 2018, schedule 5)



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