



Rottnest Island Basic Fauna Survey

RPS

DOCUMENT TRACKING

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Template 2.8.1

1. Introduction

In 2019, the Rottnest Island Authority (RIA) commenced investigations for the South Thomson Barge Landing development approvals process. During this time, a flora survey and a benthic habitat assessment were undertaken to facilitate the approvals process, however at the end of 2019, a decision was made to pause the project and no further works were undertaken.

In 2023, RIA commenced the project and, as such, the RIA require a review of the benthic habitat assessment and in addition, require a flora survey, a terrestrial fauna and marine fauna survey to be completed in accordance with guidelines for impact assessment under Section 38 of the State Environmental Protection Act 1986 (EP Act).

1.1. Scope of works

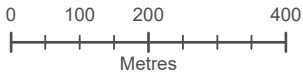
Eco Logical Australia (ELA) were engaged by RPS as a sub-consultant to complete a Basic terrestrial fauna survey of the survey area, an area of 4.16 hectares (ha) located on Army Jetty Road, Wadjemup / Rottnest Island (**Figure 1**). The following tasks were completed as part of this assessment:

- Desktop assessment to determine environmental values and conservation significant fauna relating to the survey areas;
- Undertaking a Basic fauna survey to assess values pertaining fauna habitat and terrestrial fauna;
- Preparation of a letter-style terrestrial fauna survey report for the survey area; and
- Providing all spatial/mapping data collected during the survey.



Figure 1: Project location

- Survey area
- Distributor Road
- Access Road



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2. Methodology

2.1. Desktop assessment

2.1.1. Database searches and literature review

An initial desktop assessment was undertaken prior to the field survey to determine environmental values and conservation significant fauna relating to the survey area. The following Commonwealth and State databases were searched for information relating to conservation significant fauna to inform the field survey:

- *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Protected Matters Search Tool (PMST) for Matters of National Environmental Significance (MNES), including any Threatened species and communities listed under the EPBC Act (Department of Climate Change, Energy, the Environment and Water [DCCEEW] 2023a; **Appendix A**); and
- The Department of Biodiversity, Conservation and Attractions (DBCAs) Threatened and Priority fauna database searches for Scheduled fauna listed under the EPBC Act or latest WA Biodiversity Conservation (listing of native species) (fauna) order and Priority Fauna.

In addition, the following report/s relevant to the survey area were reviewed. Aerial photography for the survey area was reviewed to identify land use patterns, the extent of vegetation, relevant landscape/catchment matters and any other relevant issues where possible.

- *Flora and vegetation survey: South Thompson and Kingstown, Rottnest Island (Wadjemup)*; 360 Environmental 2022a);
- *Native Vegetation Clearing Permit: Supporting Documentation* (360 Environmental 2022b); and
- *Flora and vegetation survey: South Thompson and Kingstown, Rottnest Island (Wadjemup)*; Focused Vision 2022).

2.1.2. Likelihood of occurrence assessment

An assessment of the likelihood of potential conservation significant fauna species (Threatened and Priority) being present within the survey area (where relevant) was carried out. The assessment is based on specific likelihood of occurrence criteria. The criteria include factors such as location of previous records in relation to the survey area, suitable landforms, soils, and habitat that appear to be present based on the desktop review and aerial imagery. Conservation codes, categories and criteria for fauna protected under the EPBC Act and the State *Biodiversity Conservation Act 2016* (BC Act) are provided in **Appendix B**. Criteria used for this assessment are presented in **Appendix C**.

Marine specific fauna (e.g., sharks, fish and marine mammals) have been excluded from this assessment as the survey area does not contain habitat to support these species. The RIA are conducting a separate marine fauna assessment for relevant areas.

2.2. Field survey

2.2.1. Survey team and timing

A Basic terrestrial fauna survey was conducted by Jeni Morris (Ecologist) on 31 October 2023 (**Table 1**). No scientific licences were required to undertake the field survey.

The survey timing was consistent with the Environmental Protection Authority (EPA) *Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment* recommendations for undertaking vertebrate fauna assemblage surveys in the Southern climatic region (i.e., reptiles in October-December, birds and mammals in September-December; EPA 2020).

Table 1: Field personnel

Staff	Project role	Experience
Jeni Morris (BSc Cons. Wildlife and Biology)	Ecologist, field survey, project manager	Jeni has over seven years conducting Baseline (Detailed), Targeted and Basic fauna surveys on the Swan Coastal Plain.

2.2.2. Basic fauna survey

The Basic fauna survey involved personnel walking traverses through the survey area, delineating and mapping fauna habitats and recording opportunistic sightings of fauna (**Figure 2**). A total of 10 fauna habitat points were taken to aid in delineation and mapping of fauna habitat (**Figure 2; Appendix D**). Fauna habitats were assessed for their ability to support and sustain populations of fauna, along with an assessment of the likelihood of occurrence of conservation significant fauna species.

The habitat characteristics and fauna database records used in assessing likelihood of occurrence for fauna included:

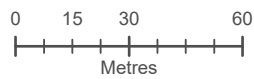
- Vegetation community, structure, and condition;
- Soil and landform type;
- Extent and connectivity of bushland;
- Fauna species habitat preferences;
- Proximity of conservation significant fauna records; and
- Signs of species presence.

Opportunistic recordings of fauna species were made at all times during the field survey. These included visual sightings of active fauna such as reptiles and birds; records of bird calls; and signs of species presence such as tracks, diggings, burrows, scats, and any other signs of fauna activity. Nomenclature used for the vertebrate fauna species within this report follows the Western Australian Museum (WAM) Checklist of the Vertebrates of Western Australia (WAM 2023).



Figure 2: Survey effort

- ▭ Survey area
- Traverses
- Fauna habitat points



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3. Results

3.1. Desktop assessment

3.1.1. Conservation significant fauna

Conservation significant fauna species previously recorded within, and in proximity to the survey area (DBCA 2023, DCCEEW 2023a) are presented in **Figure 3**. The pre-survey fauna likelihood of occurrence assessment is provided in **Appendix E**.

A total of 76 conservation significant fauna species were identified from the desktop assessment. A pre-survey likelihood of occurrence assessment determined that of these, two species have been previously recorded within the survey area, namely the Rottnest Island dugite (*Pseudonaja affinis exilis*, listed as P4 by DBCA) and the Rottnest Island bobtail (*Tiliqua rugosa konowi*, listed as VU under the BC Act; RIA; pers comms 5 January 2024). Of the remaining 74 conservation significant fauna species identified from the desktop assessment, a total of 26 were identified as having the Potential to occur within the survey area, comprising 20 birds (18 of which are migratory), three reptiles, two insects and one mammal. The remaining 48 fauna species were assessed as unlikely to occur in the survey area.

3.2. Fauna survey

Weather conditions at the time of the field survey were moderately warm and clear with a maximum temperature of 23.8°C, with no rainfall recorded (Bureau of Meteorology 2023).

3.2.1. Fauna species

A total of 14 native vertebrate fauna species were recorded within the survey area during the field survey, comprising 11 birds, two reptiles and one mammal. A complete fauna species list is provided in **Appendix F**.

3.2.2. Conservation significant fauna

One conservation significant fauna species was recorded within the survey area, the Quokka (Kwoka; *Setonix brachyurus*), listed as Vulnerable (VU) under the EPBC Act and BC Act (**Plate 1**). This species was recorded from three locations within the survey area, with individuals observed at two locations and scats observed at a third location (**Figure 4; Appendix G**).

No additional Threatened or Priority fauna species listed under the EPBC Act, BC Act or by DBCA were recorded within the survey area. No introduced (feral) fauna species were recorded within the survey area.

Following the field survey, a post-field likelihood of occurrence assessment determined that of the remaining 75 species identified from the desktop assessment as possibly occurring within the survey area, four are considered as having the Potential to occur within the survey area due to the availability of potentially suitable habitat and location of nearby recent records:

- *Pandion haliaetus* (Osprey; listed as MI under the EPBC Act and BC Act);
- *Tiliqua rugosa konowi* (Rottnest Island bobtail; listed as VU under the BC Act);
- *Lerista lineata* (Perth slider; listed as Priority [P] 3 by DBCA); and
- *Pseudonaja affinis exilis* (Rottnest Island dugite; listed as P4 by DBCA).

The remaining 71 species are considered as being unlikely to occur due to lack of suitable habitat recorded and location/age of records in vicinity of the survey area. The post-survey fauna likelihood of occurrence assessment is provided in **Appendix E**.



Plate 1: Quokka (*Kwoka*; *Setonix brachyurus*) individuals and scats recorded within the survey area © ELA 2023

3.2.3. Fauna habitat

Two fauna habitat types were recorded within the survey area, namely 'Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes' (0.87 ha; 20.9% of the survey area) and 'Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes' (3.00 ha; 72.3% of the survey area). The remaining 0.28 ha (6.8% of the survey area) was mapped as tracks/cleared areas (**Table 2; Figure 5**).

Table 2: Fauna habitats recorded within the survey area








Fauna habitat	Associated flora species	Conservation significant fauna species potentially utilising the habitat	Extent (ha)	Proportion (%)	Photo
Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<p><i>Melaleuca lanceolata</i>, <i>Callitris preissii</i>, <i>Eucalyptus gomphocephala</i>, <i>Agonis flexuosa</i>, <i>Acacia rostellifera</i>, <i>Acanthocarpus preissii</i>, <i>Lepidosperma gladiatum</i>, *<i>Trachyandra divaricata</i>, <i>Conostylis candicans</i> subsp. <i>calcicola</i>, <i>Austrostipa</i> sp.</p>	<p><i>Lerista lineata</i> (Perth slider) <i>Pandion haliaetus</i> (Osprey) <i>Pseudonaja affinis exilis</i> (Rottnest Island dugite) <i>Tiliqua rugosa konowi</i> (Rottnest Island bobtail)</p>	0.87	20.9	
Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes.	<p><i>Acanthocarpus preissii</i>, <i>Scaevola crassifolia</i>, <i>Guichenotia ledifolia</i>, <i>Lepidosperma gladiatum</i>, *<i>Trachyandra divaricata</i>, <i>Conostylis candicans</i> subsp. <i>calcicola</i>, <i>Spinifex longifolius</i>, <i>Austrostipa</i> sp.</p>	<p><i>Lerista lineata</i> (Perth slider) <i>Pandion haliaetus</i> (Osprey) <i>Pseudonaja affinis exilis</i> (Rottnest Island dugite) <i>Tiliqua rugosa konowi</i> (Rottnest Island bobtail)</p>	3.00	72.3	
Tracks/cleared areas			0.28	6.8	
Total			4.16	100	



Figure 3: Conservation significant fauna (terrestrial) previously recorded in the vicinity of the survey area (DBCA 2023)

- | | |
|--|---|
|  Survey area | Conservation significant fauna |
| |  Threatened |
| |  Threatened and Priority 4 |
| |  Priority 3 |
| |  Priority 4 |



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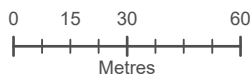


Figure 4: Locations of conservation significant species recorded within the survey area

 Survey area

Conservation significant fauna species

 *Setonix brachyurus* (Quokka, Kwoka;
VU under EPBC Act and BC Act)





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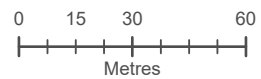


Figure 5: Fauna habitats of the survey area

-  Survey area
-  Tracks/cleared areas

Fauna habitat type

-  Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.
-  Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes.



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4. Discussion

4.1. Desktop assessment

A total of 76 conservation significant fauna species were identified from the desktop assessment as possibly occurring within the survey area. Of these species, two have been previously recorded within the survey area, namely the Rottnest Island dugite (*Pseudonaja affinis exilis*, listed as P4 by DBCA) and the Rottnest Island bobtail (*Tiliqua rugosa konowi*, listed as VU under the BC Act; RIA; pers comms 5 January 2024).

Tiliqua rugosa konowi (Rottnest Island bobtail; listed as VU under the BC Act) is a robust skink with a broad triangular head, short blunt tail and extremely large rugose scales, smaller with narrower head and darker, less variable colour than the mainland *T. rugosa* (Wilson and Swan 2010). Bobtails, also known as Shinglebacks, are common around limestone rocks and prefer limestone heath, woodland and coastal habitats (360 Environmental 2022a). A large number of historical and recent records of this species occur from the central to western extent of Rottnest Island (DBCA 2023), and sightings of this species have been made by RIA within the survey area (RIA; pers comms 5 January 2024). Their diet is known to include plant material (especially fruit), snails, insects and carrion (360 Environmental 2022a). The Rottnest Island bobtail is likely to utilise both fauna habitats within the survey area to forage and shelter.

Pseudonaja affinis exilis (Rottnest Island dugite; listed as P4 by DBCA) is a snake with midbody scales in 19 rows, much smaller than *P. affinis* (to 1.1 m compared with to 2 m on the mainland) and uniformly dark, including ventral surfaces (Wilson and Swan 2010). The subspecies occurs on Rottnest Island and is known from 68 records across the island, with the nearest record occurring approximately 100 m to the south of the survey area (DBCA 2023). This species has been observed by RIA within the survey area, with multiple records of this species being removed from the area (RIA; pers comms 5 January 2024). Dugites occupy a wide variety of habitats including coastal dunes, heathlands, shrublands, woodlands and forests, and occupy the Settlement areas of Rottnest Island (Wilson and Swan 2010; 360 Environmental 2022a). Rottnest Island dugite is likely to utilise both habitats within the survey area.

4.2. Field survey

A Basic fauna survey was conducted on Tuesday 31 October 2023 by Jeni Morris (Ecologist). The survey timing was consistent with the Environmental Protection Authority (EPA) *Technical Guidance: Terrestrial vertebrate fauna surveys for environmental impact assessment* recommendations for undertaking vertebrate fauna assemblage surveys in the Southern climatic region (i.e., reptiles in October-December, birds and mammals in September-December; EPA 2020).

Two fauna habitats were identified and mapped within the survey area, Fauna habitat 1 comprising stands of trees and tall shrubs (primarily *Melaleuca lanceolata*) over low shrubs, grasses and herbs on sand dunes, and Fauna habitat 2 comprising low shrubs over grasses and herbs on sand dunes. Fauna habitat 2 was the most commonly occurring, covering 72.3% (3.00 ha) of the survey area. Fauna habitats align with vegetation communities mapped across the area by Focused Vision in 2022 with the presence of *Melaleuca lanceolata* shrubland over *Acanthocarpus preissii* and **Trachyandra divaricata* (Focused Vision 2022).

A total of 14 native vertebrate fauna species were recorded within the survey area during the field survey, comprising 11 birds, two reptiles and one mammal. No introduced (feral) fauna species were recorded within the survey area.

One conservation significant fauna species was recorded within the survey area during the field survey, the Quokka (Kwoka; *Setonix brachyurus*), listed as Vulnerable (VU) under the EPBC Act and BC Act. This species was recorded from three locations within the survey area, with individuals observed at two locations and scats observed at a third location.

The Quokka, or Kwoka in Noongar, is a small wallaby with thick, coarse, grey-brown fur with lighter underparts, and a head and body length of 400-540 mm long (Department of Environment and Conservation [DEC] 2013). The Quokka occurs on two offshore islands (Rottnest Island/Wadjemup and Bald Island) and several mainland sites in south-west WA, ranging from just south of Perth to the Hunter River (DEC 2013; DCCEEW 2023b). The Rottnest Island quokka population is considered to be relatively stable. Previous records of this species are located across the island from the eastern to western points (DBCA 2023). The species is a habitat specialist, preferring dense understory to meet dietary and refuge requirements. These covered/shady microhabitats may also be important during the hotter months, particularly on Rottnest Island, where animals converge in dense thickets of *Gahnia* spp. and *Acanthocarpus* spp. (DCCEEW 2023b). Within the survey area, this species was recorded within Fauna habitat 1, foraging and evidence observed under *Melaleuca lanceolata* and adjacent to *Acanthocarpus preissii*, though is considered as likely occurring within Fauna habitat 2 due to the dense understory coverage provided by *Acanthocarpus preissii* in this habitat.

Following the field survey, a post-field likelihood of occurrence assessment determined that of the remaining 73 species identified from the desktop assessment as possibly occurring within the survey area, two are considered as having the potential to occur within the survey area, namely *Pandion haliaetus* (Osprey) and *Lerista lineata* (Perth slider).

Pandion haliaetus (Osprey; listed as MI under the EPBC Act and BC Act) is a medium-sized raptor to 65 centimetres (cm), dark brown to blackish brown above and white below with a white head and neck (DCCEEW 2023c). The species is widespread, with a total range (breeding plus non-breeding) extending north from Esperance in Western Australia to New South Wales, where records become scarcer towards the south, and into Victoria and Tasmania, where the species is a rare vagrant (DCCEEW 2023c). This species is also known to breed on Rottnest Island (DCCEEW 2023c). The Osprey occurs in littoral and coastal habitats and require extensive areas of open fresh, brackish or saline water for foraging and are known to frequent a variety of wetland habitats including inshore waters, reefs, bays, coastal cliffs and beaches (DCCEEW 2023c). Typically, the Osprey exhibits a preference for coastal cliffs and elevated islands in some parts of their range but have also been known to occur over atypical habitats such as heath, woodland or forest when travelling to and from foraging sites (DCCEEW 2023c). The Osprey is considered as having the potential to occur within the survey area as a vagrant visitor, due to the availability of adjacent foraging habitat (saline water, beaches).

Lerista lineata (Perth slider; listed as Priority [P] 3 by DBCA) is a small, slender *Lerista* to 11 cm long with 2 fingers, 3 toes and an immovable eyelid (Storr *et al.* 1999). The species is distributed along the lower west coast of WA from Perth to Mandurah, including Busselton, Rottnest Island and Garden Island (Storr *et al.* 1999; Wilson and Swan 2010). This species is known from 12 records on Rottnest Island, majority recent (2017), with the closest occurring approximately 330 m east of the survey area (DBCA 2023). *L. lineata* occurs on sandy, coastal heath and shrubland (Wilson and Swan 2010). Perth slider is considered

as having the potential to occur within the survey area based on availability of suitable habitat (sandy, coastal heath and shrubland) within Fauna habitat 1 and Fauna habitat 2.

The remaining 71 conservation significant fauna species identified from the desktop assessment are considered as being unlikely to occur, based on a lack of suitable habitat available for these species within the survey area and lack of recent records in the vicinity of the survey area.

Rottnest Island has been classified as a Key Biodiversity Area (KBA) by BirdLife Australia, providing critical breeding habitat for many shorebirds, including the Banded Stilt (*Cladorhynchus leucocephalus*) and the Fairy Tern (*Sternula nereis*; Birdlife Australia 2023).

A number of waterbirds and waders were identified as possibly occurring within the site based on the desktop assessment. However, a post-field survey likelihood of occurrence assessment determined that the survey area does not contain suitable breeding or foraging habitat for these species, whose habitat preferences align with habitat adjacent to, and in the vicinity of the survey area, including shore, rocky areas, intertidal habitats and wetlands. As these habitats do not occur within the survey area itself, it is considered that these species would be unlikely to occur.

5. References

360 Environmental. 2022a. *Reconnaissance Flora and Vegetation Survey (April 2022)*. Prepared for Rottneest Island Authority.

360 Environmental. 2022b. *Native Vegetation Clearing Permit: Supporting Documentation*. Prepared for Rottneest Island Authority.

Birdlife Australia. 2023. *Key Biodiversity Areas* [online]. Available from: <https://www.keybiodiversityareas.org.au/kba-map>

Bureau of Meteorology (BoM). 2023. *Climate Data Online*. Available: <http://www.bom.gov.au/climate/data/>

Department of Biodiversity, Conservation and Attractions (DBCA). 2023. *Threatened and Priority Fauna database search*. Reference number FAUNA#8006. Perth, WA.

Department of Climate Change, Energy, the Environment and Water (DCCEEW). 2023a. *EPBC Protected Matters Search Tool*. Available from: <http://www.environment.gov.au/epbc/pmst/>.

Department of Climate Change, Energy, the Environment and Water (DCCEEW). 2023b. *Species Profile and Threats Database* *Setonix brachyurus – Quokka* [online]. Available from: https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=952

Department of Climate Change, Energy, the Environment and Water (DCCEEW). 2023c. *Species Profile and Threats Database* *Pandion haliaetus – Osprey* [online]. Available from: https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=229

Department of Environment and Conservation. 2013. *Quokka Setonix brachyurus Recovery Plan. Wildlife Management Program No. 56*. Department of Environment and Conservation, Perth, WA. Available from: <http://www.environment.gov.au/resource/quokka-setonix-brachyurus-recovery-plan>. In effect under the EPBC Act from 30-Jan-2014.

Environmental Protection Authority (EPA). 2020. *Technical Guidance: Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment*. Perth, Western Australia.

Focused Vision. 2022. *Flora and vegetation survey: South Thompson and Kingstown, Rottneest Island (Wadjemup)*. Prepared for Rottneest Island Authority.

Storr, G. M., Smith L. A., and Johnstone, R. E. 1999. *Lizards of Western Australia. 1. Skinks*. Western Australian Museum.

Western Australian Museum (WAM). 2023. *WA Checklist for Terrestrial Vertebrates*. Department of terrestrial zoology, Western Australian Museum. Available from: <https://museum.wa.gov.au/research/departments/terrestrial-zoology/checklist-terrestrialvertebrate-fauna-western-australia>. Updated November 2022.

Wilson, S. and Swan, G. 2010. *A Complete Guide to Reptiles of Australia, Third Edition*. New Holland Publishers Australia Pty Ltd.

Appendix A PMST database search results



Australian Government

Department of Climate Change, Energy,
the Environment and Water

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: 25-Oct-2023

[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](#).

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar)	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	39
Listed Migratory Species:	66

Other Matters Protected by the EPBC Act

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	94
Whales and Other Cetaceans:	12
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	2
Key Ecological Features (Marine):	None
Biologically Important Areas:	12
Bioregional Assessments:	None
Geological and Bioregional Assessments:	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
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community may 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		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Critically Endangered	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Zanda latirostris listed as Calyptorhynchus latirostris Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Species or species habitat may occur within area
FISH		
Thunnus maccoyii Southern Bluefin Tuna [69402]	Conservation Dependent	Species or species habitat likely to occur within area
INSECT		
Hesperocolletes douglasi Douglas' Broad-headed Bee, Rottnest Bee [66734]	Critically Endangered	Species or species habitat may occur within area
MAMMAL		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat likely to occur within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat known to occur within area
PLANT		
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat may occur within area
REPTILE		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
SHARK		
Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Congregation or aggregation known to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sphyrna lewini Scalloped Hammerhead [85267]	Conservation Dependent	Species or species habitat likely to occur within area

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

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat may occur within area
Ardenna pacifica Wedge-tailed Shearwater [84292]		Breeding known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Onychoprion anaethetus Bridled Tern [82845]		Breeding known to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Breeding known to occur within area
Sterna dougallii Roseate Tern [817]		Breeding known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Migratory Marine Species		
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area
Mobula alfredi as Manta alfredi Reef Manta Ray, Coastal Manta Ray [90033]		Species or species habitat known to occur within area
Mobula birostris as Manta birostris Giant Manta Ray [90034]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
Calidris acuminata Sharp-tailed Sandpiper [874]		Foraging, feeding or related behaviour known to occur within area
Calidris alba Sanderling [875]		Foraging, feeding or related behaviour known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Foraging, feeding or related behaviour known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour known to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Foraging, feeding or related behaviour known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
Pluvialis squatarola Grey Plover [865]		Foraging, feeding or related behaviour known to occur within area
Thalasseus bergii Greater Crested Tern [83000]		Breeding known to occur within area
Tringa brevipes Grey-tailed Tattler [851]		Foraging, feeding or related behaviour known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour known to occur within area
Tringa totanus Common Redshank, Redshank [835]		Foraging, feeding or related behaviour known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Foraging, feeding or related behaviour known to occur within area

Other Matters Protected by the EPBC Act

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
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]		Species or species habitat may occur within area
Ardenna pacifica as Puffinus pacificus Wedge-tailed Shearwater [84292]		Breeding known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Foraging, feeding or related behaviour known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Foraging, feeding or related behaviour known to occur within area
Calidris alba Sanderling [875]		Foraging, feeding or related behaviour known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area overfly marine area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Calidris ruficollis Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area overfly marine area
Charadrius bicinctus Double-banded Plover [895]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Chroicocephalus novaehollandiae as Larus novaehollandiae Silver Gull [82326]		Breeding known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Species or species habitat may occur within area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Hydroprogne caspia as Sterna caspia Caspian Tern [808]		Breeding known to occur within area
Larus pacificus Pacific Gull [811]		Foraging, feeding or related behaviour may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area

Scientific Name	Threatened Category	Presence Text
Limosa limosa Black-tailed Godwit [845]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area overfly marine area
Numenius phaeopus Whimbrel [849]		Foraging, feeding or related behaviour known to occur within area
Onychoprion anaethetus as Sterna anaethetus Bridled Tern [82845]		Breeding known to occur within area
Onychoprion fuscatus as Sterna fuscata Sooty Tern [90682]		Breeding known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Phaethon rubricauda Red-tailed Tropicbird [994]		Breeding known to occur within area
Phalaropus lobatus Red-necked Phalarope [838]		Foraging, feeding or related behaviour known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Foraging, feeding or related behaviour known to occur within area
Pluvialis squatarola Grey Plover [865]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Puffinus assimilis Little Shearwater [59363]		Breeding known to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat may occur within area overfly marine area
Sterna dougallii Roseate Tern [817]		Breeding known to occur within area
Sternula nereis as Sterna nereis Fairy Tern [82949]		Breeding known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Species or species habitat may occur within area
Thalasseus bergii as Sterna bergii Greater Crested Tern [83000]		Breeding known to occur within area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat likely to occur within area overfly marine area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Foraging, feeding or related behaviour known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area overfly marine area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Tringa totanus Common Redshank, Redshank [835]		Foraging, feeding or related behaviour known to occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Xenus cinereus Terek Sandpiper [59300]		Foraging, feeding or related behaviour known to occur within area overfly marine area
Fish		
Acentronura australe Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Longsnout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammal		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat likely to occur within area
Reptile		
Aipysurus pooleorum Shark Bay Seasnake [66061]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Disteira kingii Spectacled Seasnake [1123]		Species or species habitat may occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area

Scientific Name	Threatened Category	Presence Text
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area
Whales and Other Cetaceans [Resource Information]		
Current Scientific Name	Status	Type of Presence
Mammal		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area

Current Scientific Name	Status	Type of Presence
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves [\[Resource Information \]](#)

Protected Area Name	Reserve Type	State
Rottnest Island	State Reserve	WA

Nationally Important Wetlands [\[Resource Information \]](#)

Wetland Name	State
Rottnest Island Lakes	WA

EPBC Act Referrals [\[Resource Information \]](#)

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Seismic Survey, Bremer Basin, Mentelle Basin and Zeewyck Sub-basin	2004/1700	Not Controlled Action	Completed

Biologically Important Areas

Scientific Name	Behaviour	Presence
Seabirds		
Ardenna carneipes Flesh-footed Shearwater [82404]	Aggregation	Known to occur
Ardenna pacifica Wedge-tailed Shearwater [84292]	Foraging (in high numbers)	Known to occur
Eudyptula minor Little Penguin [1085]	Foraging (provisioning young)	Known to occur
Hydroprogne caspia Caspian Tern [808]	Foraging (provisioning)	Known to occur

Scientific Name	Behaviour	Presence
	young)	
Larus pacificus Pacific Gull [811]	Foraging (in high numbers)	Former Range
Onychoprion anaethetus Bridled Tern [82845]	Foraging (in high numbers)	Known to occur
Puffinus assimilis tunneyi Little Shearwater [59363]	Foraging (in high numbers)	Known to occur
Sterna dougallii Roseate Tern [817]	Foraging	Known to occur
Sternula nereis Fairy Tern [82949]	Foraging (in high numbers)	Known to occur

Seals

Neophoca cinerea Australian Sea Lion [22]	Foraging (male)	Likely to occur
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Whales

Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Distribution	Known to occur
Megaptera novaeangliae Humpback Whale [38]	Migration (north and south)	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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Appendix B Framework for conservation significant flora and fauna ranking

CATEGORIES OF THREATENED SPECIES UNDER THE ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 (EPBC ACT)

Threatened fauna and flora may be listed in any one of the following categories as defined in Section 179 of the EPBC Act. Species listed as 'conservation dependent' and 'extinct' are not Matters of National Environmental Significance and therefore do not trigger the EPBC Act.

Category	Definition
Extinct (EX)	There is no reasonable doubt that the last member of the species has died.
Extinct in the Wild (EW)	Taxa known to survive only in captivity or as a naturalised population well outside its past range; or taxa has not been recorded in its known and/or expected habitat at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
Critically Endangered (CE)	Taxa considered to be facing an extremely high risk of extinction in the wild.
Endangered (EN)	Taxa considered to be facing a very high risk of extinction in the wild.
Vulnerable (VU)	Taxa considered to be facing a high risk of extinction in the wild.
Near Threatened (NT)	Taxa has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for or is likely to qualify for a threatened category in the near future.
Least Concern (LC)	Taxa has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.
Data Deficient (DD)	There is inadequate information to make a direct, or indirect, assessment of taxa's risk extinction based on its distribution and/or population status.
Not Evaluated (NE)	Taxa has not yet been evaluated against the criteria.
Migratory (MI)	Not an IUCN category. Species are defined as migratory if they are listed in an international agreement approved by the Commonwealth Environment Minister, including: <ul style="list-style-type: none"> • the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animal) for which Australia is a range state; • the agreement between the Government of Australian and the Government of the People's Republic of China for the Protection of Migratory Birds and their environment (CAMBA); • the agreement between the Government of Japan and the Government of Australia for the Protection of Migratory Birds and Birds in Danger of Extinction and their Environment (JAMBA); or • the agreement between Australia and the Republic of Korea to develop a bilateral migratory bird agreement similar to the JAMBA and CAMBA in respect to migratory bird conservation and provides a basis for collaboration on the protection of migratory shorebirds and their habitat (ROKAMBA).

CONSERVATION CODES FOR WESTERN AUSTRALIA FLORA AND FAUNA

The Wildlife Conservation (Specially Protected Fauna) Notice 2018 and the Wildlife Conservation (Rare Flora) Notice 2018 have been transitioned under regulations 170, 171 and 172 of the Biodiversity Conservation Regulations 2018 to be the lists of Threatened, Extinct and Specially Protected species under Part 2 of the *Biodiversity Conservation Act 2016*.

Specially protected fauna or flora are species which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

Threatened species (T)

Threatened fauna is that subset of ‘Specially Protected Fauna’ listed under Schedule 2 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 made by the Minister under sections 13(1), 19(1) and 23(1) of the Act and regulation 174(1) of the *Biodiversity Conservation Regulations 2018*.

Threatened flora is that subset of ‘Rare Flora’ listed under Schedule 1 of the Biodiversity Conservation (Listing of Native Species) (Rare Flora) Notice 2022 made by the Minister under sections 19(1) and 23(1) of the BC Act and regulation 174(1) of the *Biodiversity Conservation Regulations 2018*.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

Category	Code	Description
Critically Endangered species	CR	Threatened species considered to be “facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines”. Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under Schedule 2-Division 1 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for critically endangered fauna or Schedule 1-Division 1 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.
Endangered species	EN	Threatened species considered to be “facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines”. Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under Schedule 2-Division 2 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for endangered fauna or Schedule 1-Division 2 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.
Vulnerable species	VU	Threatened species considered to be “facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines”. Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under Schedule 2-Division 3 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for endangered fauna or Schedule 1-Division 3 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild, as follows:

Category	Code	Description
Extinct species	EX	Species which have been adequately searched for and there is no reasonable doubt that the last individual has died. Published as Extinct Species under Schedule 3 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022 for endangered fauna or Schedule 2 of the Biodiversity Conservation (Rare Flora) Notice 2022 for critically endangered flora.
Extinct in the wild species	EW	Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act). Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. These species meet one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

Categories are detailed below.

Category	Code	Description
Migratory species	MI	<p>Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).</p> <p>Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.</p> <p>Published as migratory birds protected under an international agreement under Schedule 1-Division 2 of the 5 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022.</p>
Species of special conservation interest (conservation dependent fauna)	CD	<p>Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).</p> <p>Published as conservation dependent fauna under Schedule 1-Division 1 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022.</p>
Other specially protected species	OS	<p>Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).</p> <p>Published as other specially protected fauna under Schedule 1-Division 3 of the Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022.</p>

Priority species (P)

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.




Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.




Category	Code	Definition
Priority 1	P1	<p>Poorly-known species</p> <p>Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g., agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.</p>
Priority 2	P2	<p>Poorly-known species</p> <p>Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g., national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.</p>
Priority 3	P3	<p>Poorly-known species</p> <p>Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.</p>
Priority 4	P4	<p>Rare, Near Threatened and other species in need of monitoring</p> <p>(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.</p> <p>(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.</p> <p>(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.</p>




Appendix C Likelihood of occurrence assessment criteria


Likelihood rating	Criteria
Recorded	The species has previously been recorded within the survey area from DBCA database search results and/or from previous surveys of the survey area, and/or the species has been confirmed through a current vouchered specimen at WA Herbarium.
Likely	<p>The species has not previously been recorded from within the survey area. However, (to qualify requires one or more criteria to be met):</p> <p>the species has been recorded in close proximity to the survey area, and occurs in similar habitat to that which occurs within the survey area;</p> <p>core habitat and suitable landforms for the species occurs within the survey area either year-round or seasonally. In relation to fauna species, this could be that a host plant is seasonally present on site, or habitat features such as caves are present that may be used during particular times during its life cycle e.g., for breeding. In relation to both flora and fauna species, it may be there are seasonal wetlands present; and</p> <p>there is a medium to high probability that a species uses the survey area.</p>
Potential	<p>The species has not previously been recorded from within the survey area. However, (one or more criteria requires to be met):</p> <p>targeted surveys may locate the species based on records occurring in proximity to the survey area and suitable habitat occurring in the survey area;</p> <p>the survey area has been assessed as having potentially suitable habitat through habitat modelling;</p> <p>the species is known to be cryptic and may not have been detected despite extensive surveys;</p> <p>the species is highly mobile and has an extensive foraging range so may not have been detected during previous surveys;</p> <p>The species has been recorded in the survey area by a previous consultant survey or there is historic evidence of species occurrence within the survey area. However, (one or more criteria requires to be met):</p> <p>doubt remains over taxonomic identification, or the majority of habitat does not appear suitable (although presence cannot be ruled out due to factors such as species ecology or distribution); and</p> <p>coordinates are doubtful.</p>
Unlikely	<p>The species has been recorded locally through DBCA database searches. However, it has not been recorded within the survey area and</p> <p>it is unlikely to occur due to the site lacking critical habitat, having at best marginally suitable habitat, and/or being severely degraded.</p> <p>it is unlikely to occur due to few historic record/s and no other current collections in the local area.</p> <p>The species has been recorded within the bioregion based on literature review but has not been recorded locally or within the survey area through DBCA database searches.</p> <p>The species has not been recorded in the survey area despite adequate survey efforts, such as a standardised methodology or targeted searching within potentially suitable habitat.</p>
Does not occur (one or more criteria requires to be met).	<p>The species is not known to occur within the IBRA bioregion based on current literature and distribution.</p> <p>The conspicuous species has not been recorded in the survey area despite adequate survey efforts at an appropriate time of year to detect the species within potentially suitable habitat.</p> <p>The survey area lacks important habitat for a species that has highly selective habitat requirements.</p> <p>The species has been historically recorded within survey area or locally; however, it is considered locally extinct due to significant habitat changes such as land clearing and/or introduced predators.</p>

Appendix D Fauna habitat points

Fauna habitat point	Fauna habitat type	Associated flora species	Landform	Easting	Northing	Photo
SITE 1	Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<i>Agonis flexuosa</i> , <i>Acanthocarpus preissii</i> , <i>*Trachyandra divaricata</i> , <i>Conostylis candicans</i> subsp. <i>calcicola</i> , <i>Austrostipa</i> sp.	Sand dunes	362853	6458416	
SITE 2	Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes.	<i>Acanthocarpus preissii</i> , <i>Scaevola crassifolia</i> , <i>Conostylis candicans</i> subsp. <i>calcicola</i> , <i>Austrostipa</i> sp., <i>*Trachyandra divaricata</i>	Sand dunes	362865	6458432	
SITE 3	Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<i>Melaleuca lanceolata</i> , <i>Acanthocarpus preissii</i> , <i>Austrostipa</i> sp., <i>*Trachyandra divaricata</i>	Sand dunes	362934	6458370	

Fauna habitat point	Fauna habitat type	Associated flora species	Landform	Easting	Northing	Photo
SITE 4	Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<i>Eucalyptus gomphocephala</i> , <i>Melaleuca lanceolata</i> , <i>Acanthocarpus preissii</i> , <i>Scaevola crassifolia</i> , <i>*Trachyandra divaricata</i>	Sand dunes	362982	6458394	
SITE 5	Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes.	<i>Acanthocarpus preissii</i> , <i>Lepidosperma gladiatum</i> , <i>Austrostipa sp.</i> , <i>*Trachyandra divaricata</i>	Sand dunes	362933	6458306	
SITE 6	Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<i>Melaleuca lanceolata</i> , <i>Callitris preissii</i> , <i>Acanthocarpus preissii</i> , <i>*Trachyandra divaricata</i>	Sand dunes and flats	362959	6458306	

Fauna habitat point	Fauna habitat type	Associated flora species	Landform	Easting	Northing	Photo
SITE 7	Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<i>Melaleuca lanceolata</i> , <i>Callitris preissii</i> , <i>Acacia rostellifera</i> , <i>Acanthocarpus preissii</i> , * <i>Trachyandra divaricata</i>	Sand dunes and flats	362989	6458252	
SITE 8	Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes.	<i>Melaleuca lanceolata</i> , <i>Acanthocarpus preissii</i> , <i>Scaevola crassifolia</i> , <i>Guichenotia ledifolia</i> , <i>Conostylis candicans</i> subsp. <i>calcicola</i> ,	Sand dunes	363030	6458276	
SITE 9	Fauna habitat 1: Trees and tall shrubs over low shrubs, grasses and herbs on sand dunes.	<i>Melaleuca lanceolata</i> , <i>Acanthocarpus preissii</i> , <i>Austrostipa</i> sp., * <i>Trachyandra divaricata</i>	Sand dunes	363091	6458277	

Fauna habitat point	Fauna habitat type	Associated flora species	Landform	Easting	Northing	Photo
SITE 10	Fauna habitat 2: Low shrubs over grasses and herbs on sand dunes.	<i>Acanthocarpus preissii</i> , <i>Scaevola crassifolia</i> , <i>Conostylis candicans</i> subsp. <i>calcicola</i> , <i>Austrostipa</i> sp., <i>*Trachyandra divaricata</i> , <i>Austrostipa</i> sp.	Sand dunes	363115	6458319	

Appendix E Fauna likelihood of occurrence assessment

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Calidris ferruginea</i>	Curlew Sandpiper	Bird	CR, MI	CR	DCCEEW 2023a, DBCA 2023	Curlew sandpipers forage on mudflats and nearby shallow water. In non-tidal wetlands, they usually wade, mostly in water 15–30 mm, but up to 60 mm deep. They forage at the edges of shallow pools and drains of intertidal mudflats and sandy shores. At high tide, they sometimes forage among low sparse emergent vegetation, such as saltmarsh, and sometimes forage in flooded paddocks or inundated saltflats. Curlew sandpipers roost in open situations with damp substrate, especially on bare shingle, shell or sand beaches, sandspits and islets in or around coastal or near-coastal lagoons and other wetlands, occasionally roosting in dunes during very high tides and sometimes in saltmarsh.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Calidris tenuirostris</i>	Great Knot	Bird	CR, MI	CR	DCCEEW 2023a, DBCA 2023	In Australasia, the species typically prefers sheltered coastal habitats, with large intertidal mudflats or sandflats. This includes inlets, bays, harbours, estuaries and lagoons. They are occasionally found on exposed reefs or rock platforms, shorelines with mangrove vegetation, ponds in saltworks, at swamps near the coast, saltlakes and non-tidal lagoons.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	Bird	CR, MI	CR	DCCEEW 2023a	The Eastern Curlew does not breed in Australia. The eastern curlew mainly forages during the non-breeding season on soft sheltered intertidal sandflats or mudflats, open and without vegetation or covered with seagrass, often near mangroves, on saltflats and in saltmarsh, rockpools and among rubble on coral reefs, and on ocean beaches near the tideline. The birds are rarely seen on near-coastal lakes or in grassy areas. The eastern curlew roosts during high tide periods on sandy spits, sandbars and islets, especially on beach sand near the high-water mark, and among coastal vegetation including low saltmarsh or mangroves.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Hesperocolletes douglasi</i>	Douglas' Broad-headed Bee, Rottnest Bee	Insect	CR	CR	DCCEEW 2023a, 360 Environmental 2022b, DBCA 2023	The species was previously listed as 'presumed extinct' based on a specimen found in 1938 on Rottnest Island, the dramatic changes to the island vegetation since European settlement and despite extensive searched in the Perth Region (including Rottnest and Garden Islands). In 2015, a single specimen was collected within the <i>Banksia</i> woodland in Muchea and on that basis has been reassessed and listed as Critically Endangered. Very little is known about the species including its floral preferences.	Potential	Habitat requirements of this species are unknown. Species may utilise the survey area.	Unlikely	Habitat requirements of this species are unknown, however the species is only known from two specimens, one from East of Muchea on the Swan Coastal Plain and one from Rottnest Island from 1938.
<i>Limosa lapponica menzbieri</i>	Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit	Bird	CR	CR	DCCEEW 2023a	The Bar-tailed Godwit is found mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. It has been sighted in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks and airstrips, although it is commonly recorded in paddocks at some locations overseas.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Diomedea amsterdamensis</i>	Amsterdam Albatross	Bird	EN, MI	CR	DCCEEW 2023a	The Amsterdam Albatross is a marine, pelagic seabird. It nests in open patchy vegetation (among tussocks, ferns or shrubs) near exposed ridges or hillocks. It sleeps and rests on ocean waters when not breeding.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Diomedea dabbenena</i>	Tristan Albatross	Bird	EN, MI	CR	DCCEEW 2023a	The Tristan albatross is a marine, pelagic seabird. It forages in open water in the Atlantic Ocean near the Cape of Good Hope, South Africa. It sleeps and rests on ocean waters when not breeding.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Calidris canutus</i>	Red Knot, Knot	Bird	EN, MI	EN	DCCEEW 2023a, DBCA 2023	In Australasia the Red Knot mainly inhabit 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. They are occasionally seen on terrestrial saline wetlands near the coast, such as lakes, lagoons, pools and pans, and recorded on sewage ponds and saltworks, but rarely use freshwater swamps. They rarely use inland lakes or swamps.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Caretta caretta</i>	Loggerhead Turtle	Reptile	EN, MI	EN	DCCEEW 2023a	It spends most of its life in open ocean, shallow coastal waters and estuarine habitats, with females briefly coming ashore (to sandy beach) to lay eggs. The loggerhead sea turtle is omnivorous, feeding mainly on bottom-dwelling invertebrates. Hatchling loggerhead turtles live in floating mats of Sargassum algae.	Unlikely	Although species may utilise adjacent beach, they are unlikely to utilise areas (vegetated) within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Charadrius mongolus</i>	Lesser Sand Plover, Mongolian Plover	Bird	EN, MI	EN	DCCEEW 2023a, DBCA 2023	In non-breeding grounds in Australia, this species usually occurs in coastal littoral and estuarine environments. It inhabits 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. It also sometime occurs in short saltmarsh or among mangroves. The species also inhabits saltworks and near-coastal saltpans, brackish swamps and sandy or silt islands in river beds.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Diomedea sanfordi</i>	Northern Royal Albatross	Bird	EN, MI	EN	DCCEEW 2023a	The Northern Royal Albatross is marine, pelagic and aerial. Its habitat includes subantarctic, subtropical, and occasionally Antarctic waters. The Northern Royal Albatross nests on flat or gently sloping ground, on slopes, ridges, gullies and plateaux of large islands, and on the summits of islets.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Bird	EN	EN	DCCEEW 2023a	The Australasian Bittern occurs mainly in freshwater wetlands and, rarely, in estuaries or tidal wetlands.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Neophoca cinerea</i>	Australian Sea-lion, Australian Sea Lion	Mammal	EN	EN	DCCEEW 2023a, DBCA 2023	Australian Sea-lions use a wide variety of habitats for breeding sites (called rookeries) and, during the non-breeding season, for haul-out sites (rest stops, which are also useful for predator avoidance, thermal regulation and social activity). Onshore habitats used include exposed islands and reefs, rocky terrain, sandy beaches and vegetated fore dunes and swales. They also use caves and deep cliff overhangs as haul-out sites or breeding habitat.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Rostratula australis</i>	Australian Painted Snipe	Bird	EN	EN	DCCEEW 2023a	The Australian painted snipe occurs in shallow freshwater (occasionally brackish) wetlands, both ephemeral and permanent, such as lakes, swamps, claypans, inundated or waterlogged grassland/saltmarsh, dams, rice crops, sewage farms and bore drains, generally with a good cover of grasses, rushes and reeds, low scrub, <i>Muehlenbeckia</i> spp. (lignum), open timber or samphire.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Zanda latirostris</i>	Carnaby's Black Cockatoo, Short-billed Black-cockatoo	Bird	EN	EN	DCCEEW 2023a, DBCA 2023	Carnaby's Cockatoo occurs in uncleared or remnant native eucalypt woodlands, especially those that contain salmon gum and wandoo, and in shrubland or kwongan heathland dominated by hakea, dryandra, banksia and grevillea species.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Very marginal suitable habitat for this species was recorded within the survey area; namely Tuart (<i>Eucalyptus gomphocephala</i>) trees for roosting. Species is unlikely to use this habitat given the proximity to infrastructure, degraded nature of vegetation and availability of further resources on the island.
<i>Dermochelys coriacea</i>	Leatherback Turtle, Leathery Turtle, Luth	Reptile	EN, MI	VU	DCCEEW 2023a, DBCA 2023	The Leatherback Turtle breeds in tropical locations, but when non-breeding it often migrates to middle latitudes such as the coastal waters of southern Australia. It feeds at the surface, moving slowly to consume jellyfish. Leatherback sea turtles can be found primarily in the open ocean. Leatherbacks follow their jellyfish prey throughout the day, resulting in turtles "preferring" deeper water in the daytime, and shallower water at night. Their favored breeding beaches are mainland sites facing the deep water with soft sand. The typical nesting environment includes a dark forested area adjacent to the beach.	Unlikely	Although species may utilise adjacent beach, they are unlikely to utilise areas (vegetated) within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Thalassarche cauta</i>	Shy Albatross	Bird	EN, MI	VU	DCCEEW 2023a	Breeds on islands off New Zealand and Tasmania, dispersing across the southern Indian Ocean to southern African waters, where it is especially common off the southern and western coast of South Africa and Namibia. It generally prefers water on the continental shelf, while more scarce further out in the ocean. It does both hunting and scavenging, mainly feeding on pelagic schooling fish and offal and bycatch from fishing vessels, supplemented with crustaceans and squid.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Macronectes giganteus</i>	Southern Giant-Petrel, Southern Giant Petrel	Bird	EN, MI	MI	DCCEEW 2023a	The Southern Giant-Petrel 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.	Unlikely	Outside of species distribution.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Phoebastria fusca</i>	Sooty Albatross	Bird	VU, MI	EN	DCCEEW 2023a	The Sooty Albatross is marine and pelagic. During both the breeding and non-breeding seasons, the species occurs widely over pelagic waters, exploiting dispersed sources of food. The species breeds on subtropical and subantarctic islands in the Indian and Atlantic Oceans, on vegetated cliffs and steep slopes that are sheltered from prevailing winds, often amongst tussock grass.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	Bird	VU, MI	EN	DCCEEW 2023a	The Indian Yellow-nosed Albatross is a marine bird, located in subtropical and warmer subantarctic waters. The species nests on tussock-covered coastal cliffs and slopes, often in rocky situations.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Thalassarche melanophris</i>	Black-browed Albatross	Bird	VU, MI	EN	DCCEEW 2023a	The Black-browed Albatross is a marine species that inhabits Antarctic, subantarctic and temperate waters and occasionally enters the tropics. It forages around the breaks of continental and island shelves and across nearby underwater banks. The Black-browed Albatross breeds on subantarctic and peri-antarctic islands. The species is rarely sighted over land away from its breeding islands.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Anous tenuirostris melanops</i>	Australian Lesser Noddy	Bird	VU	EN	DCCEEW 2023a	The Australian Lesser Noddy is endemic to Australia and nests on the Houtman Abrolhos Islands and, possibly, Ashmore Reef. Birds remain near breeding islands throughout the year, however, gales may displace birds many hundreds of kilometres. The subspecies <i>A. t. subsp. tenuirostris</i> nests on tropical and sub-tropical islands in the Indian Ocean.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area. Survey area is not within this species usual distribution.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Macronectes halli</i>	Northern Giant Petrel	Bird	VU, MI	MI	DCCEEW 2023a	In summer, it occurs predominantly in sub-Antarctic to Antarctic waters, usually between 40 and 64° south in open oceans.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover	Bird	VU, MI	VU	DCCEEW 2023a, DBCA 2023	The Greater Sand Plover does not breed in Australia. The species is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons. Greater sand plovers usually feed from the surface of wet sand or mud on open intertidal flats of sheltered embayments, lagoons or estuaries. Greater sand plovers usually roost on sand-spits and banks on beaches or in tidal lagoons, and occasionally on rocky points or in adjacent areas of saltmarsh or claypans.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Chelonia mydas</i>	Green Turtle	Reptile	VU, MI	VU	DCCEEW 2023a	Green sea turtles move across three habitat types, depending on their life stage. They lay eggs on beaches. Mature turtles spend most of their time in shallow, coastal waters with lush seagrass beds. Adults frequent inshore bays, lagoons, and shoals with lush seagrass meadows. Entire generations often migrate between one pair of feeding and nesting areas. Within their geographical range, the green sea turtles generally stay near continental and island coastlines. Near the coastlines, the green sea turtles live within shallow bays and protected shores. In these protected shores and bays, the green sea turtle habitats include coral reefs, salt marshes, and nearshore seagrass beds. Juveniles are carnivorous, but as they mature they become omnivorous. Young sea turtles eat fish eggs, molluscs, jellyfish, small invertebrates, worms, sponges, algae, and crustaceans. Most adult sea turtles are strictly herbivorous, feeding on algae and sea grass.	Unlikely	Although species may utilise adjacent beach, they are unlikely to utilise areas (vegetated) within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Diomedea epomophora</i>	Southern Royal Albatross	Bird	VU, MI	VU	DCCEEW 2023a	Nearly 80 percent of a royal albatross' life is spent directly exposed to the cold, treacherous, open oceans of the Southern Hemisphere. Remote tropical islands are sought out for nesting. They typically nest on slopes with tussock grass providing some shelter, though exposed sites are also common as they ease the often difficult tasks of take-off and landing.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Diomedea exulans</i>	Wandering Albatross	Bird	VU, MI	VU	DCCEEW 2023a, DBCA 2023	The Wandering Albatross is marine, pelagic and aerial. On breeding islands, the Wandering Albatross nests on coastal or inland ridges, slopes, plateaux and plains, often on marshy ground.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Natator depressus</i>	Flatback Turtle	Reptile	VU, MI	VU	DCCEEW 2023a	Adults inhabit soft bottom habitat over the continental shelf of northern Australia. Flatback Turtles feed in turbid, shallow inshore waters. Nesting habitat includes sandy beaches in the tropics and subtropics with sand temperatures between 25 °C and 33 °C at nest depth.	Unlikely	Although species may utilise adjacent beach, they are unlikely to utilise areas (vegetated) within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Thalassarche impavida</i>	Campbell Albatross, Campbell Black-browed Albatross	Bird	VU, MI	VU	DCCEEW 2023a	The Campbell Albatross is a marine sea bird inhabiting sub-Antarctic and subtropical waters from pelagic to shelf-break water habitats. In breeding and non-breeding seasons, the Campbell Albatross are specialised shelf feeders, concentrating around breeding islands or over adjacent submarine banks. They make their nests on tussock-covered ledges and terraces of cliffs, slopes and hills, overlooking the sea or valleys, and on the summits of rocky islets.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Thalassarche steadi</i>	White-capped Albatross	Bird	VU, MI	VU	DCCEEW 2023a	The White-capped Albatross is a marine species and occurs in subantarctic and subtropical waters. Birds nest on slopes vegetated with tussock and succulents on Auckland Island.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Setonix brachyurus</i>	Quokka, Kwoka	Mammal	VU	VU	DCCEEW 2023a, 360 Environmental 2022b, DBCA 2023	The Quokka is a habitat specialist. In the north of its range it prefers dense understorey, less than 10 years since fire, adjacent vegetation age that is greater than 25 years and the absence of feral predators. The understorey structure of the habitats currently inhabited by the Quokka consist of dense, low vegetation that provides refuge from predation by owls, the Fox (<i>Vulpes vulpes</i>) and the Cat (<i>Felis catus</i>). These covered/shady microhabitats may also be important during the hotter months, particularly on Rottnest Island, where animals converge in dense thickets of <i>Gahnia</i> spp. and <i>Acanthocarpus</i> spp. The main habitat for mainland populations of the Quokka is dense riparian vegetation, but the species also uses a range of other habitat, including: heath and shrubland on the mainland coast and offshore islands, swampy shrublands, swordgrass-dominated understorey, Paperbark (<i>Melaleuca</i> spp.) swamp.	Potential	Species is mobile across the island and may utilise the survey area.	Recorded	Species was recorded within the survey area.
<i>Sternula nereis nereis</i>	Australian Fairy Tern	Bird	VU	VU	DCCEEW 2023a, DBCA 2023	The Fairy Tern (Australian) nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Halobaena caerulea</i>	Blue Petrel	Bird	VU		DCCEEW 2023a	The blue petrel previously bred on Macquarie Island itself, but breeding is now restricted to offshore stacks near Macquarie Island. Blue petrels nest in colonies, laying a single egg in rock crevices or burrows dug among rocks or tussock grasses. The blue petrel forages in Antarctic and subantarctic waters for pelagic crustaceans, fish, cephalopods and insects.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Pachyptila turtur subantarctica</i>	Fairy Prion (southern)	Bird	VU		DCCEEW 2023a	In Australia, breeding is recorded on two rock stacks off Macquarie Island and on the nearby Bishop and Clerk Island. The population may have been larger prior to the arrival of black rats on Macquarie Island. The subspecies digs burrows among rocks or low vegetation in which to nest. Burrows may be dug below mat forming herbs. Feeds by plucking food from the ocean surface. Some individuals may migrate towards New Zealand and southern Australia in winter.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Pterodroma mollis</i>	Soft-plumaged Petrel	Bird	VU		DCCEEW 2023a	The Soft-plumaged Petrel is a marine, oceanic species. Birds breeding at Iles Crozet forage mainly to the north of the islands, over subtropical waters. The birds burrow among tussock grass and ferns on slopes and valleys.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Ardenna carneipes</i>	Flesh-footed Shearwater, Fleshy-footed Shearwater	Bird	MI	VU	DCCEEW 2023a	The Flesh-footed Shearwater mainly occurs in the subtropics over continental shelves and slopes and occasionally inshore waters. Individuals also pass through the tropics and over deeper waters when on migration. Pairs breed on islands in burrows on sloping ground in coastal forest, scrubland, shrubland or grassland.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Phaethon rubricauda</i>	Red-tailed Tropicbird	Bird	MI	MI, P4	DCCEEW 2023a, DBCA 2023	It nests in loose colonies, on offshore islands and stacks, rocky cliffs, coral atolls and cays. It rarely nests on large bodies of land, though has done so in southern Western Australia.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Tringa brevipes</i>	Grey-tailed Tattler	Bird	MI	MI, P4	DCCEEW 2023a	The Grey-tailed Tattler is often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats. It can also be found at intertidal rocky, coral or stony reefs as well as platforms and islets that are exposed at low tide.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Actitis hypoleucos</i>	Common Sandpiper	Bird	MI	MI	DCCEEW 2023a	The Common Sandpiper does not breed in Australia. The species utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. Generally the species forages in shallow water and on bare soft mud at the edges of wetlands; often where obstacles project from substrate, e.g. rocks or mangrove roots. Roost sites are typically on rocks or in roots or branches of vegetation, especially mangroves.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Anous stolidus</i>	Common Noddy	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	During the breeding season, the Common Noddy usually occurs on or near islands, on rocky islets and stacks with precipitous cliffs, or on shoals or cays of coral or sand. When not at the nest, individuals will remain close to the nest, foraging in the surrounding waters. Birds may nest in bushes, saltbush, or other low vegetation. They may also nest on the ground in Pigface (<i>Carpobrotus</i> spp.) or grass, on bare rock, on top of rocks protruding above vegetation, on shingle beaches, among coral rubble or in sand close to grassy areas.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Apus pacificus</i>	Fork-tailed Swift	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	The Fork-tailed Swift is almost exclusively aerial, flying from less than 1 m to at least 300 m above ground and probably much higher. In Australia, they mostly occur over inland plains but sometimes above foothills or in coastal areas. They often occur over cliffs and beaches and also over islands and sometimes well out to sea. They also occur over settled areas, including towns, urban areas and cities. They mostly occur over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Marginal habitat for this species (scrub, coastal areas, beaches) occurs within the survey area. However, species is almost exclusively aerial. Two records of this species from Rottneest Island are both >20 years old.
<i>Ardenna grisea</i>	Sooty Shearwater	Bird	MI	MI	DCCEEW 2023a	The Sooty Shearwater forages in pelagic (open ocean) sub-tropical, sub-Antarctic and Antarctic waters. The Sooty Shearwater breeds mainly on subtropical and sub-Antarctic islands, as well as on the mainland of New Zealand. Birds nest in burrows or rock crevices on coastal slopes, ridges and cliff tops, in herbfields, tussock grassland or forest. Areas with waterlogged or shallow soils and/or dense vegetation are avoided.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Ardenna pacifica</i>	Wedge-tailed Shearwater	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	The Wedge-tailed Shearwater is a pelagic, marine bird known from tropical and subtropical waters. The species tolerates a range of surface-temperatures and salinities, but is most abundant where temperatures are greater than 21 °C and salinity is greater than 34.6 ‰. In tropical zones the species may feed over cool nutrient-rich waters. The species has been recorded in offshore waters of eastern Victoria and southern NSW, mostly over continental slope with sea-surface temperatures of 13.9–24.4 °C and usually off the continental shelf in north-west Australia.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Arenaria interpres</i>	Ruddy Turnstone	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	In Australasia, the Ruddy Turnstone is mainly found on coastal regions with exposed rock coast lines or coral reefs. It also lives near platforms and shelves, often with shallow tidal pools and rocky, shingle or gravel beaches. It can, however, be found on sand, coral or shell beaches, shoals, cays and dry ridges of sand or coral. It has occasionally been sighted in estuaries, harbours, bays and coastal lagoons, among low saltmarsh or on exposed beds of seagrass, around sewage ponds and on mudflats. In north Australia it is known to occur in a wide variety of habitats, and may prefer wide mudflats.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	The Sharp-tailed Sandpiper does not breed in Australia. In Australia, the species prefers muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation. They forage at the edge of the water of wetlands or intertidal mudflats, either on bare wet mud or sand, or in shallow water. Roosting occurs at the edges of wetlands, on wet open mud or sand, in shallow water, or in short sparse vegetation, such as grass or saltmarsh.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Calidris alba</i>	Sanderling	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	In Australia, the species is almost always found on the coast, mostly on open sandy beaches exposed to open sea-swell, and also on exposed sandbars and spits, and shingle banks, where they forage in the wave-wash zone and amongst rotting seaweed. Sanderlings also occur on beaches that may contain wave-washed rocky outcrops. Less often the species occurs on more sheltered sandy shorelines of estuaries, inlets and harbours. Rarely, they are recorded in near-coastal wetlands, such as lagoons, hypersaline lakes, saltponds and samphire flats.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Calidris melanotos</i>	Pectoral Sandpiper	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	In Australasia, the Pectoral Sandpiper 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.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Calidris ruficollis</i>	Red-necked Stint	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	In Australasia, the Red-necked Stint is mostly found in coastal areas, including in sheltered inlets, bays, lagoons and estuaries with intertidal mudflats, often near spits, islets and banks and, sometimes, on protected sandy or coralline shores. Occasionally they have been recorded on exposed or ocean beaches, and sometimes on stony or rocky shores, reefs or shoals. They also occur in saltworks and sewage farms; saltmarsh; ephemeral or permanent shallow wetlands near the coast or inland, including lagoons, lakes, swamps, riverbanks, waterholes, bore drains, dams, soaks and pools in saltflats. They sometimes use flooded paddocks or damp grasslands. They have occasionally been recorded on dry gibber plains, with little or no perennial vegetation.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Charadrius bicinctus</i>	Double-banded Plover	Bird	MI	MI	DCCEEW 2023a	The Double-banded Plover is found on littoral, estuarine and fresh or saline terrestrial wetlands and also saltmarsh, grasslands and pasture. It occurs on muddy, sandy, shingled or sometimes rocky beaches, bays and inlets, harbours and margins of fresh or saline terrestrial wetlands such as lakes, lagoons and swamps, shallow estuaries and rivers. The species is sometimes associated with coastal lagoons, inland saltlakes and saltworks. It is also found on seagrass beds, especially <i>Zostera</i> , which, when exposed at low tide, remain heavily saturated or have numerous water-filled depressions. This species sometimes utilises kelp beds.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Charadrius dubius</i>	Little ringed plover	BIRD	MI	MI	DBCA 2023	Their breeding habitat is open gravel areas near freshwater, including gravel pits, islands and river edges across the Palearctic including northwestern Africa. It less commonly inhabits coastal areas such as saltpans, estuaries, creeks or rainwater pools on dry salt-flats bordering mangroves.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Gallinago megala</i>	Swinhoe's Snipe	Bird	MI	MI	DCCEEW 2023a	During the non-breeding season Swinhoe's Snipe occurs at the edges of wetlands, such as wet paddy fields, swamps and freshwater streams. The species is also known to occur in grasslands, drier cultivated areas. Habitat specific to Australia includes the dense clumps of grass and rushes round the edges of fresh and brackish wetlands. This includes swamps, billabongs, river pools, small streams and sewage ponds. They are also found in drying claypans and inundated plains pitted with crab holes.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Gallinago stenura</i>	Pin-tailed Snipe	Bird	MI	MI	DCCEEW 2023a	During non-breeding period the Pin-tailed Snipe 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. The species is also found in drier, more open wetlands such as claypans in more arid parts of species' range. It is also commonly seen at sewage ponds; not normally in saline or inter-tidal wetlands.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Hydroprogne caspia</i>	Caspian Tern	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	This species is mostly found in sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred. They also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes (including ephemeral lakes), waterholes, reservoirs, rivers and creeks.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Limosa lapponica</i>	Bar-tailed Godwit	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	Mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It is found often around beds of seagrass and, sometimes, in nearby saltmarsh. It has been sighted in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. It is rarely found on inland wetlands or in areas of short grass, such as farmland, paddocks and airstrips, although it is commonly recorded in paddocks at some locations overseas.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Limosa limosa</i>	Black-tailed Godwit	Bird	MI	MI	DCCEEW 2023a	In Australia the Black-tailed Godwit has a primarily coastal habitat environment. The species is commonly found 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, saltflats, river pools, swamps, lagoons and floodplains. There are a few inland records, around shallow, freshwater and saline lakes, swamps, dams and bore-overflows.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Motacilla cinerea</i>	Grey Wagtail	Bird	MI	MI	DCCEEW 2023a	Often near flowing water with nearby rocks or surrogate rocky habitat, from mountain streams to weirs in suburban parklands. Outside the breeding season, they may also be seen around lakes, coasts and other watery habitats.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Numenius minutus</i>	Little Curlew, Little Whimbrel	Bird	MI	MI	DCCEEW 2023a	The Little Curlew is most often found feeding in short, dry grassland and sedgeland, including dry floodplains and blacksoil plains, which have scattered, shallow freshwater pools or areas seasonally inundated. Open woodlands with a grassy or burnt understorey, dry saltmarshes, coastal swamps, mudflats or sandflats of estuaries or beaches on sheltered coasts, mown lawns, gardens, recreational areas, ovals, racecourses and verges of roads and airstrips are also used. When resting during the heat of day, the Little Curlew congregates around pools, river beds and water-filled tidal channels, and shallow water at edges of billabongs.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Numenius phaeopus</i>	Whimbrel	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	The Whimbrel is often found on the intertidal mudflats of sheltered coasts. It is also found in harbours, lagoons, estuaries and river deltas, often those with mangroves, but also open, unvegetated mudflats. The Whimbrel generally forages on intertidal mudflats, along the muddy banks of estuaries and in coastal lagoons, either in open unvegetated areas or among mangroves.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Onychoprion anaethetus</i>	Bridled Tern	Bird	MI	MI	DCCEEW 2023a	Bridled Terns occupy tropical and subtropical seas, breeding on islands, including vegetated coral cays, rocky continental islands and rock stacks. Bridled Terns are only rarely found in inshore continental waters and along mainland coastlines, though the species is reported to breed on the mainland of far southern Western Australia. The Bridled Tern roosts ashore when breeding. Frequency of use of different sites varies with time of breeding cycle following return from non-breeding areas, and with time of day. At breeding colonies, birds roost or loaf on branches of shrubs or low trees (such as Pisonia, Argusia), on rocks, less often on the ground among vegetation or rubble or on the shoreline. However, at the start of the breeding season and when the chicks are older (about 40 days old), birds roost or loaf in groups during the day on sandbanks or beaches and the like, distant from final breeding sites.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Pandion haliaetus</i>	Osprey	Bird	MI	MI	DCCEEW 2023a	Eastern Ospreys occur 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. They require extensive areas of open fresh, brackish or saline water for foraging.	Potential	Suitable habitat may be present within the survey area.	Potential	Marginal habitat for this species (coastal areas, trees for perching, adjacent ocean for foraging) occurs within the survey area. Species is highly mobile and may utilise the survey area as a transient visitor.
<i>Phalaropus lobatus</i>	Red-necked Phalarope	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	During non-breeding period the Red-necked Phalarope occurs mainly at sea. In Australia it is recorded at both inland and coastal lakes/swamps, including highly saline waters and artificial wetlands notably saltfields.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Pluvialis fulva</i>	Pacific Golden Plover	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	In non-breeding grounds in Australia this species usually inhabits coastal habitats, though it occasionally occurs around inland wetlands. Pacific Golden Plovers usually occur on beaches, mudflats and sandflats (sometimes in vegetation such as mangroves, low saltmarsh such as <i>Sarcocornia</i> , or beds of seagrass) in sheltered areas including harbours, estuaries and lagoons, and also in evaporation ponds in saltworks. The species is also sometimes recorded on islands, sand and coral cays and exposed reefs and rocks.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Pluvialis squatarola</i>	Grey Plover	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	In non-breeding grounds in Australia, Grey Plovers occur almost entirely in coastal areas, where they usually inhabit sheltered embayments, estuaries and lagoons with mudflats and sandflats, and occasionally on rocky coasts with wave-cut platforms or reef-flats, or on reefs within muddy lagoons. They also occur around terrestrial wetlands such as near-coastal lakes and swamps, or salt-lakes.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Sterna dougallii</i>	Roseate Tern	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	The Roseate Tern occurs in coastal and marine areas in subtropical and tropical seas. The species inhabits rocky and sandy beaches, coral reefs, sand cays and offshore islands. Birds rarely occur in inshore waters or near the mainland, usually venturing into these areas only accidentally, when nesting islands are nearby. They are rarely recorded foraging in shallow sheltered inshore waters. The Roseate Tern usually roosts or loafs in the intertidal zone on islands, including on the upper sections of beaches, above the high-water mark (but still in the wash-zone) on banks, spits and bars, usually of coral or sand. Birds can roost in the open, but this is often at the edge of, or among, sparse, prostrate vegetation, including grasses, succulents and herbs, usually comprising less than 25% ground-cover.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Thalasseus bergii</i>	Greater Crested Tern	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	Greater Crested Terns are widespread around the coasts of the Indian Ocean, Southern Ocean and west-central Pacific Ocean. They may rest on the surface of the sea in calm weather but during storms they shelter behind dunes, rocks and vegetation.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area. Vegetation is open, not sheltered.
<i>Tringa nebularia</i>	Common Greenshank, Greenshank	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	The Common Greenshank does not breed in Australia. The species is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. The species is known to forage at edges of wetlands, in soft mud on mudflats, in channels, or in shallows around the edges of water. The Common Greenshank roosts and loaf round wetlands, in shallow pools and puddles, or slightly elevated on rocks, sandbanks or small muddy islets.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Tringa stagnatilis</i>	Marsh Sandpiper, Little Greenshank	Bird	MI	MI	DCCEEW 2023a, DBCA 2023	Permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, salt pans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats and also regularly at sewage farms and saltworks. The Marsh Sandpiper usually forages in shallow water at the edge of wetlands. They probe wet mud of mudflats or feed among marshy vegetation. The Marsh Sandpiper has been recorded roosting or loafing on tidal mudflats, near low saltmarsh, and around inland swamps.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Tringa totanus</i>	Common Redshank, Redshank	Bird	MI	MI	DCCEEW 2023a	In Australia, the Common Redshank has been recorded at scattered locations. In Western Australia (WA), the species is vargrant to the south-west with records at Peel Inlet, Coodanup, the Gascoyne region, Coral Bay and Carnarvon. The Common Redshank is found at sheltered coastal wetlands such as bays, river estuaries, lagoons, inlets and saltmarsh (with bare open flats and banks of mud or sand). They are also found around saltlakes, freshwater lagoons, artificial wetlands and saltworks and sewage farms.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Xenus cinereus</i>	Terek Sandpiper	Bird	MI	MI	DCCEEW 2023a	The Terek Sandpiper mostly forages in the open, on soft wet intertidal mudflats or in sheltered estuaries, embayments, harbours or lagoons.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Tiliqua rugosa konowi</i>	Rottnest Island bobtail	Reptile	-	VU	360 Environmental 2022b, DBCA 2023	Rottnest Island Bobtails, also known as Shinglebacks, are common around limestone rocks and prefer limestone heath, woodland, and coastal habitats, but also be found around the Settlement Area.	Potential	Suitable habitat may be present within the survey area.	Recorded	Previously recorded by RIA (RIA; pers comms 5 January 2024)
<i>Falco peregrinus</i>	Peregrine Falcon	Bird	-	OS	360 Environmental 2022b, DBCA 2023	The Peregrine Falcon is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites, and prefers coastal and inland cliffs or open woodlands near water, and may even be found nesting on high city buildings. It occurs along rivers and ranges, as well as wooded watercourses and lakes.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Idiosoma sigillatum</i>	Swan Coastal Plain shieldbacked trapdoor spider	Insect	-	P3	360 Environmental 2022b, DBCA 2023	This species is the dominant idiopid trapdoor spider on the Swan Coastal Plan, where it occurs from Dalyellup north to at least Ledge Point (including Rottnest Island and Garden Island) with the eastern limit of its range along the sandy foothills of the Darling Escarpment, from Boyanup north to at least Gingin (WAM 2018b, Rix et al. 2018). Many of these records are historical in nature and occur within the Perth metropolitan area. It is highly likely that much of the habitat for this species within the Perth metropolitan area has been cleared for urban development and the species is unlikely to occur through much of its historical distribution in urban areas except in remnant habitats (e.g., Kings Park, Bold Park, and Shenton Park bushland). Burrows of this species usually occur in Banksia woodland and heathland on sandy soils and are adorned with a typical 'moustache-like' arrangement of twig-lines.	Potential	Suitable habitat may be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area. One historical record (>60 years) is located within 2km of the survey area.
<i>Lerista lineata</i>	Perth slider, lined skink	Reptile	-	P3	DCCEEW 2023a, DBCA 2023	The species was found in summer-scented wattle (<i>Acacia rostellifera</i>) scrub on Rottnest Island in 2016. Occurs in white sand.	Potential	Suitable habitat may be present within the survey area.	Potential	Suitable habitat for this species occurs within the survey area. Records are located within 2km of the survey area.
<i>Ixobrychus dubius</i>	Australian little bittern	BIRD	-	P4	DBCA 2023	The Australian Little Bittern occurs in diverse freshwater habitats, mainly where tall rushes, reeds, <i>Typha (cumbungi)</i> , shrub thickets or other dense cover is inundated by at least 30cm of water. It can be found in vast swamps, but unlike the Australasian Bittern, it often inhabits small patches of dense wetland vegetation such as <i>Typha</i> along drains or in small urban lakes.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area. Only one historical record from >80 years.	Unlikely	Suitable habitat for this species was not recorded within the survey area.
<i>Pseudonaja affinis exilis</i>	Rottnest Island dugite	Reptile	-	P4	360 Environmental 2022b, DBCA 2023	Dugites live in abandoned burrows or hollow logs and prefer coastal habitat, limestone heath, woodland, and the Settlement areas of the island.	Potential	Suitable habitat may be present within the survey area.	Recorded	Previously recorded by RIA (RIA; pers comms 5 January 2024)

Species	Common name	Type	EPBC Act	BC Act /DBC A	Source	Habitat description	Pre-survey likelihood	Justification	Post-survey likelihood	Justification
<i>Thinornis cucullatus</i>	Hooded plover, hooded dotterel	BIRD	-	P4	DBCA 2023	The hooded plover (eastern) is a small Australian beach nesting bird. It mainly occurs on wide beaches backed by dunes with large amounts of seaweed and jetsam, creek mouths and inlet entrances. Nests are found above the high water mark on flat beaches, on stony terraces, or on sparsely vegetated dunes.	Unlikely	Suitable habitat for this species is unlikely to be present within the survey area.	Unlikely	Suitable habitat for this species was not recorded within the survey area.

Appendix F Fauna species list

Type	Species	Common name	Listing	Observation type
Bird	<i>Chroicocephalus novaehollandiae</i>	Silver gull (Djeninkara)	-	Directly observed
Bird	<i>Corvus coronoides</i>	Australian Raven	-	Directly observed
Bird	<i>Gerygone fusca</i>	Western Gerygone	-	Heard
Bird	<i>Hirundo neoxena</i>	Welcome Swallow	-	Directly observed
Bird	<i>Lichenostomus virescens</i>	Singing Honeyeater	-	Directly observed
Bird	<i>Merops ornatus</i>	Rainbow bee-eater (Birin-birin)	-	Heard
Bird	<i>Pachycephala pectoralis</i>	Golden Whistler	-	Heard
Bird	<i>Petroica goodenovii</i>	Red-capped robin	-	Directly observed
Bird	<i>Spilopelia chinensis</i>	Spotted Dove	-	Directly observed
Bird	<i>Todiramphus sanctus</i>	Sacred Kingfisher	-	Directly observed
Bird	<i>Zosterops lateralis</i>	Silvereye	-	Directly observed
Mammal	<i>Setonix brachyurus</i>	Quokka (Kwoka)	VU	Directly observed
Reptile	<i>Ctenotus fallens</i>	West-coast laterite ctenotus	-	Directly observed
Reptile	<i>Egernia kingii</i>	King's skink (Woondi)	-	Directly observed

Appendix G Locations of conservation significant fauna recorded within the survey area

Species	Listing	Easting	Northing	Observation type
<i>Setonix brachyurus</i> (Quokka, Kwoka)	VU under EPBC Act and BC Act	362969	6458348	Scats
<i>Setonix brachyurus</i> (Quokka, Kwoka)	VU under EPBC Act and BC Act	362964	6458395	Directly observed
<i>Setonix brachyurus</i> (Quokka, Kwoka)	VU under EPBC Act and BC Act	362998	6458276	Directly observed