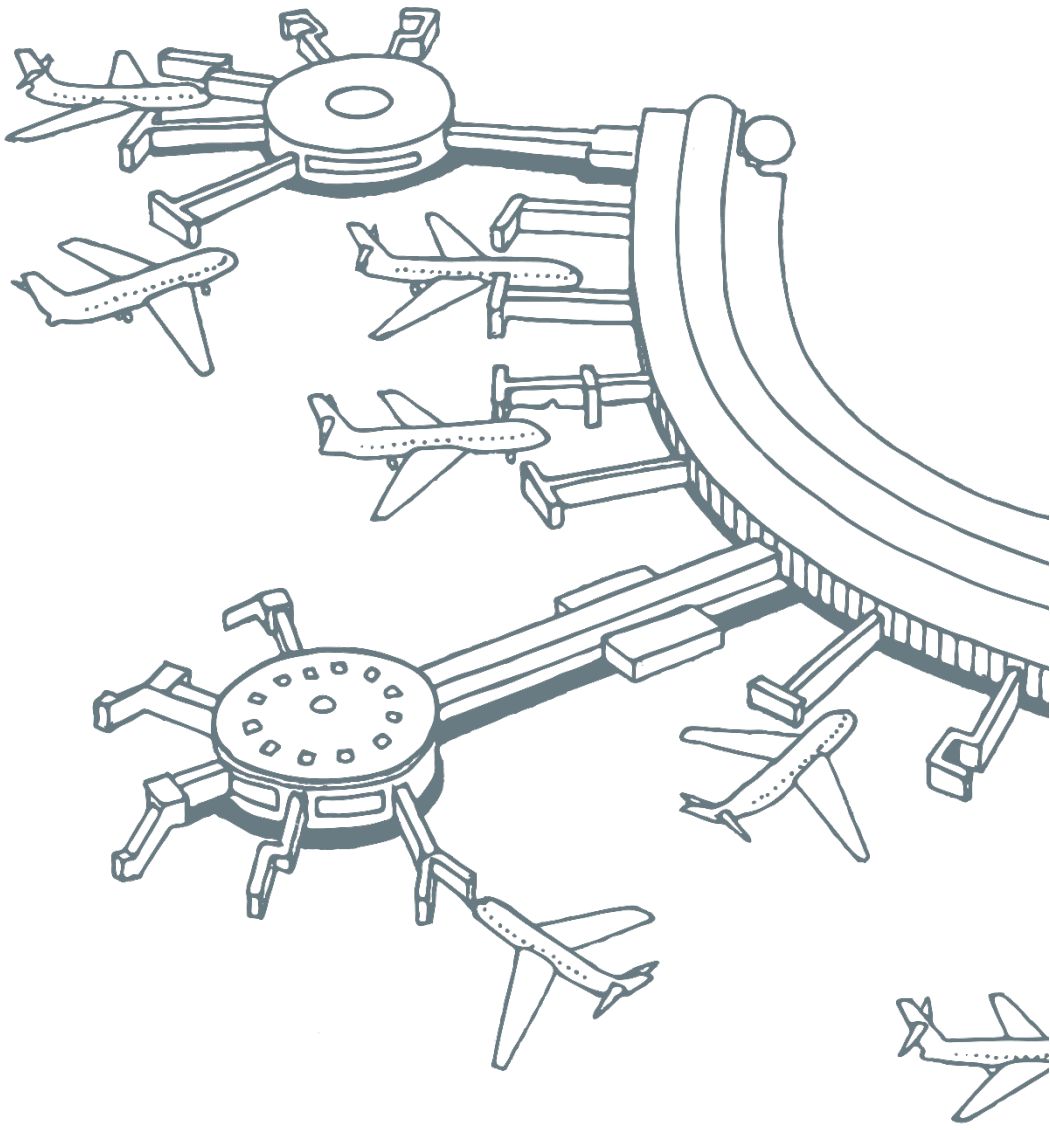
APPENDIX H
SELF-ASSESSMENT OF IMPACTS



BNE Auto Mall

Environment Protection and Biodiversity Conservation Act Self-Assessment of Impacts

Brisbane Airport Corporation

Reference: 503043

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Bringing ideas to life

Document control record

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1 Introduction

1.1 Project overview

To ensure compliance with the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), BAC have commissioned Aurecon to undertake an EPBC Act self-assessment for matters of national environmental significance (MNES) and impacts to land owned by the Commonwealth of Australia, for the construction and operation of the BNE Auto Mall (the Project) as part of BAC's Major Development Plan (MDP) application.

The Project involves the construction of the BNE Auto Mall on an unused 51.3 ha parcel of land bordered by Moreton Drive, Airport Drive and Nancy Bird Way. The BNE Auto Mall is set to be Australia's benchmark automotive precinct designed for new and used car buyers, motoring enthusiasts and the public. The development will include a diverse mix of uses such as:

- A range of commercial uses including, but not limited to, automotive retail dealerships, retail showrooms, and retail tenancies
- Dedicated manufacturers brand experience centres
- An automotive performance track, associated manoeuvring and handling courses, skidpan and 4WD testing circuit
- Track operations and management centre.

Clearing of vegetation within the Project area commenced in September 2017 under the land development phase of the Project. The Project area contains no natural vegetation communities and no potential natural habitats for shelter, foraging, animal breeding places. The project area boundary and aerial photography showing the Project area's current condition is provided in Figure 1.1.

The BNE Auto Mall will comprise a combination of hardstand, landscaped areas and the performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Landscape design will incorporate resilient, native species found within the airport's coastal setting. Species to be used as part of the planting palate, will not attract birds or flying foxes and, when fully mature, will not compromise operational airspace associated with airport operations.

1.2 Purpose and scope of this report

Desktop review of MNES, derived from the EPBC Protected Matters Search Tool (refer Appendix A) indicated that 120 separated MNES are predicted to occur within a 5 km radius of the Project area. An assessment of the likelihood of each MNES to occur within the Project area and its immediate surrounds has been undertaken. Results of this analysis indicate that 39 MNES have potential to occur based on the presence of preferred habitat within the Project area (refer to species identified in bold text in Table 1.1). An assessment of potential occurrence of each of the identified MNES is provided in Table 1.1.

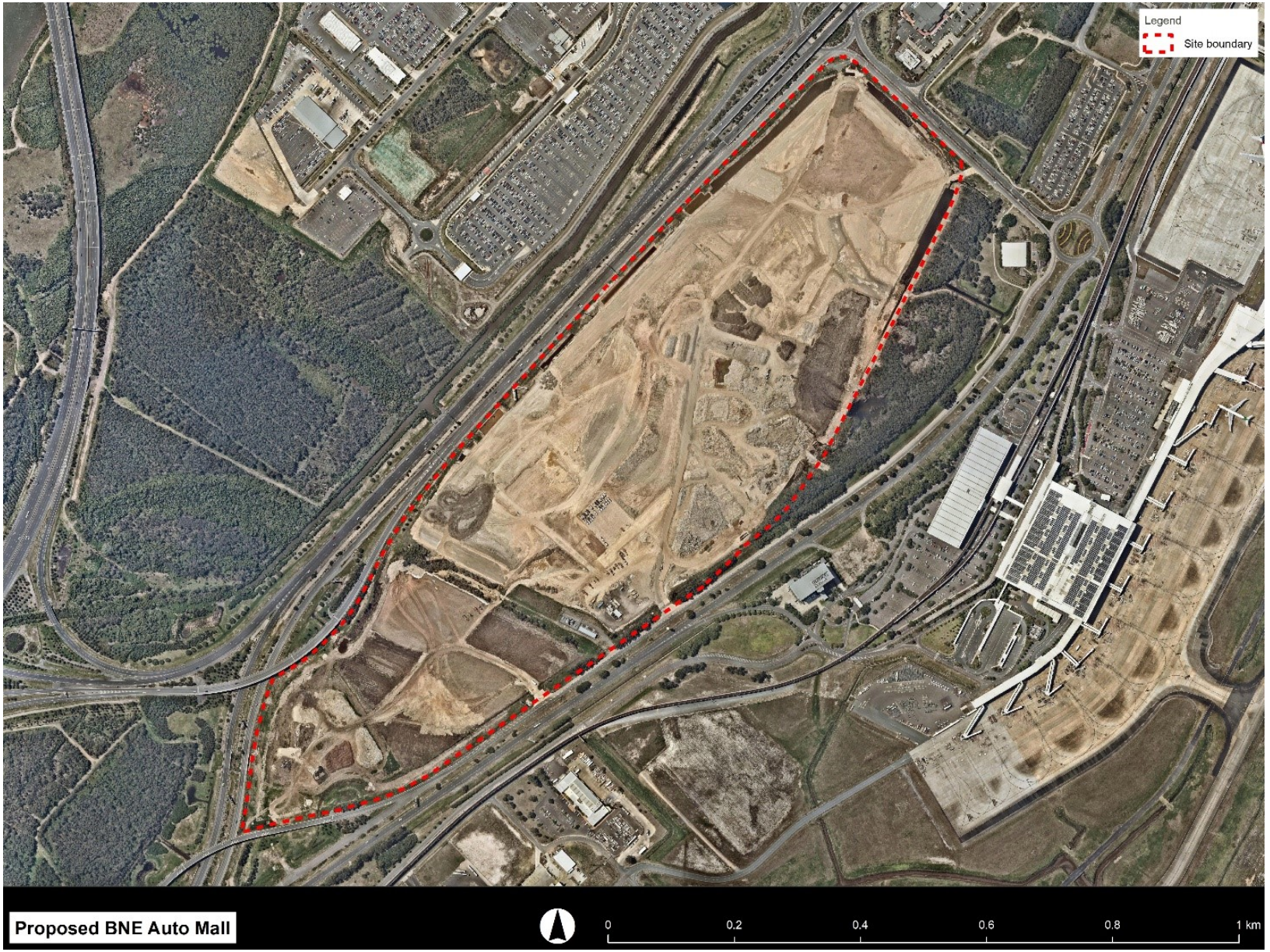


Figure 1.1 **Project area and current condition (as of 3 November 2018)**

Table 1.1 Matters of national environmental significance species identified as potentially occurring within the Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Commonwealth land			
Land owned by the Commonwealth of Australia	Protected	N/A	**Present** – Project area is located within Commonwealth owned land
Wetlands of international importance			
Moreton Bay	Protected (Ramsar wetland)	N/A	Absent – the Project area is terrestrial
Threatened ecological communities (TECs)			
Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland ecological community	Endangered	N/A	Absent – the Project area does not contain this TEC
Lowland Rainforest of Subtropical Australia	Critically endangered	N/A	Absent – the Project area does not contain this TEC
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	N/A	Absent – the Project area does not contain this TEC
Flora			
Arthraxon hispidus (Hairy-joint Grass)	Vulnerable	Rainforest, seeps and the edge of freshwater wetlands	Unlikely, suitable habitat does not exist within the Project area
Bosistoa transversa (Three-leaved Bosistoa)	Vulnerable	Rainforest	Unlikely, suitable habitat does not exist within the Project area
Cryptocarya foetida (Stinking Cryptocarya)	Vulnerable	Rainforest	Unlikely, suitable habitat does not exist within the Project area
Dichanthium setosum (Bluegrass)	Vulnerable	Native grasslands	Unlikely, suitable habitat does not exist within the Project area
Macadamia integrifolia (Macadamia Nut)	Vulnerable	Rainforest	Unlikely, suitable habitat does not exist within the Project area
Macadamia ternifolia (Small-fruited Queensland Nut)	Vulnerable	Rainforest	Unlikely, suitable habitat does not exist within the Project area
Macadamia tetraphylla (Rough-shelled Bush Nut)	Vulnerable	Rainforest	Unlikely, suitable habitat does not exist within the Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Phaius australis (Lesser Swamp-orchid)	Endangered	Wallum swamps, Paperbark swamps and wet heathlands	Unlikely, suitable habitat does not exist within the Project area
Samadera bidwillii (Quassia)	Vulnerable	Range of habitats including Eucalypt forest, woodland, farmland	Unlikely, suitable habitat does not exist within the Project area
Thesium australe (Austral toadflax)	Vulnerable	Grasslands on black soil	Unlikely, suitable habitat does not exist within the Project area.
Fauna			
Birds			
Anthochaera phrygia (Regent Honeyeater)	Critically endangered	Eucalypts forests and woodlands. Areas containing mistletoes	Unlikely, suitable habitat does not exist within the Project area
***Botaurus poiciloptilus* (Australasian bittern)**	Endangered	Freshwater and estuarine wetlands, drainage lines and flooded paddocks containing emergent macrophytes such as reeds	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris canutus* (Red knot)**	Endangered, Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris ferruginea* (Curlew sandpiper)**	Critically endangered, Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris tenuirostris* (Great knot)**	Critically endangered, Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area.
***Charadrius leschenaultii* (Greater sand plover)**	Vulnerable, Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Charadrius mongolus* (Lesser sand plover)**	Endangered, Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide (HAT) level	**Possible** – suitable roosting habitat may exist within the Project area
Dasyornis brachypterus (Eastern bristlebird)	Endangered	Within Queensland, grassland areas associated with mountainous areas located adjacent to Eucalypt forest	Unlikely, outside of the known range for this species
Diomedea antipodensis (Antipodean albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Diomedea antipodensis gibsoni (Gibson's albatross)	Vulnerable	Pelagic species	Unlikely, suitable habitat absent from Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Diomedea exulans (Wandering slbatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Erythrotriorchis radiatus (Red Goshawk)	Vulnerable	Eucalypt forest and woodland associated with drainage lines. The presence of large emergent canopy trees is essential and are typically chosen as nesting locations	Unlikely, suitable habitat absent from Project area
Fregetta grallaria grallaria (White-bellied Storm-Petrel	Vulnerable	Pelagic species	Unlikely, suitable habitat absent from Project area
Geophaps scripta scripta (Squatter Pigeon)	Vulnerable	Native grassland, open Eucalypt forest and woodland west of the Great Dividing Range.	Absent, outside of the known range for this species
Lathamus discolor (Swift Parrot)	Critically endangered	Eucalypt forests and woodland. This species feeds on Pollen and nectar and feeds only in Tasmania	Unlikely, outside of the known range for this species
***Limosa lapponica baueri* (Bar-tailed godwit)**	Vulnerable	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Limosa lapponica menzbieri* (Bar-tailed godwit)**	Critically endangered	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Macronectes giganteus (Southern Giant-Petrel)	Endangered, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Macronectes halli (Northern Giant Petrel)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
***Numenius madagascariensis* (Eastern curlew)**	Critically endangered, Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Pachyptila turtur subantarctica (Fairy Prion)	Vulnerable	Pelagic species	Unlikely, suitable habitat absent from Project area
Poephila cincta cincta (Southern Black-throated Finch)	Endangered	Grassland areas associated with drainage lines and wetlands. Ventures into open forest and woodland.	Absent, outside of the known range for this species
Pterodroma neglecta neglecta (Kermadec Petrel)	Vulnerable	Pelagic species	Unlikely, suitable habitat absent from Project area
***Rostratula australis* (Australian painted-snipe)**	Endangered	Freshwater and potentially estuarine wetlands, drainage lines and flooded paddocks	**Possible** – suitable habitat may exist within the Project area, along drainage lines
Thalassarche cauta cauta (Shy Albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Thalassarche cauta steadi (White-capped Albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Thalassarche eremita (Chatham Albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Thalassarche impavida (Campbell Albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Thalassarche melanophris (Black-browed Albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Thalassarche salvini (Salvin's Albatross)	Vulnerable, Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Turnix melanogaster (Black-breasted Button-quail)	Vulnerable	Rainforest, Open forest and woodland areas containing a thick understory layer. Known to associated with thickest of *Lantana camara*	Unlikely, suitable habitat absent from Project area
Fish			
Epinephelus daemelii (Black Rockcod)	Vulnerable	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Maccullochella peelii (Murray Cod)	Vulnerable	Larger rivers within the Murray Darling Drainage system	Absent, outside of the known range for this species
Insects			
Argynnis hyperbius inconstans (Australian Fritillary)	Critically endangered	The Australian fritillary is restricted to areas where its larval food plant, *Viola betonicifolia* (the arrowhead violet), occurs.	Unlikely, suitable habitat (ie the presence of the larvae food plant) is absent from Project area
Mammals			
Balaena glacialis australis (Southern Right Whale)	Endangered, Migratory	Pelagic species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Balaenoptera musculus (Blue whale)	Endangered, Migratory	Pelagic species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Chalinolobus dwyeri (Large-eared Pied Bat)	Vulnerable	Open Eucalypt forest and woodland	Unlikely, suitable habitat absent from Project area
Dasyurus hallucatus (Spot-tailed Quoll)	Endangered	Rainforest, open Eucalypt forest, woodland.	Unlikely, outside of the known range for this species

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Eubalaena australis (Southern Right Whale)	Endangered	Pelagic species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Megaptera novaeangliae (Humpback Whale)	Vulnerable, Migratory	Pelagic species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Petauroides volans (Greater Glider)	Vulnerable	Open Eucalypt forest and woodland containing hollows of suitable size to act as refuge	Unlikely, suitable habitat absent from Project area
Phascolarctos cinereus (Koala)	Vulnerable	Open Eucalypt forest and woodland and isolated Eucalypt trees that constitute food	Unlikely, suitable habitat absent from Project area
Potorous tridactylus tridactylus (Long-nosed Potoroo)	Vulnerable	Variety of habitats including rainforest, Eucalypt forest and heathland. An important feature is the presence of dense thickets that provide refuge	Unlikely, suitable habitat absent from Project area
Pteropus poliocephalus (Grey-headed Flying-fox)	Vulnerable	Areas containing flowering tress such as Eucalypts, Corymbia and fruiting trees such as Figs (Ficus). Will forage up to 40km from known camp sites	Unlikely, suitable habitat absent from Project area
Xeromys myoides (Water mouse)	Vulnerable	Inhabits the intertidal area associated with salt marsh, mangroves and areas below the HAT. Areas utilised are typically in a natural state.	Unlikely, suitable habitat absent from Project area
Reptiles			
Caretta caretta (Loggerhead Turtle)	Endangered, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Chelonia mydas (Green Turtle)	Vulnerable, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Delma torquata (Collared Delma)	Vulnerable	Grassland, Woodland with surface rocks, typically on igneous geology	Unlikely, suitable habitat absent from Project area
Dermochelys coriacea (Leatherback Turtle)	Endangered, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Eretmochelys imbricate (Hawksbill Turtle)	Vulnerable, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Lepidochelys olivacea (Olive Ridley Turtle)	Endangered, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Natator depressus (Flatback Turtle)	Vulnerable	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Saiphos reticulatus (Three-toed Snake-tooth Skink)	Vulnerable	Rainforest and vine forest with a well-developed leaf litter layer	Unlikely, suitable habitat absent from Project area
Sharks			
Carcharias taurus (Grey Nurse Shark)	Critically Endangered	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Carcharodon carcharias (Great White Shark)	Vulnerable, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Pristis zijsron (Green Sawfish)	Vulnerable, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Rhincodon typus (Whale Shark)	Vulnerable, Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Migratory species			
Birds			
Anous stolidus (Common Noddy)	Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
***Apus pacificus* (Fork-tailed Swift)**	Migratory	Aerial species, hunts on the wing and rarely lands. Breeds in the northern hemisphere	**Likely**, this species may utilise airspace above the Project area. This species will not land within the Project area
Ardenna carneipes (Fleshy-footed Shearwater)	Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Calonectris leucomelas (Streaked Shearwater)	Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Fregata ariel (Lesser Frigatebird)	Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area
Fregata minor (Great Frigatebird)	Migratory	Pelagic species	Unlikely, suitable habitat absent from Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Sternula albifrons (Little Tern)	Migratory	Hunts over open water such as lakes, larger rivers, estuaries and the ocean	Unlikely, suitable habitat absent from Project area
Cuculus optatus (Oriental Cuckoo)	Migratory	Open forest, Woodland and scrublands	Unlikely, suitable habitat absent from Project area
***Hirundapus caudacutus* (White-throated Needletail)**	Migratory	Aerial species, hunts on the wing and rarely lands. Breeds in the northern hemisphere	**Likely**, this species may utilise airspace above the Project area. This species will not land within the Project area
Monarcha melanopsis (Black-faced Monarch)	Migratory	Rainforest, open forest, Woodland and scrublands, particularly along drainage lines	Unlikely, suitable habitat absent from Project area
Monarcha trivirgatus (Spectacled Monarch)	Migratory	Rainforest, open forest, Woodland and scrublands, particularly along drainage lines	Unlikely, suitable habitat absent from Project area
Myiagra cyanoleuca (Satin Flycatcher)	Migratory	Rainforest, open forest, Woodland and scrublands, particularly along drainage lines	Unlikely, suitable habitat absent from Project area
Rhipidura rufifrons (Rufous Fantail)	Migratory	Rainforest, open forest, Woodland and scrublands, particularly along drainage lines	Unlikely, suitable habitat absent from Project area
***Actitis hypoleucos* (Common Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Arenaria interpres* (Ruddy Turnstone)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris acuminata* (Sharp-tailed Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris alba* (Sanderling)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris melanotos* (Pectoral Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
***Calidris ruficollis* (Red-necked Stint)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Charadrius bicinctus **(Double-banded Plover)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Charadrius veredus **(Oriental Plover)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Gallinago hardwickii **(Latham's Snipe)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Gallinago megala **(Swinhoe's Snipe)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Gallinago stenura **(Pin-tailed Snipe)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Limicola falcinellus **(Broad-billed Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Limnodromus semipalmatus **(Asian Dowitcher)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Limosa lapponica **(Bar-tailed godwit)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Limosa limosa **(Black-tailed Godwit)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Numenius minutus **(Little curlew)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Numenius phaeopus **(Whimbrel)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Pandion haliaetus (Osprey)	Migratory	Large lakes, waterbodies and the ocean	**Possible** – suitable roosting habitat may exist within the Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Philomachus pugnax **(Ruff)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Pluvialis fulva **(Pacific Golden Plover)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Pluvialis squatarola **(Grey Plover)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Tringa brevipes **(Grey-tailed Tattler)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Tringa glareola **(Wood Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Tringa incana **(Wandering Tattler)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Tringa nebularia **(Common Greenshank)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Tringa stagnatilis **(Marsh Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Xenus cinereus **(Terek Sandpiper)**	Migratory	Estuarine and marine wetlands, drainage lines and mudflats. High tide roosts may be located in areas above the Highest Astronomical Tide level	**Possible** – suitable roosting habitat may exist within the Project area
Mammals			
Balaenoptera edeni (Bryde's Whale)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Dugong dugon (Dugong)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area

Scientific name (Common name)	Conservation status	Preferred habitat	Likelihood of occurrence
Orcaella heinsohni (Australian Snubfin Dolphin)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Orcinus orca (Killer Whale)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Sousa chinensis (Indo-Pacific Humpback Dolphin)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Fish			
Lamna nasus (Mackerel Shark)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Manta alfredi (Reef Manta Ray)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area
Manta birostris (Giant Manta Ray)	Migratory	Aquatic marine species	Absent, aquatic marine areas that are accessible by this species are not present within the Project area

As a result of the potential presence of the 39 MNES identified as potentially occurring within the Project area (refer Table 1.1), a self-assessment of the Project's potential impacts upon the identified MNES is required.

This self-assessment of the Project activities against the MNES identified as potentially occurring within the Project area, has been undertaken to assist in the determination of the applicability and need for submitting a referral to the Department of Environment and Energy (DoEE) for a decision by the Australian Government Environment Minister, on whether assessment and approval is required under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

This report documents the self-assessment process for the MNES that have been identified as having potential to occur within areas that are proposed to be disturbed as part of the proposed Project activities. This report provides an assessment of significance of each MNES designation in accordance with DoEE's *Matters of National Environmental Significance; Significant impact guidelines 1.1 – Environment Protection and Biodiversity Conservation Act 1999* (DoE 2014a) (henceforth referred to as 'the MNES guidelines') and *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies; Significant impact guidelines 1.2 – Environment Protection and Biodiversity Conservation Act 1999* (DoE 2014b) (henceforth referred to as 'the Commonwealth guidelines').

2 Assessment of potential impacts

2.1 Background

Under the EPBC Act, an action will require approval from the Environment Minister if the action has, will have, or is likely to have, a significant impact on a MNES.

In addition, under the EPBC Act, approval from the Minister is required for:

1. **An action taken by any person on Commonwealth land** that is likely to have a significant impact on the environment (subsection 26(1) of the EPBC Act).
2. **An action taken by any person outside of Commonwealth land** that is likely to have a significant impact on the environment on Commonwealth land (subsection 26(2) of the EPBC Act).
3. **An action taken by a Commonwealth agency anywhere in the world** that is likely to have a significant impact on the environment (section 28 of the EPBC Act).

To this end, the Australian Government (i.e. DoEE) has prepared the MNES guidelines and Commonwealth guidelines to assist in the determination of the applicability and need for submitting a referral to DoEE in relation to MNES and Commonwealth Land.

The 'significant impact criteria', contained within the MNES guidelines is specific for each category of MNES, and is intended to assist in the determination of whether the potential impacts of the proposed action are likely to be significant impacts on the specific MNES.

In the current context, an action will require approval if the action has, will have, or is likely to have a significant impact on MNES species listed in any of the following categories:

- Critically endangered and Endangered
- Vulnerable
- Migratory

Further, the four steps to the self-assessment as detailed in the Commonwealth guideline are addressed in this document.

The self-assessment process associated with MNES identified in Table 1.1 as having potential to occur within the Project area has been structured into the following categories:

- Critically endangered and Endangered species (refer Section 2.2)
- Vulnerable species (refer Section 2.3)
- Migratory species (refer Section 2.4)
- Commonwealth Land (Section 2.5)

2.2 Preliminary significant impact assessment for Critically endangered and Endangered species

2.2.1 Background

Eight critically endangered/endangered species have been identified as potentially occurring within the Project area (refer Table 2.1). Whilst these species were not identified during Project field investigations, a precautionary approach to their presence has been applied, based on the availability of suitable habitat within the Project area. A brief discussion related to the ecology of each of the species identified in Table 2.1 is provided below.

Table 2.1 Endangered species identified as potentially occurring within the Project area

Scientific name (Common name)	Conservation status
Fauna – 8 MNES	
Birds	
Botaurus poiciloptilus (Australasian bittern)	Endangered
Calidris canutus (Red knot)	Endangered
Calidris ferruginea (Curlew sandpiper)	Critically endangered
Calidris tenuirostris (Great knot)	Critically endangered
Charadrius mongolus (Lesser Sand Plover)	Endangered
Limosa lapponica menzbieri (Bar-tailed godwit)	Critically endangered
Numenius madagascariensis (Eastern curlew)	Critically endangered
Rostratula australis (Australian painted-snipe)	Endangered

Botaurus poiciloptilus (Australasian bittern)

The Australasian bittern is a secretive, stocky, heron-like bird, living in wetlands where it forages. Bitterns are very well camouflaged and can be difficult to spot in the reeds and rushes. On occasion they will even sway in time with reeds to blend into their surroundings. The distinctive booming call of males gives them away (DoEE 2019a).

In Queensland, the species occurs as far north as Yeppoon and west to Wyandra. In the south-east, there is habitat remaining on Fraser Island, the Fraser Coast, North Stradbroke Island, Redlands and out into the Lockyer Valley. Key areas in Queensland where the species has been reliability seen in the past include the floodplains south of Byfield State Forest, Garnett's Lagoon and Lake Clarendon (DoEE 2019a).

The Australasian bittern is generally solitary, but sometimes occurs in pairs or dispersed aggregations of up to 12 birds. While the Australasian bittern was previously thought to be largely sedentary, recent tracking studies have shown extensive movements (over hundreds of kilometres) between wetlands in south-east Australia (DoEE 2019a).

The Australasian bittern occurs mainly in freshwater wetlands and, rarely, in estuaries or tidal wetlands. It favours wetlands with tall dense vegetation, where it forages in still, shallow water up to 0.3 m deep, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water. It favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and reeds (e.g. Phragmites, Cyperus, Eleocharis, Juncus, Typha, Baumea, Bolboschoenus) or cutting grass (Gahnia) growing over a muddy or peaty substrate. The diet of the Australasian bittern includes aquatic animals such as small fish, frogs, freshwater crayfish, spiders, insects and small reptiles (DoEE 2019a).

The Australasian bittern breeds from October to February in solitary pairs. However, sometimes several nests may be placed in close proximity to each other. The species nests adjacent to relatively deep, densely vegetated freshwater swamps and pools, building its nests under dense cover over shallow water. The species prefers to nest in vegetation that is up to 2.5 m tall and the nests are placed about 30 cm above the water level. The nest is a shallow structure of dry or green reeds, within a clump of reeds in water or a

swamp and is built on a platform of bent-over reeds. Several females will nest within one male's territory. In rushes, it may avoid breeding in the densest areas. If population densities are high, it may resort to open wetlands for nesting, such as in stunted Acacia swamps. Clutch size is usually four or five, but ranges from three to six (DoEE 2019a).

The Australasian bittern has primarily been impacted by the loss of wetland habitat through the diversion of water away from wetlands; drainage of swamps; and clearing for urban and agricultural development (DoEE 2019a).

Calidris canutus (Red knot)

The Red knot is a small to medium member of the *Calidridinae* family. It has a length of 23 to 25 cm, a wingspan of 45 to 54 cm and a weight of 120 g. The species is robust, short-necked, rather dumpy but long bodied wader with a short straight bill, long wings extending beyond the tail and short legs. The Red knot is similar in shape and proportions to Great knot, Calidris tenuirostris, but smaller and less bulky, with shorter bill, and the breeding plumage differs markedly. In all plumages the species has a clear narrow white wing bar and off-white patch on the rump and upper tail-coverts (DoEE 2019b).

The Red knot is common in all the main suitable habitats around the coast of Australia but is less numerous in south-west Australia than elsewhere. Very large numbers are regularly recorded in north-west Australia. The only places it is not found in significant numbers are the northern part of the Great Australian Bight in South Australia and Western Australia, and along much of the NSW coast, where wader habitat is rather scarce (DoEE 2019b). The Red knot breeds in North America, Russia, north-west and east Greenland, north Alaska round the Seward Peninsula, the De Long Mountains and, rarely, at Point Barrow and Cooper Island (DoEE 2019b).

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 (DoEE 2019b)

Calidris ferruginea (Curlew sandpiper)

The Curlew sandpiper is a small, slim sandpiper 18–23 cm long and weighing 57 g, with a wingspan of 38 to 41 cm. The legs and neck are long. The bill is also long and is decurved with a slender tip. The bill is black, sometimes with a brown or green tinge at the base. The head is small and round, and the iris is dark brown. The legs and feet are black or black-grey. When at rest, the wing-tips project beyond the tip of the tail. The sexes are similar, but females have a slightly larger and longer bill and a slightly paler underbelly in breeding plumage (DoEE 2019c)

In Australia, Curlew sandpipers occur around the coasts and are also quite widespread inland, though in smaller numbers. Records occur in all states during the non-breeding period, and also during the breeding season when many non-breeding first year birds remain in Australia rather than migrating north. In Queensland, scattered records occur in the Gulf of Carpentaria, with widespread records along the coast south of Cairns. (DoEE 2019c).

Curlew sandpipers mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand. They occur in both fresh and brackish waters. Occasionally they are recorded around floodwaters (DoEE 2019c)

Calidris tenuirostris (Great knot)

The Great knot is the largest of the calidrid birds and grows to 26 to 28 cm long, with a wingspan of approximately 58 cm. Females are slightly larger than males. The bill is black, and slightly downward curved and tinged green at the tip. The eye is brown, legs and feet dark greenish-grey. The bird has noticeable breeding, non-breeding and juvenile plumages (DoEE 2019d).

The Great knot has been recorded around the entirety of the Australian coast, with a few scattered records inland. It is now absent from some sites along the south coast where it used to be a regular visitor. The greatest numbers are found in northern Australia; where the species is common on the coasts of the Pilbara and Kimberley, from the Dampier Archipelago to the Northern Territory border, and in the Northern Territory from Darwin and Melville Island, through Arnhem Land to the south-east Gulf of Carpentaria (DoEE 2019d).

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, salt lakes and non-tidal lagoons. The Great knot rarely occurs on inland lakes and swamps. The Great knot roosts in large groups in open areas, often at the water's edge or in shallow water close to feeding grounds. It is known that in hot conditions, waders prefer to roost where a damp substrate lowers the local temperature (Rogers 1999b). A group of approximately 8610 birds have been recorded roosting at an inland claypan near Roebuck Bay in north-west Western Australia (DoEE 2019d)

Charadrius mongolus (Lesser sand plover)

The Lesser sand plover is a small to medium-sized grey-brown and white plover which has a dark eye-stripe and which reaches 18 to 21 cm in length and 56 to 71 g in weight. Sexes differ when in breeding plumage, but are inseparable when in non-breeding plumage. Juveniles are distinguishable DoEE 2019e).

Within Australia, the Lesser sand-plover is widespread in coastal regions, and has been recorded in all states. It mainly occurs in northern and eastern Australia, in south-eastern parts of the Gulf of Carpentaria, western Cape York Peninsula and islands in Torres Strait, and along the entire east coast, though it occasionally also occurs inland. It is most numerous in Queensland and NSW. The species does not breed in Australia. (DoEE 2019e).

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 roost near foraging areas, on beaches, banks, spits and banks of (DoEE 2019e).

Limosa lapponica menzbieri (Bar-tailed godwit)

The Bar-tailed godwit is a large migratory shorebird. It has a length around 37 to 39 cm, a wingspan of 62 to 75 cm and body mass between 250 to 450 g. It has a long neck with a very long upturned bill which is characterized by a dark tip and pinkish base. All non-breeding plumages have a uniform upper pattern, with a dark back and upper rump. It is distinguishable from other godwits by the dark barring on the lower white rump, upper-tail and lining of the underwing (DoEE 2019f).

The Bar-tailed godwit has been recorded in the coastal areas of all Australian states. It is widespread in the Torres Strait and along the east and south-east coasts of Queensland, NSW and Victoria. In Tasmania, the Bar-tailed godwit has mostly been recorded on the south-east coast. In South Australia it has mostly been recorded around coasts from Lake Alexandrina to Denial Bay. In Western Australia it is widespread around the coast, from Eyre to Derby. Populations have also been recorded in the northern Australia, from Darwin east to the Gulf of Carpentaria. The Bar-tailed godwit does not breed in Australia (DoEE 2019f).

The Bar-tailed godwit usually forages near the edge of water or in shallow water, mainly in tidal estuaries and harbours. They prefer exposed sandy or soft mud substrates on intertidal flats, banks and beaches. The Bar-tailed godwit usually roosts on sandy beaches, sandbars, spits and also in near-coastal saltmarsh (DoEE 2019f).

Numenius madagascariensis (Eastern curlew)

The Eastern curlew is the largest migratory shorebird in the world, with a long neck, long legs, and a very long downcurved bill. The wingspan is 110 cm and the birds weigh approximately 900 g. The head and neck are dark brown and streaked with darker brown. The chin and throat are whitish and there is a prominent white eye-ring; the iris is dark brown. The feathers of the upper parts of the body are brown, with blackish centres, and have broad pale rufous or olive brown edges or notches. The tail is grey-brown with narrow dark banding on the feathers. The underside of the bird is dark brownish-buff, becoming paler on the rear belly. There is fine dark brown streaking on the fore-neck and breast, which becomes thicker arrow-shaped streaks and barring on the fore-flanks. The upper belly and rear flanks have finer and sparser dark streaking. The underneath of the wing is whitish, but appears darker due to fine dark barring. The bill is dark brown with a pinkish base and the legs and feet are blue-grey. The female is slightly larger than the male with noticeably longer bill (DoEE 2019g).

Within Australia, the Eastern curlew has a primarily coastal distribution. The species is found in all states, particularly the north, east, and south-east regions including Tasmania. Eastern curlews are rarely recorded inland. They have a continuous distribution from Barrow Island and Dampier Archipelago, Western Australia, through the Kimberley and along the Northern Territory, Queensland, and NSW coasts and the islands of Torres Strait. They are patchily distributed elsewhere. The eastern curlew does not breed in Australia (DoEE 2019g).

The Eastern curlew mainly forages during 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. Birds roost 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. They occasionally roost on reef-flats, in the shallow water of lagoons and other near-coastal wetlands. (DoEE 2019g).

Rostratula australis (Australian painted-snipe)

The Australian painted-snipe is a stocky wading bird around 220 to 250 mm in length with a long pinkish bill. The adult female, more colourful than the male, has a chestnut-coloured head, with white around the eye and a white crown stripe, and metallic green back and wings, barred with black and chestnut. There is a pale stripe extending from the shoulder into a V down its upper back. The adult male is similar to the female, but is smaller and duller with buff spots on the wings and without any chestnut colouring on the head, nape or throat (DoEE 2019h).

The Australian painted-snipe has been recorded at wetlands in all states of Australia and is most common in eastern Australia, where it has been recorded at scattered locations throughout much of Queensland, NSW, Victoria and south-eastern South Australia. It has been recorded less frequently at a smaller number of more scattered locations farther west in South Australia, the Northern Territory and Western Australia. It has also been recorded on single occasions in south-eastern Tasmania and at Lord Howe Island (DoEE 2019h).

The Australian painted-snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of lignum Muehlenbeckia or canegrass or sometimes tea-tree (Melaleuca). The Australian Painted Snipe sometimes utilises areas that are lined with trees, or that have some scattered fallen or washed-up timber (DoEE 2019h).

The Australian painted-snipe breeding habitat requirements may be quite specific: shallow wetlands with areas of bare wet mud and both upper and canopy cover nearby. Nest records are all, or nearly all, from or near small islands in freshwater wetlands, provided that these islands are a combination of very shallow water, exposed mud, dense low cover and sometimes some tall dense cover (DoEE 2019h).

2.2.2 Assessment of significance

Significant impact criteria for critically endangered and endangered species are provided in the MNES guidelines. These criteria dictated that an action is likely to have a significant impact on a critically endangered or endangered species if there is a real chance or possibility that it will:

- Lead to a long-term decrease in the size of a population
- Reduce the area of occupancy of the species
- Fragment an existing population into two or more populations
- Adversely affect habitat critical to the survival of a species
- Disrupt the breeding cycle of a population
- Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat
- Introduce disease that may cause the species to decline, or
- Interfere with the recovery of the species.

An assessment of potential impacts to the endangered species identified in Table 2.1 in relation to the assessment of significance criteria presented above, is presented in Table 2.2.

Table 2.2 Assessment of the Project against the significant impact criteria in relation to the endangered flora and fauna

Significant impact criteria	Predicted impacts to endangered species
Lead to a long-term decrease in the size of a population	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks to facilitate future development of the site. The Project area does not currently support any resident flora, fauna or ecological communities. It is proposed that the Project area will be developed to comprise a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Potential habitat may be present within the Project area in the form of aquatic macrophytes that may have re-established following initial clearing (i.e. potential habitat for the Australasian bittern), and areas of dry land immediately above HAT (i.e. potential high-tide roosts for marine waders). However, these areas of potential habitat are considered to be sub-optimal when compared to available habitat areas located in proximity to the Project area. Historic field investigations have not identified the presence of any species listed in Table 2.1. It is therefore assumed that if the species do occur within the Project area, their densities will be very low. As such, it is not expected that the proposed Project works will lead to a long-term decrease in the size of the population of any species identified in Table 2.1.
Reduce the area of occupancy of the species	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks under the endorsed Environmental Assessment Report (EAR) to facilitate future development of the area. The Project area does not currently support any resident flora, fauna or ecological communities. Whist potential habitat may be present within the Project area in the form of aquatic macrophytes that may have re-established following initial clearing and bulk earthworks (ie potential habitat for the Australasian bittern), and areas of dry land immediately above HAT (ie potential high-tide roosts for marine waders) these areas of potential habitat are considered sub-optimal in nature (i.e. have resulted from anthropogenic activities). Historic field investigations did not identify the presence of any species listed in Table 2.1. It is therefore assumed that if the species do still occur within the Project area, their densities will be very low. As such, it is not expected that the proposed Project works will lead to a long-term decrease in the size of the population of any species identified in Table 2.1.

Significant impact criteria	Predicted impacts to endangered species
Fragment an existing population into two or more populations	Given the nature of works, the marginal habitat present within the Project area and the highly vagile nature of the species identified in Table 2.1, the proposed Project works will not fragment an existing population into two or more populations.
Adversely affect habitat critical to the survival of a species	Habitat identified within the Project area has not been identified to be critical to the survival of any species listed in Table 2.1. Therefore, the proposed Project works will not adversely affect habitat critical to the survival of a species.
Disrupt the breeding cycle of a population	The proposed Project works will not disrupt the breeding cycle of a population of any species listed in Table 2.1. Except for the Australasian bittern and the Australian painted-snipe, all of the species listed in Table 2.1 do not breed within Australia.
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Within the Project area, habitat for species listed in Table 2.1 is typically in poor condition and considered to be marginal in nature. Therefore, the Project will not modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species listed in Table 2.1 are likely to decline.
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat	The Project area has previously been cleared of vegetation under the endorsed EAR. It is proposed that the Project area will be developed to comprise a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. These areas will be managed to ensure that invasive species do not become established to the extent that they will become harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat.
Introduce disease that may cause the species to decline	The propose Project works are not likely to introduce disease that may cause species listed in Table 2.1 to decline.
Interfere with the recovery of the species	The proposed Project works will not interfere with the recovery of the species listed in Table 2.1.

2.2.3 Determination of assessed significance

Project works within the Project area will result in the construction of a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Potential habitat for the species listed in Table 2.1 is considered to be in poor condition and has resulted from anthropogenic activities. With reference to Table 2.2, the modification of this habitat has been identified as being unlikely to result in a significant impact to the critically endangered and endangered species listed in Table 2.1 and indicates that an EPBC Act referral for the Project in relation to impacts upon endangered species is **not recommended.**

2.3 Preliminary significant impact assessment for Vulnerable species

2.3.1 Background

Two vulnerable species have been identified as potentially occurring within the Project area (refer Table 2.3). Whilst these species were not identified during Project field investigations, a precautionary approach to their presence has been applied, based on the availability of suitable habitat within the Project area. A brief discussion related to the ecology of each of the species identified in Table 2.3 is provided below.

Table 2.3 Vulnerable species identified as potentially occurring within the Project area

Scientific name (Common name)	Conservation status
Fauna – 2 MNES	
Birds	
Charadrius leschenaultii (Greater sand plover)	Vulnerable
Limosa lapponica baueri (Bar-tailed godwit)	Vulnerable

Charadrius leschenaultii (Greater sand plover)

The Greater sand plover is a medium-sized (length: 22 to 25 cm; weight 75 to 100 g) brown-and-white plover. Sexes differ when in breeding plumage, but are inseparable when in non-breeding plumage; juveniles are also separable from adults (DoEE 2019i)

In Australia, the Greater sand plover occurs in coastal areas in all states, though the greatest numbers occur in northern Australia, especially the north-west. In northern Australia, the species is especially widespread between North West Cape and Roebuck Bay in Western Australia; there are sparsely scattered records from the largely inaccessible area between Roebuck Bay and Darwin, but it often occurs in the Top End of the Northern Territory, including on Groote Eylandt. It is also abundant in south-eastern parts of the Gulf of Carpentaria in Queensland, and is widespread from the Torres Strait, along the eastern coast, into the Northern Rivers region of northern NSW, with occasional records south to about Shoalhaven Heads. The species does not breed in Australia (DoEE 2019i).

The species is almost entirely coastal in distribution, 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. They seldom occur in shallow freshwater wetlands. The species typically roosts on sand-spits and banks on beaches or in tidal lagoons, and occasionally on rocky points, or in adjacent areas of saltmarsh or claypans. They tend to roost further up the beach than other waders, sometimes well above high-tide mark (DoEE 2019i).

Limosa lapponica baueri (Bar-tailed godwit)

The Bar-tailed godwit is a large migratory shorebird. It has a length around 37 to 39 cm, a wingspan of 62 to 75 cm and body mass between 250 to 450 g. It has a long neck with a very long upturned bill which is characterized by a dark tip and pinkish base. All non-breeding plumages have a uniform upper pattern, with a dark back and upper rump. It is distinguishable from other godwits by the dark barring on the lower white rump, upper-tail and lining of the underwing. The sexes differ with females being larger and with longer bills than males and having a duller breeding plumage. Males and females exhibit marked variation in plumages with males having a deep rufous head and neck. Juveniles are similar to non-breeding adults with the exception that the crown is more heavily streaked (DoEE 2019j).

The Bar-tailed godwit has been recorded in the coastal areas of all Australian states. It is widespread in the Torres Strait and along the east and south-east coasts of Queensland, NSW and Victoria. In Tasmania, the Bar-tailed godwit has mostly been recorded on the south-east coast. In South Australia it has mostly been recorded around coasts from Lake Alexandrina to Denial Bay. In Western Australia it is widespread around

the coast, from Eyre to Derby. Populations have also been recorded in the northern Australia, from Darwin east to the Gulf of Carpentaria. The Bar-tailed godwit does not breed in Australia (DoEE 2019j).

The Bar-tailed godwit usually forages near the edge of water or in shallow water, mainly in tidal estuaries and harbours. They prefer exposed sandy or soft mud substrates on intertidal flats, banks and beaches. The Bar-tailed godwit usually roosts on sandy beaches, sandbars, spits and also in near-coastal saltmarsh (DoEE 2019j).

2.3.2 Assessment of significance

Significant impact criteria for vulnerable species are provided in the MNES guidelines. These criteria dictated that an action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will:

- Lead to a long-term decrease in the size of an important population of a species
- Reduce the area of occupancy of an important population
- Fragment an existing important population into two or more populations
- Adversely affect habitat critical to the survival of a species
- Disrupt the breeding cycle of an important population
- Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline
- Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat
- Introduce disease that may cause the species to decline, or
- Interfere substantially with the recovery of the species.

An assessment of potential impacts to the vulnerable species identified in Table 2.3 in relation to the assessment of significance criteria presented above, is presented in Table 2.4.

Table 2.4 Assessment of the Project against the significant impact criteria in relation to the Vulnerable flora and fauna

Significant impact criteria	Predicted impacts to vulnerable species
Lead to a long-term decrease in the size of an important population of a species	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks to facilitate future development of the area under the endorsed EAR. The Project area does not currently support any resident flora, fauna or ecological communities. It is proposed that the Project area will be developed to comprise a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Whist potential habitat may be present within the Project area in the form of areas of dry land immediately above HAT (i.e. potential high-tide roosts for marine waders), this potential habitat is considered to be sub-optimal when compared to available habitat areas located in proximity to the Project area. Historic field investigations did not identify the presence of any species listed in Table 2.3. It is therefore assumed that if the species do occur within the Project area, their densities will be very low. As such, it is not expected that the proposed Project works will lead to a long-term decrease in the size of an important population of any species identified in Table 2.3.

Significant impact criteria	Predicted impacts to vulnerable species
Reduce the area of occupancy of an important population	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks to facilitate future development of the area. The Project area does not currently support any resident flora, fauna or ecological communities. Whist potential habitat may be present within the Project area in the form of aquatic macrophytes that may have re-established following initial clearing and bulk earthworks (ie potential habitat for the Australasian bittern), and areas of dry land immediately above HAT (ie potential high-tide roosts for marine waders) these areas of potential habitat are considered sub-optimal in nature (i.e. have resulted from anthropogenic activities). Historic field investigations did not identify the presence of any species listed in Table 2.3. It is therefore assumed that if the species do occur within the Project area, their densities will be very low. As such, it is not expected that the proposed Project works will lead to a long-term decrease in the size of an important population of any species identified in Table 2.3.
Fragment an existing important population into two or more populations	Given the nature of works, the marginal habitat present within the Project area and the highly vagile nature of the species identified in Table 2.3, the proposed Project works will not fragment an existing important population into two or more populations.
Adversely affect habitat critical to the survival of a species	Habitat identified within the Project area has not been identified to be critical to the survival of any species listed in Table 2.3. Therefore, the proposed Project works will not adversely affect habitat critical to the survival of a species.
Disrupt the breeding cycle of an important population	The proposed Project works will not disrupt the breeding cycle of an important population of any species listed in Table 2.3 as they do not breed within Australia.
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Within the Project area, habitat for species listed in Table 2.3 is typically in poor condition and considered to be marginal in nature. Therefore, the Project will not modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species listed in Table 2.3 are likely to decline.
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	The Project area has previously been cleared of vegetation. It is proposed that the Project area will be developed to comprise a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. These areas will be managed to ensure that invasive species do not become established to the extent that they will become harmful to a critically endangered or endangered species becoming established in the vulnerable species' habitat.
Introduce disease that may cause the species to decline	The propose Project works are not likely to introduce disease that may cause species listed in Table 2.3 to decline.
Interfere substantially with the recovery of the species	The proposed Project works will not interfere with the recovery of the species listed in Table 2.3.

2.3.3 Determination of assessed significance

Project works within the Project area will result in the construction of a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Potential habitat for the species listed in Table 2.3 is considered to be in poor condition and has resulted from anthropogenic activities. With reference to Table 2.4, the modification of this habitat has been identified as being unlikely to result in a significant impact to the vulnerable species listed in Table 2.3 and indicates that an EPBC Act referral for the Project in relation to impacts upon endangered species is **not recommended.**

2.4 Preliminary Significant Impact Assessment for Migratory species

2.4.1 Introduction

Twenty-eight migratory species have been identified as potentially occurring within the Project area (refer Table 2.5). Whilst these species were not identified during field investigations, a precautionary approach to their presence has been applied, based on the availability of suitable habitat within the Project area. The species identified in Table 2.5 are highly vagile. With the exception of two aerial species (i.e. *Apus pacificus* and *Hirundapus caudacutus*), the identified migratory species typically associate with marine, estuarine and freshwater wetlands. These species are likely to utilise marine mudflat areas in the broader context of the Project area (i.e. mudflats that are subject to tidal inundation, located outside of the Project area). Portions of the Project area may potentially be used as high-tide roosts.

Table 2.5 Migratory species identified as potentially occurring within the Project area

Scientific name (Common name)	Conservation status
Migratory species – 28 MNES	
Birds	
Apus pacificus (Fork-tailed Swift)	Migratory
Hirundapus caudacutus (White-throated Needletail)	Migratory
Actitis hypoleucos (Common Sandpiper)	Migratory
Arenaria interpres (Ruddy Turnstone)	Migratory
Calidris acuminata (Sharp-tailed Sandpiper)	Migratory
Calidris alba (Sanderling)	Migratory
Calidris melanotos (Pectoral Sandpiper)	Migratory
Calidris ruficollis (Red-necked Stint)	Migratory
Charadrius bicinctus (Double-banded Plover)	Migratory
Charadrius veredus (Oriental Plover)	Migratory
Gallinago hardwickii (Latham's Snipe)	Migratory
Gallinago megala (Swinhoe's Snipe)	Migratory
Gallinago stenura (Pin-tailed Snipe)	Migratory
Limicola falcinellus (Broad-billed Sandpiper)	Migratory
Limnodromus semipalmatus (Asian Dowitcher)	Migratory
Limosa lapponica (Bar-tailed godwit)	Migratory
Limosa limosa (Black-tailed Godwit)	Migratory
Numenius minutus (Little curlew)	Migratory
Numenius phaeopus (Whimbrel)	Migratory
Philomachus pugnax (Ruff)	Migratory
Pluvialis fulva (Pacific Golden Plover)	Migratory
Pluvialis squatarola (Grey Plover)	Migratory
Tringa brevipes (Grey-tailed Tattler)	Migratory
Tringa glareola (Wood Sandpiper)	Migratory
Tringa incana (Wandering Tattler)	Migratory
Tringa nebularia (Common Greenshank)	Migratory
Tringa stagnatilis (Marsh Sandpiper)	Migratory
Xenus cinereus (Terek Sandpiper)	Migratory

2.4.2 Assessment of significance

Significant impact criteria for migratory species are provided in the MNES guidelines. These criteria dictated that an action is likely to have a significant impact on a migratory species if there is a real chance or possibility that it will:

- Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species
- Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or
- Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species

An assessment of potential impacts to the migratory species identified in Table 2.5 in relation to the assessment of significance criteria presented above, is presented in Table 2.6.

Table 2.6 Assessment of the Project against the significant impact criteria in relation to the Vulnerable flora and fauna

Significant impact criteria	Predicted impacts to migratory species
Substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks to facilitate future development of the area under the endorsed EAR. The Project area does not currently support any resident flora, fauna or ecological communities. It is proposed that the Project area will be developed to comprise a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Whist potential habitat may be present within the Project area in the form of areas of dry land immediately above HAT (i.e. potential high-tide roosts for marine waders), this habitat potential is considered to be sub-optimal when compared to available habitat areas located in proximity to the Project area. The proposed works will not substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for any of the migratory species listed in Table 2.5.
Result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species	The proposed works will not result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for any of the migratory species listed in Table 2.5.
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species	The proposed works will not seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of any of the migratory species listed in Table 2.5.

2.4.3 Determination of assessed significance

Project works within the Project area will result in the construction of a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Potential habitat for the species listed in Table 2.5 is considered to be in poor condition and has resulted from anthropogenic activities. With reference to Table 2.6, the modification of this habitat has been identified as being unlikely to result in a significant impact to the migratory species listed in Table 2.5 and indicates that an EPBC Act referral for the Project in relation to impacts upon endangered species is **not recommended.**

2.5 Preliminary Significant Impact Assessment for Commonwealth land

2.5.1 Introduction

Project area as a whole, is contained within land managed by BAC. BAC is an “airport-lessee-company” under the *Airports Act 1996* (Airport Act) and all land under it management is owned by the Commonwealth of Australia. As such, the Project area is wholly contained within Commonwealth Land (refer Table 2.7).

Table 2.7 Commonwealth land occurring within the Project area

Feature	Conservation Status
Commonwealth Land	
Land managed by Brisbane Airport Corporation (BAC) – Project area and its surrounds	Protected

2.5.2 Assessment of significance

Significant impact assessment to assess the significance of Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies has four steps as outlined below:

- Step 1 – Determine the environmental context
- Step 2 – Determine the potential Impacts
- Step 3 – Identify the impact avoidance and mitigation strategies
- Step 4 – Assessment to determine if the impacts are significant

Each of the four stages of the assessment pathway have defined assessment criteria. An assessment of potential impacts to the Commonwealth land as identified in Table 2.7 in relation to the four impact assessment steps and their associated significance criteria is presented in Table 2.8.

Table 2.8 Assessment of the Project against the significant impact criteria in relation to the impacts to Commonwealth land

Self-assessment Step	Impact criteria	Response to impact criteria
Step 1 – Environmental context	What are the components or features of the environment in the area where the action will take place?	The Project area is contained within land managed by BAC and is Commonwealth Land. The Project area is approximately 51.3 ha in size and is bordered by Moreton Drive, Airport Drive and Nancy Bird Way.
	Which components or features of the environment are likely to be impacted?	Whist the Project area has been subject to anthropogenic activities including the clearing of vegetation and bulk earthworks, it has the potential to provide marginal habitat for conservation significant and migratory species as listed in Table 2.1, Table 2.3 and Table 2.5. Potential habitat afforded by the site includes high-tide marine wader roosts and drainage features containing aquatic macrophytes that may be used by the Australasian bittern and Australian painted-snipe.
	Is the environment which is likely to be impacted, or are elements of it, sensitive or vulnerable to impacts?	The areas that will be subject to impacts have resulted from anthropogenic activities and are widespread and abundant within the broader context of the Project area (ie. within the local region). As such, these areas are not sensitive to change.
	What is the history, current use and condition of the environment which is likely to be impacted?	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks to facilitate future development of the area. The Project area does not currently support any resident flora, fauna or ecological communities. The project area boundary and an image of its current condition is provided in Figure 1.1.

Self-assessment Step	Impact criteria	Response to impact criteria
Step 2 – Potential Impacts	What are the components of the action?	The proposed development involves the construction of the BNE Auto Mall on an unused 51.3 ha parcel of land bordered by Moreton Drive, Airport Drive and Nancy Bird Way. The BNE Auto Mall is set to be Australia's benchmark automotive precinct designed for new and used car buyers, motoring enthusiasts and the public. The development will include a diverse mix of uses such as: ■ A range of commercial uses including, but not limited to, automotive retail dealerships, retail showrooms, and retail tenancies ■ Dedicated manufacturers brand experience centres ■ An automotive performance track, associated manoeuvring and handling courses, skidpan and 4WD testing circuit ■ Track operations and management centre. The proposed BNE Auto Mall will comprise a combination of hardstand, landscaped areas and the performance track. New landscaped areas will be provided as part of the development, which will be designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Landscape design will incorporate resilient, native species found within the airport's coastal setting that will not attract birds or flying foxes and, when fully mature, will not compromise operational airspace.
	What are the predicted adverse impacts associated with the action including indirect consequences?	The action will result in the removal or areas identified as potential, marginal habitat for conservation significant species and migratory species as listed in Table 2.1, Table 2.3 and Table 2.5.
	How severe are the potential impacts?	It is considered that given the highly disturbed nature of the Project area, the presence of similar habitat of higher quality within the broader context of the local area, and the relatively poor quality of habitat present within the Project area and the absence of direct sightings or indirect evidence of the species identified in Table 2.1, Table 2.3 and Table 2.5 on site, it is considered that the severity of the impacts will be very low to negligible.
	What is the extent of uncertainty about potential impacts?	In relation to the species as listed in Table 2.1, Table 2.3 and Table 2.5, it is certain that the project works will not result in a significant impact (refer Table 2.2, Table 2.4 and Table 2.6).
Step 3 – Impact avoidance and mitigation	Will any measures to avoid or mitigate impacts ensure, with a high degree of certainty, that impacts are not significant?	Vegetation has previously been cleared from the Project area which has been subject to bulk earthworks to facilitate future development of the area. The Project area does not currently support any resident flora, fauna or ecological communities. All potential habitat for species listed in Table 2.1, Table 2.3 and Table 2.5 has resulted though anthropogenic processes and it is not considered that further works will significantly impact upon species for which the site may potentially provide habitat (refer Table 2.2, Table 2.4 and Table 2.6).
Step 4 – Are the impacts significant	Considering all of the matters in steps 1 to 3 above, is the action likely to have a significant impact on the environment (confirmed against the significance criteria set out in these guidelines)?	In reference to Steps 1 to 3 above, and the information contained therein, it is considered that the action is not likely to have a significant impact on the environment.

2.5.3 Determination of assessed significance

Project works within the Project area will result modifications to Commonwealth Land. Modifications associated with the Project will include the construction of a combination of hardstand, landscaped areas and a performance track. New landscaped areas will be provided as part of the development, which will be

designed to satisfy the intent of the Brisbane Airport Landscape Setting Strategy 2018. Potential habitat for conservation significant species and migratory species is contained within the Project area. However, this habitat is considered to be in poor condition and has resulted from anthropogenic activities. With reference to Table 2.8, the modifications to Commonwealth Land has been identified as being unlikely to result in a significant impact and indicates that an EPBC Act referral for the Project in relation to impacts upon Commonwealth Land is **not recommended.**

3 Summary and conclusions

Aurecon has been commissioned by BAC to undertake a self-assessment for the construction and operation of the Auto Mall under the EPBC Act Significant Impact Guidelines.

Desktop review of MNES, derived from the EPBC Protected Matters Search Tool, 39 MNES have potential to occur based on the presence of preferred habitat within the Project area.

As a result of the presence or potential habitat of these MNES, an assessment of the Project's potential impacts upon these MNES was undertaken in accordance with the following guidelines:

- Department of Environment (2014a), *Matters of National Environmental Significance: Significant impact guidelines Version 1.1*
- Department of Environment (2014b), *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies; Significant impact guidelines 1.2 – Environment Protection and Biodiversity Conservation Act 1999*.

This process allows documentation of the process used to assist in the determination of the applicability and need for submitting a referral to DoEE for a decision by the Australian Government Environment Minister, on whether assessment and controlled action approval is required under the EPBC Act.

Assessment of the potential impacts of the Project upon the identified MNES was undertaken in accordance with the relevant EPBC Act guidelines identified above.

Following the self-assessment process, it is considered that the proposed Project activities are not likely to result in significant impacts to critically endangered, endangered, vulnerable or migratory species as listed under the EPBC Act, or land owned by the Commonwealth of Australia.

It is therefore concluded that an EPBC Act referral for the Project in relation to impacts to MNES or land owned by the Commonwealth government is **not required.**

4 References

Brisbane Airport Corporation 2018, *Brisbane Airport – Landscape Setting Strategy*, Version 1.0, March 2018.

Department of Environment (2014a), *Matters of National Environmental Significance: Significant impact guidelines Version 1.1*, Accessed: June 2019.

Department of Environment (2014b), *Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies; Significant impact guidelines 1.2 – Environment Protection and Biodiversity Conservation Act 1999* Accessed: June 2019.

Department of Environment (2019a), Species Profile and Threats Database - *Botaurus poiciloptilus* (Australasian bittern). Accessed: June 2019.

Department of Environment (2019b), Species Profile and Threats Database - *Calidris canutus* (Red Knot). Accessed: June 2019.

Department of Environment (2019c), Species Profile and Threats Database - *Calidris ferruginea* (Curlew sandpiper). Accessed: June 2019.

Department of Environment (2019d), Species Profile and Threats Database - *Calidris tenuirostris* (Great Knot). Accessed: June 2019.

Department of Environment (2019e), Species Profile and Threats Database - *Charadrius mongolus* (Lesser Sand Plover). Accessed: June 2019.

Department of Environment (2019f), Species Profile and Threats Database - *Limosa lapponica menzbieri* (Bar-tailed Godwit). Accessed: June 2019.

Department of Environment (2019g), Species Profile and Threats Database - *Numenius madagascariensis* (Eastern Curlew). Accessed: June 2019.

Department of Environment (2019h), Species Profile and Threats Database - *Rostratula australis* (Australian Painted-snipe). Accessed: June 2019.

Department of Environment (2019i), Species Profile and Threats Database - *Charadrius leschenaultii* (Greater Sand Plover). Accessed: June 2019.

Department of Environment (2019j), Species Profile and Threats Database - Limosa lapponica baueri (Bar-tailed Godwit). Accessed: June 2019.

Appendix A
EPBC Protected Matters Search Tool results

Australian Government
Department of the Environment and Energy

EPBC Act Protected Matters Report

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

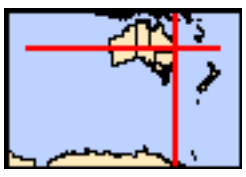
Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

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

Report created: 05/06/19 10:09:08

Coordinates

Buffer: 5.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	25
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	67
Listed Migratory Species:	76

Other Matters Protected by the EPBC Act

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

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

A 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 Land:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	109
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	42
Nationally Important Wetlands:	1
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Moreton bay	Within Ramsar site
Moreton bay	Within Ramsar site
Moreton bay	Within Ramsar site
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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.

Name	Status	Type of Presence
Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland ecological community	Endangered	Community likely to occur within area
Lowland Rainforest of Subtropical Australia	Critically Endangered	Community may occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia		
Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area
Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area

Name	Status	Type of Presence
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	Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Dasyornis brachypterus Eastern Bristlebird [533]	Endangered	Species or species habitat likely to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Erythrotriorchis radiatus Red Goshawk [942]	Vulnerable	Species or species habitat likely to occur within area
Fregetta grallaria grallaria White-bellied Storm-Petrel (Tasman Sea), White-bellied Storm-Petrel (Australasian) [64438]	Vulnerable	Species or species habitat likely to occur within area
Geophaps scripta scripta Squatter Pigeon (southern) [64440]	Vulnerable	Species or species habitat may occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat known to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may 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	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Poephila cincta cincta		
Southern Black-throated Finch [64447]	Endangered	Species or species habitat may occur within area
Pterodroma neglecta neglecta		
Kermadec Petrel (western) [64450]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Rostratula australis		
Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Thalassarche cauta cauta		
Shy Albatross, Tasmanian Shy Albatross [82345]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta steadi		
White-capped Albatross [82344]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita		
Chatham Albatross [64457]	Endangered	Species or species habitat may 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	Species or species habitat may occur within area
Thalassarche salvini		
Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
Turnix melanogaster		
Black-breasted Button-quail [923]	Vulnerable	Species or species habitat may occur within area
Fish		
Epinephelus daemelii		
Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitat may occur within area
Maccullochella peelii		
Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area
Insects		
Argynnis hyperbius inconstans		
Australian Fritillary [88056]	Critically Endangered	Species or species habitat may occur within area
Mammals		
Balaenoptera musculus		
Blue Whale [36]	Endangered	Species or species habitat may occur within area
Chalinolobus dwyeri		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Dasyurus hallucatus		
Northern Quoll, Digul [Gogo-Yimidir], Wijingadda [Dambimangari], Wiminji [Martu] [331]	Endangered	Species or species habitat likely to occur within area
Dasyurus maculatus maculatus (SE mainland population)		
Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat likely to occur within area
Eubalaena australis		
Southern Right Whale [40]	Endangered	Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Megaptera novaeangliae		
Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Petauroides volans		
Greater Glider [254]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Potorous tridactylus tridactylus		
Long-nosed Potoroo (SE mainland) [66645]	Vulnerable	Species or species habitat may occur within area
Pteropus poliocephalus		
Grey-headed Flying-fox [186]	Vulnerable	Roosting known to occur within area
Xeromys myoides		
Water Mouse, False Water Rat, Yirrkoo [66]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Arthraxon hispidus		
Hairy-joint Grass [9338]	Vulnerable	Species or species habitat may occur within area
Bosistoa transversa		
Three-leaved Bosistoa, Yellow Satinheart [16091]	Vulnerable	Species or species habitat likely to occur within area
Cryptocarya foetida		
Stinking Cryptocarya, Stinking Laurel [11976]	Vulnerable	Species or species habitat may occur within area
Dichanthium setosum		
bluegrass [14159]	Vulnerable	Species or species habitat may occur within area
Macadamia integrifolia		
Macadamia Nut, Queensland Nut Tree, Smooth-shelled Macadamia, Bush Nut, Nut Oak [7326]	Vulnerable	Species or species habitat likely to occur within area
Macadamia ternifolia		
Small-fruited Queensland Nut, Gympie Nut [7214]	Vulnerable	Species or species habitat likely to occur within area
Macadamia tetraphylla		
Rough-shelled Bush Nut, Macadamia Nut, Rough-shelled Macadamia, Rough-leaved Queensland Nut [6581]	Vulnerable	Species or species habitat may occur within area
Phaius australis		
Lesser Swamp-orchid [5872]	Endangered	Species or species habitat likely to occur within area
Samadera bidwillii		
Quassia [29708]	Vulnerable	Species or species habitat likely to occur within area
Thesium australe		
Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Breeding known to occur within area

Name	Status	Type of Presence
Delma torquata Adorned Delma, Collared Delma [1656]	Vulnerable	Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Saiphos reticulatus Three-toed Snake-tooth Skink [88328]	Vulnerable	Species or species habitat may occur within area
Sharks		
Carcharias taurus (east coast population) Grey Nurse Shark (east coast population) [68751]	Critically Endangered	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species	[Resource Information]	
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely 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	Species or species habitat may occur within area
Sternula albifrons Little Tern [82849]		Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may 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	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Species or species habitat likely to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat 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	Breeding known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Dugong dugon Dugong [28]		Species or species habitat known to occur within area
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or

Name	Threatened	Type of Presence
		related behaviour known to occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	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
Orcaella heinsohni Australian Snubfin Dolphin [81322]		Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Pristis zijsron Green Sawfish, Dindagubba, Narrowsnout Sawfish [68442]	Vulnerable	Breeding may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Breeding known to occur within area
Migratory Terrestrial Species		
Cuculus optatus Oriental Cuckoo, Horsfield's Cuckoo [86651]		Species or species habitat known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur

Name	Threatened	Type of Presence
		within area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting 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]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting known to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]		Roosting known 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]		Roosting known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting known to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area

Name	Threatened	Type of Presence
Pandion haliaetus		
Osprey [952]		Breeding known to occur within area
Philomachus pugnax		
Ruff (Reeve) [850]		Roosting known to occur within area
Pluvialis fulva		
Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola		
Grey Plover [865]		Roosting known to occur within area
Tringa brevipes		
Grey-tailed Tattler [851]		Roosting known to occur within area
Tringa glareola		
Wood Sandpiper [829]		Roosting known to occur within area
Tringa incana		
Wandering Tattler [831]		Roosting 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]		Roosting known to occur within area
Xenus cinereus		
Terek Sandpiper [59300]		Roosting known to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land [Resource Information]

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

Name
Defence - BANYO STORES DEPOT
Defence - DAMASCUS BARRACKS - MEEANDAH

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Birds		
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
Anseranas semipalmata		
Magpie Goose [978]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis		
Cattle Egret [59542]		Breeding likely to occur within area

Name	Threatened	Type of Presence
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Roosting known to occur within area
Calidris alba Sanderling [875]		Roosting 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]		Roosting known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Roosting known to occur within area
Calonectris leucomelas Streaked Shearwater [1077]		Species or species habitat known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Roosting known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Roosting known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Species or species habitat may occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Species or species habitat may occur within area
Diomedea gibsoni Gibson's Albatross [64466]	Vulnerable*	Species or species habitat may occur within area
Fregata ariel Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat known to occur within area
Fregata minor Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat likely to occur within area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Roosting known to occur within area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area

Name	Threatened	Type of Presence
Gallinago stenura Pin-tailed Snipe [841]		Roosting likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Roosting known to occur within area
Heteroscelus incanus Wandering Tattler [59547]		Roosting known to occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Roosting known to occur within area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat likely to occur within area
Limicola falcinellus Broad-billed Sandpiper [842]		Roosting known to occur within area
Limnodromus semipalmatus Asian Dowitcher [843]		Roosting known 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]		Roosting 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	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus Spectacled Monarch [610]		Species or species habitat known to occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting known to occur within area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area

Name	Threatened	Type of Presence
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Breeding known to occur within area
Philomachus pugnax Ruff (Reeve) [850]		Roosting known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area
Rhipidura rufifrons Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna albifrons Little Tern [813]		Species or species habitat may occur within area
Thalassarche cauta Tasmanian Shy Albatross [89224]	Vulnerable*	Species or species habitat may occur within area
Thalassarche eremita Chatham Albatross [64457]	Endangered	Species or species habitat may 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	Species or species habitat may occur within area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
Tringa glareola Wood Sandpiper [829]		Roosting 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]		Roosting known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Roosting known to occur within area
Fish		

Name	Threatened	Type of Presence
Acentronura tentaculata Shortpouch Pygmy Pipehorse [66187]		Species or species habitat may occur within area
Campichthys tryoni Tryon's Pipefish [66193]		Species or species habitat may occur within area
Corythoichthys amplexus Fijian Banded Pipefish, Brown-banded Pipefish [66199]		Species or species habitat may occur within area
Corythoichthys ocellatus Orange-spotted Pipefish, Ocellated Pipefish [66203]		Species or species habitat may occur within area
Festucalex cinctus Girdled Pipefish [66214]		Species or species habitat may occur within area
Filicampus tigris Tiger Pipefish [66217]		Species or species habitat may occur within area
Halicampus grayi Mud Pipefish, Gray's Pipefish [66221]		Species or species habitat may occur within area
Hippichthys cyanospilos Blue-speckled Pipefish, Blue-spotted Pipefish [66228]		Species or species habitat may occur within area
Hippichthys heptagonus Madura Pipefish, Reticulated Freshwater Pipefish [66229]		Species or species habitat may occur within area
Hippichthys penicillus Beady Pipefish, Steep-nosed Pipefish [66231]		Species or species habitat may occur within area
Hippocampus kelloggi Kellogg's Seahorse, Great Seahorse [66723]		Species or species habitat may occur within area
Hippocampus kuda Spotted Seahorse, Yellow Seahorse [66237]		Species or species habitat may occur within area
Hippocampus planifrons Flat-face Seahorse [66238]		Species or species habitat may occur within area
Hippocampus trimaculatus Three-spot Seahorse, Low-crowned Seahorse, Flat-faced Seahorse [66720]		Species or species habitat may occur within area
Hippocampus whitei White's Seahorse, Crowned Seahorse, Sydney Seahorse [66240]		Species or species habitat likely to occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Micrognathus andersonii Anderson's Pipefish, Shortnose Pipefish [66253]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Micrognathus brevirostris thorntail Pipefish, Thorn-tailed Pipefish [66254]		Species or species habitat may occur within area
Microphis manadensis Manado Pipefish, Manado River Pipefish [66258]		Species or species habitat may occur within area
Solegnathus dunckeri Duncker's Pipehorse [66271]		Species or species habitat may occur within area
Solegnathus hardwickii Pallid Pipehorse, Hardwick's Pipehorse [66272]		Species or species habitat may occur within area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area
Solenostomus cyanopterus Robust Ghostpipefish, Blue-finned Ghost Pipefish, [66183]		Species or species habitat may occur within area
Solenostomus paradoxus Ornate Ghostpipefish, Harlequin Ghost Pipefish, Ornate Ghost Pipefish [66184]		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
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area
Trachyrhamphus bicoarctatus Bentstick Pipefish, Bend Stick Pipefish, Short-tailed Pipefish [66280]		Species or species habitat may occur within area
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
Mammals		
Dugong dugon Dugong [28]		Species or species habitat known to occur within area
Reptiles		
Aipysurus laevis Olive Seasnake [1120]		Species or species habitat may occur within area
Astrotia stokesii Stokes' Seasnake [1122]		Species or species habitat may occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Eretmochelys imbricata Hawksbill Turtle [1766]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Hydrophis elegans Elegant Seasnake [1104]		Species or species habitat may occur within area
Laticauda laticaudata a sea krait [1093]		Species or species habitat may occur within area
Lepidochelys olivacea Olive Ridley Turtle, Pacific Ridley Turtle [1767]	Endangered	Foraging, feeding or related behaviour known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Pelamis platurus Yellow-bellied Seasnake [1091]		Species or species habitat may occur within area

Whales and other Cetaceans [Resource Information]

Name	Status	Type of Presence
Mammals		
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 may occur within area
Delphinus delphis Common Dophin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat likely to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcaella brevirostris Irrawaddy Dolphin [45]		Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Sousa chinensis Indo-Pacific Humpback Dolphin [50]		Breeding known to occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted		Species or species

Name	Status	Type of Presence
Bottlenose Dolphin [68418] Tursiops truncatus s. str. Bottlenose Dolphin [68417]		habitat likely to occur within area Species or species habitat may occur within area

Extra Information

Invasive Species [Resource Information]

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

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Lonchura punctulata Nutmeg Mannikin [399]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Frogs		
Rhinella marina Cane Toad [83218]		Species or species habitat known to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur

Name	Status	Type of Presence within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus norvegicus Brown Rat, Norway Rat [83]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Annona glabra Pond Apple, Pond-apple Tree, Alligator Apple, Bullock's Heart, Cherimoya, Monkey Apple, Bobwood, Corkwood [6311]		Species or species habitat may occur within area
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		Species or species habitat likely to occur within area
Asparagus africanus Climbing Asparagus, Climbing Asparagus Fern [66907]		Species or species habitat likely to occur within area
Cabomba caroliniana Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		Species or species habitat likely to occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Chrysanthemoides monilifera subsp. rotundata Bitou Bush [16332]		Species or species habitat likely to occur within area
Cryptostegia grandiflora Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda		Species or species habitat likely to occur

Name	Status	Type of Presence
[18913]		within area
Dolichandra unguis-cati		
Cat's Claw Vine, Yellow Trumpet Vine, Cat's Claw Creeper, Funnel Creeper [85119]		Species or species habitat likely to occur within area
Eichhornia crassipes		
Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Hymenachne amplexicaulis		
Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass [31754]		Species or species habitat likely to occur within area
Lantana camara		
Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to occur within area
Opuntia spp.		
Prickly Pears [82753]		Species or species habitat likely to occur within area
Parthenium hysterophorus		
Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat likely to occur within area
Prosopis spp.		
Mesquite, Algaroba [68407]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Sagittaria platyphylla		
Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii		
Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta		
Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Senecio madagascariensis		
Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]		Species or species habitat likely to occur within area
Reptiles		
Hemidactylus frenatus		
Asian House Gecko [1708]		Species or species habitat likely to occur within area
Ramphotyphlops braminus		
Flowerpot Blind Snake, Brahminy Blind Snake, Cacing Besi [1258]		Species or species habitat likely to occur within area

Nationally Important Wetlands	[Resource Information]
Name	State
Moreton Bay	QLD

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-27.40176 153.10386

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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