

TECHNICAL MEMORANDUM

Likelihood of occurrence

EPBC Act Referral

Parron Wind Farm

PROJECT NUMBER	EP23-085(11)	DOC. NO.	EP23-085(11)—031 FIK
PROJECT NAME	Parron Wind Farm	CLIENT	Zephyr Energy Pty Ltd
AUTHOR	FIK	REVIEWER	JDH
VERSION	1	DATE	28/10/2024

1. INTRODUCTION

Zephyr Energy Pty Ltd (the Proponent) proposes to progress development of the Parron Wind Farm (referred to herein as the Proposed Action). The proponent is referring the Proposed Action to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) pursuant to the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

This technical memorandum provides a summary of the Matters of National Environmental Significance (MNES) relevant to the Proposed Action through a likelihood of occurrence assessment.

2. METHODS

As part of preparations for the ecological surveys completed over the Project Area, a search was conducted for MNES that may occur within a 20 km radius using the Protected Matters Search Tool (PMST) on 20 November 2023. An updated search using the PMST was conducted on 28 October 2024 to ensure all MNES relevant to the Proposed Action were able to be addressed as part of the EPBC Act referral process. The 28 October 2024 PMST report has been included as **Attachment A**.

The information contained within the following terrestrial flora and vegetation and fauna assessments completed within the Project Area have informed this likelihood of occurrence:

- *Detailed Flora and Vegetation Assessment – Parron Wind Farm Development Support, Version 1* (Emerge Associates 2024b).
- *Basic Fauna and Targeted Bird and Bat Assessment – Parron Wind Farm Development Support, Version B* (Emerge Associates 2024a).

To determine likelihood of occurrence, information relating to the MNES identified using the most recent PMST was reviewed. This has included consideration of the species profiles, characteristics/habitat preferences, management plans, recovery plans as well as historic and the recent biological surveys indicated above. Species information was compared to existing environmental data available for the Project Area, from various public datasets and the ecological surveys undertaken within the Project Area. This included consideration of factors such as geomorphology, soils, vegetation types, and historic land use, to understand the potential for MNES to occur.

3. MNES RELEVANCE

The MNES relevance assessment is based on a search of the Commonwealth's EPBC PMST which identified MNES that could occur within a 20 km radius of the Project Area. A summary of the MNES relevant to the Project Area based on the most recent likelihood of occurrence outcomes are outlined in **Table 1** below.

Table 1: Summary of MNES relevant to the Project Area.

Matters of National Environmental Significance	MNES identified within 20 km of the Project Area based on PMST	Relevance to the Project Area
World Heritage Properties	There are no World Heritage Properties in the vicinity of the Project Area.	Not relevant.
National Heritage Places	Lesueur National Park occurs approximately 25 km south-east of the Project Area.	Not relevant.
Wetlands of International Importance (listed under the Ramsar convention)	There are no Wetlands of International Importance in the vicinity of the Project Area.	Not relevant.
Listed Threatened Species	Fifty-five (55) Listed Threatened Species are identified within a 20 km buffer surrounding the Proposal area.	<ul style="list-style-type: none"> One (1) threatened fauna species pertinent to the EPBC Act was 'recorded' within the Project Area No threatened flora species pertinent to the EPBC Act were considered 'possible' or 'likely' to occur based on the habitat and results recorded during the ecological surveys. The assessment of likelihood of occurrence for all species identified in the PMST search is included below in Table 2.
Listed Threatened Ecological Communities (TEC)	Two (2) Listed TEC are suggested to occur within the buffer area, including: <ul style="list-style-type: none"> Banksia Woodlands of the Swan Coastal Plain ecological community (Endangered). Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and Forests of the Swan Coastal Plain ecological community (Critically Endangered). 	<ul style="list-style-type: none"> No TECs were identified during the ecological surveys to occur within the Project Area. The Project Area is not located in an area and/or contains suitable habitat which might suggest a TEC identified during the desktop searches would occur, but were determined to be unrepresentative and unlikely. Likelihood of occurrence for TEC's are considered further in Table 3.

Table 1: Summary of MNES relevant to the Project Area (continued).

Matters of National Environmental Significance	MNES identified within 10 km of the Project Area based on PMST	Relevance to the Project Area
Listed Migratory Species (protected under international agreements)	Ten (10) Listed Migratory Species are identified within a 20 km buffer surrounding the Project Area.	<ul style="list-style-type: none"> One (1) migratory bird species may possibly occur in the vicinity of the Project Area, significant impacts are unlikely. The assessment of likelihood of occurrence for all species identified in the PMST search is included below in Table 2.
Commonwealth Marine Area	The Project Area is not located in a Commonwealth Marine Area.	Not relevant.
Great Barrier Reef Marine Park	The Project Area is not located in the Great Barrier Reef Marine Park.	Not relevant.
Nuclear actions (including uranium mines)	The Project Area is not likely to represent a significant impact to the environment resulting from a Nuclear Action.	Not relevant.
Water resources (that relate to coal seam gas development and large coal mining development)	The Project Area is not a coal seam gas or coal mining development.	Not relevant.

4. THREATENED SPECIES AND ECOLOGICAL COMMUNITIES

An assessment of the likelihood of occurrence for the Listed Threatened Species, Migratory Species and Threatened Ecological Communities within the Project Area was undertaken for each species and community identified in the PMST search. Each species and community was assigned to one of the following categories:

- Recorded: the species has been previously recorded in the Project Area or was recorded during a field survey.
- Likely: suitable habitat for the species or community occurs and it is likely the species may occur based on recent historical record/s within or nearby the Project Area.
- Possible: the Project Area contains marginal habitat and/or extent for the species and is located within the known distribution range for the species but there is no other information to suggest the species may occur within or nearby the Project Area.
- Unlikely: no suitable habitat for the species and/or recent literature records occur near the Project Area.

Table 2 outlines the threatened species and their potential to occur based on results from ecological surveys with consideration to relevant literature to factor habitat preference, sightings and historical records of the species. MNES considered likely to occur or possible to occur have been highlighted in green.

Table 2: Threatened flora and fauna species and likelihood of occurrence

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Birds					
<i>Actitis hypoleucos</i>	Common Sandpiper	Migratory	Edge of sheltered waters salt or fresh, e.g. estuaries, mangrove creeks, rocky coasts, near-coastal salt lakes (including saltwater ponds), river pools, lagoons, claypans, drying swamps, flood waters, dams and sewage ponds. Preferring situations where low perches are available (Johnstone and Storr 1998).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (sheltered waters salt or fresh) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Aphelocephala leucopsis</i>	Southern Whiteface	Vulnerable	Relatively undisturbed open woodlands and shrublands with low tree densities, with an understory of grasses or herbaceous litter cover. They require hollows and crevices in living or dead trees for roosting and nesting (Department of Climate Change 2023).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (undisturbed woodlands or shrublands) is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Apus pacificus</i>	Fork-tailed Swift, Pacific Swift	Migratory	Aerial, migratory species that is most often seen over inland plains and sometimes above open areas, foothills or in coastal areas. Sometimes occurs over settled areas, including towns, urban areas and cities (Pizzey and Knight 2012).	Possible	<ul style="list-style-type: none"> The Pacific swift is an aerial forager and unlikely to be dependent on any of the habitats present within the Project Area. The species has not been recorded during previous surveys but given its large range it is considered possible to opportunistically forage in the air above the Project Area or fly over on commute in search for prey. The species is highly mobile and may opportunistically fly over or forage in the Project Area for short periods of time as part of a much larger home range. The species would not breed within the Project Area. Any occurrence of Pacific swift in the Project Area would likely be in the air space and largely independent from terrestrial habitat.
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Vulnerable (Migratory)	Habits tidal mudflats, saltmarshes and mangroves, plus shallow fresh, brackish or saline inland wetlands. Also recorded in floodwater areas, irrigated pastures and crops, sewage ponds, salt fields.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (tidal mudflats, saltmarshes, mangroves and wetlands) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Calidris canutus</i>	Red knot	Vulnerable (Migratory)	Mud and sand flats in estuaries and on sheltered coasts. Also near-coastal saltlakes, including saltwork ponds (Pizzey and Knight 2012).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (estuaries and sheltered coasts) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered (Migratory)	Mainly shallows of estuaries and near-coastal saltlakes (including saltwork ponds) and drying near-coastal freshwater lakes and swamps. Also beaches and near-coastal sewage ponds (Johnstone and Storr 1998).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (estuaries and near-coastal salt/freshwater lakes) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Calidris melanotos</i>	Pectoral sandpiper	Migratory	Mainly fresh waters (swamps, lagoons, river pools, irrigation channels and sewage ponds); also samphire flats around estuaries and saltlakes (Johnstone & Storr 1998).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (fresh waters, estuaries and saltlakes) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Birds (continued)					
<i>Leipoa ocellata</i>	Malleefowl	Vulnerable	Scrubs and thickets of Eucalyptus spp., <i>Melaleuca lanceolata</i> and <i>Acacia linophylla</i> ; also other dense litter-forming shrublands. Attracted to fallen wheat in stubbles and along roads (Johnstone and Storr 1998).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (scrubs, thickets and dense litter-forming shrublands) is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Motacilla cinerea</i>	Grey wagtail	Migratory	In Australia mostly near running water in disused quarries, sandy and rocky streams in escarpments and rainforests, sewage ponds, ploughed fields and airfields (Pizzey and Knight 2012).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area and overfly marine area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (near running water) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Numenius madagascariensis</i>	Eastern curlew	Critically Endangered (Migratory)	Mainly tidal mudflats; also reef flats, sandy beaches and rarely near-coastal lakes (including saltwork ponds) (Johnstone and Storr 1998).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (tidal mudflats, reef flats and sandy beaches) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Rostratula australis</i>	Australian painted snipe	Endangered	Mainly shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans (Marchant and Higgins 1993).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (terrestrial wetlands) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Sternula nereis nereis</i>	Australian fairy tern	Vulnerable	Sheltered blue-water seas close to land, estuaries (when free of silt) and near-coastal lakes (Johnstone and Storr 1998).	Unlikely	<ul style="list-style-type: none"> PMST suggests foraging, feeding or related behaviour is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (blue-water, estuaries and near-coastal lakes) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Tringa nebularia</i>	Common greenshank, greenshank	Endangered (Migratory)	Found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats and rock platforms (Higgins and Davies 1996).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No suitable habitat (wetlands and sheltered coastal) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat within proximity of the Project Area.
<i>Zanda latirostris</i>	Carnaby's Black cockatoo, Short-billed Black-cockatoo	Endangered	Mainly proteaceous scrubs and heaths and adjacent eucalypt woodlands and forests; and plantations of Pinus spp. Attracted to seeding Banksia spp., Dryandra spp., Hakea spp., Eucalyptus spp., <i>Corymbia calophylla</i> , Grevillea spp., and Allocasuarina spp. (Johnstone and Storr 1998).	Recorded	<ul style="list-style-type: none"> PMST suggests that breeding is known to occur within 20 km of the Project Area and potential breeding habitat was recorded within the Project Area. The Project Area lies within the northern part of the Carnaby's black cockatoo modelled distribution and breeding range which stretches to Eneabba, approximately 40 km north of the site (DoEE 2016b). Numerous recent and reliable records within 20 km of the site. Suitable foraging habitat is present in the site. Evidence of the species (chewed banksia fruits) was recorded during field survey within the Project Area and as such is classified as 'recorded'.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Reptiles					
<i>Egernia stokesii badia</i>	Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink	Endangered	Generally widespread though patchy distribution in dry to semi-arid habitats. E.s badia subspecies occupies hollow crevices and hollow timber in the southwest interior of WA and on Dirk Hartog Island. All known localities are east of Brand Highway (Wilson and Swan 2021). Populations persist in woodland patches as small as one hectare and completely surrounded by wheatfields. Hollow logs are used as refuge sites in woodland habitat.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains fragmented but potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. There is no suitable habitat (woodland patches, hollow crevices and hollow timber) present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
Shark					
<i>Pristis pristis</i>	Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish	Vulnerable (Migratory)	May potentially occur in all large rivers of northern Australia from the Fitzroy River, Western Australia, to the western side of Cape York Peninsula, Queensland. It is mainly confined to the main channels of large rivers (Allen 2000, pers. comm.). Freshwater Sawfish predominantly occur in rivers and estuaries, while large mature animals tend to occur more often in coastal and offshore waters up to 25 m depth (Giles et al. 2006; Stevens et al. 2005).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. The species requires a riverine, estuarine or marine habitat. No suitable habitat is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat within proximity of the Project Area.
Mammals					
<i>Bettongia penicillata ogilbyi</i>	Woylie	Endangered	Woodlands and adjacent heaths with a dense understorey of shrubs, particularly <i>Gastrolobium</i> spp. (TSSC 2018).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (woodlands with a dense understorey) is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Dasyurus geoffroii</i>	Chuditch	Vulnerable	Wide range of habitats from woodlands, dry sclerophyll forests, riparian vegetation, beaches and deserts. Appears to utilise native vegetation along roadsides in the wheatbelt (DEC 2012).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (woodlands, forests, riparian and beaches) is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Macroderma gigas</i>	Ghost Bat	Vulnerable	Requires undisturbed roost caves or mineshafts, usually complex systems with several openings (Menkhorst and Knight 2011).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (undisturbed roost caves or mineshafts) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.
<i>Parantechinus apicalis</i>	Dibbler	Endangered	Old-growth mallee heath in coastal southwest and Escape Island off Jurien Bay (Menkhorst and Knight 2011).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat (old-growth mallee heath) is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat and lack of recent and reliable records within proximity of the Project Area.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Plants					
<i>Acacia forrestiana</i>	Forest's Wattle	Vulnerable	Lateritic gravelly soils, clay loam over sandstone. Gullies, hills, breakaways.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Acacia splendens</i>	Splendid Wattle, Dandaragan Wattle	Endangered	White sand over clay, pale brown loam, cracked brown soil, gravel, laterite, ironstone. Slopes of breakaways, especially southern slopes, hills.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Acacia wilsonii</i>	Wilson's Wattle	Endangered	White/yellow sand & lateritic gravel, sandy clay over laterite.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Andersonia gracilis</i>	Slender Andersonia	Endangered	A Slender erect or open straggly shrub, 0.1-0.5(-1) m high. Flowers are white-pink-purple with flowering occurring between September and November. Found in seasonally damp, black sandy clay flats near or on the margins of swamps, often on duplex soils supporting low open heath vegetation with species such as <i>Calothamnus hirsutus</i> , <i>Verticordia densiflora</i> and <i>Kunzea recurva</i> over sedges (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No suitable habitat is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat within proximity of the Project Area.
<i>Anigozanthos viridis</i> subsp. <i>terraspectans</i>	Dwarf Green Kangaroo Paw	Vulnerable	Grey sand, clay loam. Winter-wet depressions.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Banksia cataglypta</i>		Vulnerable	Lateritic breakaways.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Banksia mimica</i>	Summer Honeypot	Endangered	Grows on flat to gentle slopes in grey and white sand in open woodlands. In the Whicher Range this species grows in closed shrubland with a <i>Banksia attenuata</i> overstorey. Associated vegetation includes <i>Andersonia</i> sp., <i>Stirlingia latifolia</i> , <i>Xanthorrhoea preisii</i> , <i>Leucopogon</i> sp., <i>Melaleuca thymoides</i> and <i>Petrophile</i> sp. (Kelly et al., 1999; Williams et al., 2001). In the Darling Range and Mogumber, it occurs in mixed low heath with a <i>Banksia attenuata</i> / <i>B. menziesii</i> open low woodland overstorey (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Plants (continued)					
<i>Banksia serratuloides</i> subsp. <i>perissa</i>	Northern Serrate Dryandra	Critically Endangered	Gravelly lateritic soils.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Caladenia hoffmanii</i>	Hoffman's Spider-orchid	Endangered	Clay, loam, laterite, granite. Rocky outcrops and hillsides, ridges, swamps and gullies.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Caleana dixonii</i> (listed as <i>Paracaleana dixonii</i>)	Sandplain Duck Orchid	Endangered	Deep sand in open areas beneath dense tall shrubs with scattered banksias, or in heathland in shallow sand over laterite. Occurs from near Eneabba to near Cataby.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Chamelaucium lullfitzii</i> (listed as <i>Chamelaucium</i> sp. <i>Gingin</i> (N.G.Marchant 6)	Gingin Wax	Endangered	White yellow sand in low woodland.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Conospermum densiflorum</i> subsp. <i>unicephalum</i>	One-headed Smokebush	Endangered	Clay in low lying areas.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Drakaea elastica</i>	Glossy-leafed Hammer Orchid	Endangered	A slender flower stem up to 30 cm high with a single glossy green heart shaped leaf. Found in bare patches of sand within otherwise dense vegetation in-low lying areas alongside winterwet swamps. Typically, in banksia woodland or thickets of <i>Kunzea glabrescens</i> . Flowers late September to October to November (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Eremophila scaberula</i>	Rough Emu Bush	Endangered	Winter-wet plains, inundated areas.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Plants (continued)					
<i>Eucalyptus absita</i>	Badgingarra Box	Endangered	White lateritic sand. Paddocks.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey within the Project Area.
<i>Eucalyptus argutifolia</i>	Yanchep Mallee, Wabbling Hill Mallee	Vulnerable	Shallow soils over limestone. Slopes or gullies of limestone ridges, outcrops	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Eucalyptus crispata</i>	Yandanooka Mallee	Vulnerable	Sand, loam with lateritic gravel. Lateritic breakaways.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey of the Project Area.
<i>Eucalyptus dolorosa</i>	Dandaragan Mallee, Mount Misery Mallee	Endangered	Laterite. Hillsides.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Eucalyptus impensa</i>	Eneabba Mallee	Endangered	Yellow sand. Lateritic hills.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Eucalyptus johnsoniana</i>	Johnson's Mallee	Vulnerable	White/grey sand with lateritic gravel. Sandplains, lateritic breakaways.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey within the Project Area.
<i>Eucalyptus leprophloia</i>	Scaly Butt Mallee, Scaly-butt Mallee	Endangered	White or grey sand over laterite. Valley slopes.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey within the Project Area.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Plants (continued)					
<i>Eucalyptus pruiniramis</i>	Midlands Gum, Jingymia Gum	Endangered	Skeletal soils over sandstone or laterite. Rocky hillslopes.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Eucalyptus suberea</i>	Cork Mallee, Mount Lesueur Mallee	Vulnerable	Grey sand. Near or on lateritic breakaways.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey within the Project Area.
<i>Eucalyptus x balanites</i>	Cadda Road Mallee	Endangered	Malle to 5m in height. Light coloured sandy soils over laterite. Habitat consists of gently sloping heathlands; open mallee woodland over shrubland (Population 2) or heathland with emergent mallees (Population 1) (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey within the Project Area.
<i>Eucalyptus x lateritica</i> (listed as <i>Eucalyptus lateritica</i>)	Laterite Mallee, Mt Michaud Mallee	Vulnerable	White or grey sand with gravel. Lateritic breakaways & mesas.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. A conclusive survey (targeted searches) was undertaken at a suitable time of year and with sufficient effort to detect the species which was not found. The species is considered 'unlikely' to occur within the Project Area given the results of the conclusive survey within the Project Area.
<i>Grevillea batrachioides</i>	Mt Lesueur Grevillea	Endangered	Sandy loam. Sandstone outcrops.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. No suitable habitat is present in the Project Area. The species is considered 'unlikely' to occur within the Project Area given the absence of suitable habitat within proximity of the Project Area.
<i>Grevillea christineae</i>	Christine's Grevillea	Endangered	Clay loam, sandy clay, often moist.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Grevillea curviloba</i> subsp. <i>incurva</i>	Narrow curved—lead Grevillea	Endangered	<i>Grevillea curviloba</i> subsp. <i>incurva</i> grows as a vigorous, sprawling shrub to 2.5 metres high and wide, with greyish-green leaves. Occurs on sand and sandy loam over limestone or ironstone in winter-wet heath (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Grevillea humifusa</i>	Spreading Grevillea	Endangered	Gravelly loam over laterite.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Plants (continued)					
<i>Hakea megalosperma</i>	Lesueur Hakea	Vulnerable	Grey sand, loam. Lateritic hills & rocks.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. The species has been recorded in a previous survey 4 km south of the Project Area. Although the Project Area contains suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Hemiandra gardneri</i>	Red Snakebush	Endangered	Grey or yellow sand, clayey sand. Sandplains.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Styphelia obtecta</i>	Hidden Beard-heath	Endangered	Grey sand.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Macarthuria keigheryi</i>	Keighery's Macarthuria	Endangered	Erect or spreading perennial, herb or shrub, between 0.2-0.4 m in height and 0.3-0.6 m wide. Flowers from September to December or February to March. Typically occurs on white or grey sand (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Patersonia spirifolia</i>	Spiral-leaved Patersonia	Endangered	Sand over laterite. Low hills.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area. Although the Project Area contains suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation. The species is considered 'unlikely' to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Petrophile nivea</i>		Vulnerable	Dry bare white sand over gravel over laterite. Uplands.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Ptychosema pusillum</i>	Dwarf Pea	Vulnerable	Red, brown & yellow sand rises.	Unlikely	<ul style="list-style-type: none"> PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area. No recent and reliable records within 20 km of the Project Area. No suitable habitat is present in the Disturbance Footprint of the Project Area. The species is considered 'unlikely' to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.

Table 2: Threatened flora and fauna species and likelihood of occurrence (continued)

Scientific Name	Common Name	EPBC status	Habitat	Likelihood of occurrence	Justification
Plants (continued)					
<i>Spirogardnera rubescens</i>	Spiral Bush	Endangered	Laterite, sand over laterite, loam.	Unlikely	<ul style="list-style-type: none">PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area.Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation.The species is considered ‘unlikely’ to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.
<i>Tetradlea nephelioides</i>		Critically Endangered	White-grey sand, yellow-brown clayey sand, gravel, laterite. Outcrops, undulating hills, ridges.	Unlikely	<ul style="list-style-type: none">PMST suggests the species or suitable habitat for the species is known to occur within 20 km of the Project Area.No recent and reliable records within 20 km of the Project Area.No suitable habitat is present in the Disturbance Footprint of the Project Area.The species is considered ‘unlikely’ to occur within the Disturbance Footprint of the Project Area given the absence of suitable habitat and lack of recent and reliable records available within proximity of the Project Area.
<i>Thelymitra stellata</i>	Star Sun-orchid	Endangered	Tuberous perennial herb to 0.25m in height. Flowers are yellow and brown flowering from October to November. Occurs on sandy loam, clay or gravel over laterite or gravel (Western Australian Herbarium 2024).	Unlikely	<ul style="list-style-type: none">PMST suggests the species or suitable habitat for the species is likely to occur within 20 km of the Project Area.Although the Project Area contains potentially suitable habitat for the species, the Disturbance Footprint does not comprise suitable habitat for the species given the high level of historical disturbance and the absence of any native vegetation.The species is considered ‘unlikely’ to occur within the Disturbance Footprint in the Project Area given the absence of suitable habitat.

Table 3: Threatened Ecological Communities and likelihood of occurrence

Community Name	EPBC Status	Habitat/Description	Likelihood of occurrence	Reason
Ecological communities				
Banksia Woodlands of the Swan Coastal Plain	Endangered	The Conservation Advice (Threatened Species Scientific Committee 2016) states that Banksia Woodland TEC “typically occurs on well drained, low nutrient soil on sandplain landforms, particularly deep Bassendean and Spearwood sands and occasionally on Quindalup sands”, and that the community “is also common on sandy colluvium and aeolian sands of the Ridge Hill Shelf, Whicher Scarp and Dandaragan Plateau; and may also occur in other limited scenarios” (DoEE 2016a).	Does not occur	<ul style="list-style-type: none">PMST suggests the ecological community is likely to occur within the site.No vegetation that meets the description or key diagnostic criteria of this TEC was identified to occur within the Project Area as part of the Detailed Flora and Vegetation Assessment (Emerge Associates 2024b).
Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and Forests of the Swan Coastal Plain	Critically Endangered	Tuart (<i>Eucalyptus gomphocephala</i>) woodland and forests of the Swan Coastal Plan TEC, listed in July 2019 as a Critically Endangered TEC under the EPBC Act and Priority 3 listed by DBCA. Mostly confined to Quindalup Dunes and Spearwood Dunes from Jurien Bay to the Sabina River, with outliers along some rivers and the Bassendean dunes and Pinjarra Plain. Tuart is the key dominant canopy species however Tuart communities comprise a variety of flora and fauna assemblages. Trees commonly co-occurring with Tuart include <i>Agonis flexuosa</i> (peppermint), <i>Banksia grandis</i> , <i>Banksia attenuata</i> , <i>Eucalyptus marginata</i> ; and less commonly, <i>Corymbia calophylla</i> , <i>Banksia menziesii</i> and <i>Banksia prionotes</i> . An understorey of native plants is typically present, which may include grasses, herbs and shrubs (DoEE 2019).	Does not occur	<ul style="list-style-type: none">PMST suggests the ecological community is likely to occur within the site.No vegetation that meets the description or key diagnostic criteria of this TEC was identified to occur within the Project Area as part of the Detailed Flora and Vegetation Assessment (Emerge Associates 2024b).

5. CONCLUSIONS

Information from available databases and recent comprehensive flora and fauna surveys were used to assess the likelihood of occurrence of each identified MNES.

None of the conservation significant flora species identified within the PMST database search were considered 'likely' or 'possible' to occur within the Project Area based on the lack of preferred habitat, historic and current disturbance and/or because they were not identified during the ecological surveys.

No TECs identified in the MNES search are considered likely to occur within the Project Area.

Of the twenty (20) fauna species identified in the PMST search, one (1) threatened species was recorded within the Project Area:

- *Zanda latirostris* (Carnaby's black cockatoo) – suitable foraging habitat was surveyed within the Project Area. Evidence of Carnaby's black cockatoo was recorded in the Project Area.

One (1) fauna species was considered 'possible' to occur based on suitable habitat identified within the Project Area:

- *Apus pacificus* (Pacific swift) – may opportunistically fly over the Project Area on commute or in search of prey.

The remainder of the conservation significant fauna species identified in the PMST were considered 'unlikely' to occur in the Project Area due to a lack of suitable or preferred habitat, because the Project Area lies outside of the species known distribution, and/or it has been confirmed through targeted survey that they do not occur within the Project Area.

6. References

The references listed below have been considered as part of preparing this document.

Department of Environment and Conservation (DEC) 2012, *Chuditch (Dasyurus geoffroii) National Recovery Plan - Wildlife Management Program No. 54*.

Department of Climate Change, Energy, the Environment and Water 2023, *Conservation Advice for Aphelocephala leucopsis (southern whiteface)*, Canberra.

Department of Environment and Energy (DoEE) 2016a, *Approved Conservation Advice (incorporating listing advice) for the Banksia Woodlands of the Swan Coastal Plain ecological community*, Canberra.

Department of the Environment and Energy (DoEE) 2016b, *Modelled distribution for Carnaby's Cockatoo (Calyptorhynchus latirostris)*, Canberra.

Department of Environment and Energy (DoEE) 2019, *Approved Conservation Advice (incorporating listing advice) for the Tuart (Eucalyptus gomphocephala) woodlands and forests of the Swan Coastal Plain ecological community*, Canberra.

Emerge Associates 2024a, *Basic Fauna and Targeted Bird and Bat Assessment: Parron Wind Farm Development Support*, EP23-085(02).

Emerge Associates 2024b, *Detailed Flora and Vegetation Assessment - Parron Wind Farm Development Support*, EP23-085(01)--006 MS, Version 1.

Higgins, P. J. and Davies, S. J. J. F. 1996, *Handbook of Australian, New Zealand and Antarctic Birds. Volume Three - Snipe to Pigeons*, Oxford University Press, Melbourne, Victoria.

Johnstone, R. E. and Storr, G. M. 1998, *Handbook of Western Australian Birds. Volume 1 - Non-Passerines (Emu to Dollarbird)*, Western Australian Museum, Perth.

Marchant, S. and Higgins, P. J. 1993, *Handbook of Australian, New Zealand and Antarctic Birds. Volume two - Raptors to Lapwings*, Oxford University Press, Melbourne, Victoria.

Menkhorst, P. and Knight, F. 2011, *Field guide to the mammals of Australia (Third edition)*, Oxford University Press Australia & New Zealand, Melbourne, VIC, Australia.

Pizzey, G. and Knight, F. 2012, *The Fieldguide to the Birds of Australia*, Harper Collins Publishers, Sydney, Australia.

Threatened Species Scientific Committee (TSSC) 2018, *Conservation advice for Bettongia penicillata (woylie)*, Department of the Environment, Canberra.

Western Australian Herbarium 2024, *Florabase-the Western Australian Flora*, Department of Biodiversity, Conservation and Attractions <<https://florabase.dbca.wa.gov.au/>>.

Wilson, S. and Swan, G. 2021, *A Complete Guide to Reptiles of Australia*, New Holland Publishers, Sydney, Australia.

Attachment A: PMST Report





Australian Government

Department of Climate Change, Energy,
the Environment and Water

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 28-Oct-2024

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	1
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	55
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

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

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

A [permit](#) may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	3
Commonwealth Heritage Places:	None
Listed Marine Species:	14
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	15
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	15
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

National Heritage Places			[Resource Information]
Name	State	Legal Status	Buffer Status
Natural			
Lesueur National Park	WA	Listed place	In buffer area only

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

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

Community Name	Threatened Category	Presence Text	Buffer Status
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area	In buffer area only
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area	In buffer area only

Listed Threatened Species	[Resource Information]
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Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.

Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Zanda latirostris listed as Calyptorhynchus latirostris Carnaby's Black Cockatoo, Short-billed Black-cockatoo [87737]	Endangered	Breeding known to occur within area	In feature area
MAMMAL			
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat may occur within area	In feature area
Macroderma gigas Ghost Bat [174]	Vulnerable	Species or species habitat may occur within area	In feature area
Parantechinus apicalis Dibbler [313]	Endangered	Species or species habitat may occur within area	In feature area
PLANT			
Acacia forrestiana Forest's Wattle [17235]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Acacia splendens Splendid Wattle, Dandaragan Wattle [81510]	Endangered	Species or species habitat known to occur within area	In buffer area only
Acacia wilsonii Wilson's Wattle [65228]	Endangered	Species or species habitat known to occur within area	In buffer area only
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat known to occur within area	In feature area
Anigozanthos viridis subsp. terraspectans Dwarf Green Kangaroo Paw [3435]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Banksia catoglypta [85021]	Vulnerable	Species or species habitat known to occur within area	In feature area
Banksia mimica Summer Honeypot [82765]	Endangered	Species or species habitat may occur within area	In feature area
Banksia serratuloides subsp. perissa Northern Serrate Dryandra [82767]	Critically Endangered	Species or species habitat known to occur within area	In buffer area only
Caladenia hoffmanii Hoffman's Spider-orchid [56719]	Endangered	Species or species habitat may occur within area	In buffer area only
Caleana dixonii listed as Paracaleana dixonii Sandplain Duck Orchid [87944]	Endangered	Species or species habitat known to occur within area	In feature area
Chamelaucium lullfitzii listed as Chamelaucium sp. Gingin (N.G.Marchant 6) Gingin Wax [92777]	Endangered (listed as Chamelaucium sp. Gingin)	Species or species habitat may occur within area	In buffer area only
Conospermum densiflorum subsp. unicephalum One-headed Smokebush [64871]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Drakaea elastica Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat may occur within area	In buffer area only
Eremophila scaberula Rough Emu Bush [16729]	Endangered	Species or species habitat may occur within area	In buffer area only
Eucalyptus absita Badgingarra Box [24260]	Endangered	Species or species habitat known to occur within area	In feature area
Eucalyptus argutifolia Yanchep Mallee, Wabling Hill Mallee [24263]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eucalyptus crispata Yandanooka Mallee [24268]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eucalyptus dolorosa Dandaragan Mallee, Mount Misery Mallee [56709]	Endangered	Species or species habitat may occur within area	In buffer area only
Eucalyptus impensa Eneabba Mallee [56711]	Endangered	Species or species habitat may occur within area	In buffer area only
Eucalyptus johnsoniana Johnson's Mallee [14516]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Eucalyptus leprophloia Scaly Butt Mallee, Scaly-butt Mallee [56712]	Endangered	Species or species habitat known to occur within area	In feature area
Eucalyptus pruiniramis Midlands Gum, Jingymia Gum [56403]	Endangered	Species or species habitat known to occur within area	In feature area
Eucalyptus suberea Cork Mallee, Mount Lesueur Mallee [5529]	Vulnerable	Species or species habitat known to occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Eucalyptus x balanites Cadda Road Mallee, Cadda Mallee [87816]	Endangered	Species or species habitat known to occur within area	In feature area
Eucalyptus x lateritica listed as Eucalyptus lateritica Laterite Mallee, Mt Michaud Mallee [94036]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
Grevillea batrachioides Mt Lesueur Grevillea [21735]	Endangered	Species or species habitat known to occur within area	In feature area
Grevillea christineae Christine's Grevillea [64520]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Grevillea curviloba subsp. incurva Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat may occur within area	In buffer area only
Grevillea humifusa Spreading Grevillea [61182]	Endangered	Species or species habitat known to occur within area	In feature area
Hakea megalosperma Lesueur Hakea [10505]	Vulnerable	Species or species habitat known to occur within area	In feature area
Hemiandra gardneri Red Snakebush [7945]	Endangered	Species or species habitat likely to occur within area	In feature area
Leucopogon obtectus Hidden Beard-heath [19614]	Endangered	Species or species habitat known to occur within area	In feature area
Macarthuria keigheryi Keighery's Macarthuria [64930]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Patersonia spirifolia Spiral-leaved Patersonia [83927]	Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Petrophile nivea [75847]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Ptychosema pusillum Dwarf Pea [11268]	Vulnerable	Species or species habitat known to occur within area	In buffer area only
Spirogardnera rubescens Spiral Bush [15667]	Endangered	Species or species habitat known to occur within area	In feature area
Tetratheca nephelioides [83217]	Critically Endangered	Species or species habitat likely to occur within area	In buffer area only
Thelymitra stellata Star Sun-orchid [7060]	Endangered	Species or species habitat known to occur within area	In feature area

REPTILE			
Egernia stokesii badia Western Spiny-tailed Skink, Baudin Island Spiny-tailed Skink [64483]	Endangered	Species or species habitat known to occur within area	In feature area

SHARK			
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species		[Resource Information]	
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area

Migratory Marine Species			
Pristis pristis Freshwater Sawfish, Largetooth Sawfish, River Sawfish, Leichhardt's Sawfish, Northern Sawfish [60756]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Migratory Terrestrial Species			
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Wetlands Species			
Actitis hypoleucos			
Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus			
Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area	In feature area
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may occur within area	In feature area
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area	In buffer area only

Other Matters Protected by the EPBC Act

Commonwealth Lands			[Resource Information]
The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.			
Commonwealth Land Name	State	Buffer Status	
Unknown			
Commonwealth Land - [51489]	WA	In buffer area only	
Commonwealth Land - [52115]	WA	In buffer area only	
Commonwealth Land - [51994]	WA	In buffer area only	
Listed Marine Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status

Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area	In feature area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area	In feature area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat may occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat may occur within area overfly marine area	In buffer area only
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat known to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area	In feature area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat likely to occur within area overfly marine area	In buffer area only

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Badgingarra	National Park	WA	In feature area
Boothendarra	Nature Reserve	WA	In buffer area only
Coomallo	Nature Reserve	WA	In buffer area only
Hill River	Nature Reserve	WA	In feature area
Lesueur	National Park	WA	In buffer area only
Nambung	National Park	WA	In buffer area only
Southern Beekeepers	Nature Reserve	WA	In buffer area only
Twyata	Nature Reserve	WA	In buffer area only
Unnamed WA29719	Nature Reserve	WA	In buffer area only
Unnamed WA29901	Conservation Park	WA	In buffer area only
Unnamed WA33287	Nature Reserve	WA	In buffer area only
Unnamed WA41986	Conservation Park	WA	In buffer area only
Unnamed WA48717	Conservation Park	WA	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status	
Unnamed WA51272	Conservation Park	WA	In buffer area only	
Wongonderrah	Nature Reserve	WA	In buffer area only	
EPBC Act Referrals [Resource Information]				
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Atlas Mineral Sands Project	2021/9056		Post-Approval	In buffer area only
Jurien East Road Upgrade, 3 km NNE Jurien Bay, WA	2020/8740		Post-Approval	In buffer area only
Waddi Wind Farm	2023/09639		Assessment	In buffer area only
Controlled action				
Atlas Mineral Sands Mine	2020/8813	Controlled Action	Completed	In buffer area only
Brand Highway Widening and Passing Lanes Project 34.83-164.3 SLK	2017/7864	Controlled Action	Post-Approval	In buffer area only
Not controlled action				
Cooljarloo Mine Falcon Extension	2007/3556	Not Controlled Action	Completed	In buffer area only
Development of the Badgingarra Wind Farm	2008/4065	Not Controlled Action	Completed	In feature area
Development of the Dandaragan Wind Farms	2011/6006	Not Controlled Action	Completed	In buffer area only
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed	In feature area
Northern Looping project, Karratha to Gingin	2005/2251	Not Controlled Action	Completed	In buffer area only
Waddi Wind and Solar Farm, near Dandaragan, WA	2018/8352	Not Controlled Action	Completed	In buffer area only
Not controlled action (particular manner)				
Transmission Line Rebuild and Extension	2009/5105	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
UIL Energy 2D Seismic Survey, Perth Basin, WA	2015/7554	Not Controlled Action (Particular Manner)	Post-Approval	In feature area

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Referral decision				
Badgingarra Wind Farm	2007/3529	Referral Decision	Completed	In feature area
Transmission Line Rebuild and Extension	2009/4972	Referral Decision	Completed	In feature area

Caveat

1 PURPOSE

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

The report contains the mapped locations of:

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

2 DISCLAIMER

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

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

3 DATA SOURCES

Threatened ecological communities

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

Threatened, migratory and marine species

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

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions when time permits.

4 LIMITATIONS

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

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

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

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

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

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

Acknowledgements

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

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

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

Please feel free to provide feedback via the [Contact us](#) page.

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