



Terrestrial Ecological Desktop Assessment

Aurora Green Offshore Wind Project

PREPARED FOR



Iberdrola Australia OW 2 Pty
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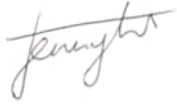
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Terrestrial Ecological Desktop Assessment

Aurora Green Offshore Wind Farm

0758202_RPT_EIA_008_V6



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CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION	6
1.1 PROJECT OVERVIEW	6
1.2 PURPOSE OF ASSESSMENT	11
2. METHODS	12
2.1 DATABASE SEARCH	12
2.2 LIKELIHOOD OF OCCURRENCE	13
3. PRELIMINARY ASSESSMENT RESULTS	15
3.1 REFERRAL AREA DESCRIPTION	15
3.2 PLANNING OVERVIEW	15
3.2.1 Clause 12.01 Biodiversity	15
3.2.2 Clause 52.17 Native Vegetation	16
3.2.3 Zoning	16
3.2.4 Overlays	19
3.3 NATIVE VEGETATION	19
3.3.1 Ecological Vegetation Classes	19
3.3.2 Patches	25
3.3.3 Scattered Trees	26
3.4 FLORA	26
3.4.1 Threatened Species	26
3.5 FAUNA	33
3.5.1 Habitat	33
3.5.2 Landscape Context and Connectivity	35
3.5.3 Threatened Species	36
3.6 LISTED ECOLOGICAL COMMUNITIES	57
3.6.1 EPBC Act	57
3.6.2 FFG Act	60
3.7 WETLANDS	63
3.7.1 State Mapped Wetlands	63
3.7.2 Nationally Important Wetlands	63
3.7.3 Wetlands of International Importance	63
3.8 PROTECTED AREAS	64
3.9 LEGISLATIVE AND APPROVAL CONSIDERATIONS	69
3.9.1 <i>Environment Protection and Biodiversity Conservation Act 1999</i>	69
3.9.2 <i>Environment Effects Act 1978</i>	69
3.9.3 Flora and Fauna Guarantee Act 1988	72
3.9.4 Planning and Environment Act 1987	72
3.9.5 Catchment and Land Protection Act 1984	72
3.9.6 Wildlife Act 1975	72
3.9.7 Marine and Coastal Act 2018	72
4. CONCLUSION	73
REFERENCES	77

APPENDIX A	PROTECTED MATTERS SEARCH TOOL REPORT	
APPENDIX B	LIKELIHOOD OF OCCURRENCE: FLORA	
APPENDIX C	LIKELIHOOD OF OCCURRENCE: FAUNA	

LIST OF TABLES

TABLE 2-1	DATABASE DESKTOP SEARCHES	12
TABLE 2-2	LIKELIHOOD OF OCCURRENCE CRITERIA	13
TABLE 3-1	REFERRAL AREA OVERVIEW	15
TABLE 3-2	ASSESSMENT PATHWAY FOR AN APPLICATION TO REMOVE, DESTROY OR LOP NATIVE VEGETATION	16
TABLE 3-3	PLANNING OVERLAYS WITHIN THE REFERRAL AREA	19
TABLE 3-4	MODELLED EVCS WITHIN THE REFERRAL AREA	20
TABLE 3-5	MODELLED NATIVE VEGETATION IN THE REFERRAL AREA	25
TABLE 3-6	THREATENED FLORA LIKELIHOOD OF OCCURRENCE OUTCOMES	26
TABLE 3-7	EPBC ACT THREATENED FLORA SPECIES	26
TABLE 3-8	FFG ACT THREATENED FLORA SPECIES	27
TABLE 3-9	THREATENED FAUNA LIKELIHOOD OF OCCURRENCE OUTCOMES	36
TABLE 3-10	EPBC ACT THREATENED FAUNA SPECIES	37
TABLE 3-11	EPBC ACT MIGRATORY SPECIES	39
TABLE 3-12	FFG ACT THREATENED FAUNA SPECIES	40
TABLE 3-13	POTENTIAL IMPACTS TO MNES: CRITICALLY ENDANGERED AND ENDANGERED SPECIES	51
TABLE 3-14	POTENTIAL IMPACTS TO MNES: VULNERABLE SPECIES	54
TABLE 3-15	POTENTIAL IMPACTS TO MNES: MIGRATORY SPECIES	56
TABLE 3-16	PMST SEARCH RESULTS FOR THREATENED ECOLOGICAL COMMUNITIES	57
TABLE 3-17	POTENTIAL IMPACTS TO MNES: CRITICALLY ENDANGERED AND ENDANGERED TECS	58
TABLE 3-18	POTENTIAL IMPACTS TO MNES: RAMSAR WETLANDS	68
TABLE 3-19	PRELIMINARY ASSESSMENT AGAINST INDIVIDUAL REFERRAL CRITERIA OF THE EE ACT	70
TABLE 3-20	ASSESSMENT AGAINST COMBINED REFERRAL CRITERIA OF THE EE ACT	71

LIST OF FIGURES

FIGURE 1-1	PROJECT COMPONENTS OVERVIEW (SECTION VIEW)	6
FIGURE 1-2	PROJECT COMPONENTS AND AREAS OVERVIEW (PLAN VIEW)	7
FIGURE 1-3	AURORA GREEN OFFSHORE WIND PROJECT LOCATION	9
FIGURE 1-4	REFERRAL AREA AND ENVIRONMENTAL SURROUNDS	10
FIGURE 3-1	PLANNING ZONES AND OVERLAYS IN THE REFERRAL AREA	18
FIGURE 3-2	MODELLED EVCS WITHIN THE REFERRAL AREA (PRE 1750 STATE MAPPING)	23
FIGURE 3-3	MODELLED NATIVE VEGETATION WITHIN THE REFERRAL AREA (2005 STATE MAPPING)	24
FIGURE 3-4	EPBC ACT LISTED THREATENED FLORA RECORDS	29
FIGURE 3-5	FFG ACT LISTED THREATENED FLORA RECORDS	30
FIGURE 3-6	EPBC ACT LISTED THREATENED FAUNA RECORDS	44
FIGURE 3-7	MIGRATORY SPECIES RECORDS	47
FIGURE 3-8	FFG ACT LISTED THREATENED FAUNA RECORDS	48
FIGURE 3-9	FFG ACT LISTED COMMUNITIES MODELLING	62
FIGURE 3-10	MAPPED WETLANDS WITHIN THE REFERRAL AREA AND SURROUNDS	66
FIGURE 3-11	PROTECTED AREAS WITHIN THE REFERRAL AREA AND SURROUNDS	67

ACRONYMS AND ABBREVIATIONS

Acronyms	Description
BCS	Bioregional Conservation Status
BMO	Bushfire Management Overlay
BPA	Bushfire Prone Area
CaLP Act	<i>Catchment and Land Protection Act 1994</i>
CMA	Catchment Management Authority
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Cth)
DEECA	Department of Energy, Environment and Climate Action
DELWP	Former Department of Environment, Water, Land and Planning
DSH	Diameter at Standard Height (1.3 m) of a canopy tree
DTP	Department of Transport and Planning
EE Act	<i>Environment Effects Act 1978</i>
EES	Environment Effects Statement
EIS	Environmental Impact Statement
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Cth)
ERM	Environmental Resources Management Australia Pty Ltd
ESO	Environmental Significance Overlay
EVC	Ecological Vegetation Class
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
FZ	Farming Zone
GHU	General Habitat Unit
the Guidelines	<i>Guidelines for the removal, destruction or lopping of native vegetation</i> (DELWP 2017)
HDD	Horizontal Directional Drilling
Iberdrola Australia	Iberdrola Australia OW 2 Pty Limited
IBRA7	Interim Biogeographic Regionalisation for Australia, version 7
LDRZ	Low Density Residential Zone
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NEM	National Electricity Market

Acronyms	Description
NRZ	Notional Root Zone (=12 × DSH, to a max of 15 m and with a minimum of 2 m)
NVCR	Native Vegetation Credit Register
NVR Report	Native Vegetation Removal Report
O&M	Operations and Maintenance
OWF	Offshore Wind Farm
PCRZ	Public Conservation and Resource Zone
PE Act	<i>Planning and Environment Act 1987</i>
PMST	Protected Matters Search Tool
Project	Aurora Green Offshore Wind Project
REZ	Renewable Energy Zone
SBV	Strategic Biodiversity Value
SHU	Species Habitat Unit
TEC	Threatened Ecological Community
TRZ3	Transport Road Zone 3
TZ	Township Zone
VBA	Victorian Biodiversity Atlas
VicGrid	A DEECA body, that coordinates the planning and development of Victorian renewable energy zones
VQA	Vegetation Quality Assessment
WMP	Weed Management Plan

EXECUTIVE SUMMARY

Iberdrola Australia OW 2 Pty Limited (**Iberdrola Australia**) proposes to construct and operate the Aurora Green Offshore Wind Project (**the Project**), a renewable energy development to be located off the Gippsland coast of Victoria, Australia.

The Project is a 3 GW offshore wind project located 25+ kms from the Gippsland coast comprising an offshore wind farm and a transmission system of cables and substations to transfer electricity generated offshore to the National Electricity Market via an onshore connection point to the electricity network.

Environmental Resources Management Australia Pty Ltd has been engaged by Iberdrola Australia as lead consultant to undertake environmental studies and assessments for the purpose of obtaining primary and secondary approvals for the Project.

A preliminary assessment of potential environmental impacts has been carried out to inform the project referrals under Commonwealth and Victorian legislation, environmental assessments and approvals, and project development processes. This desktop report documents the preliminary assessment and recommendations for further studies on the terrestrial environment to inform the Project.

Assessment Overview

This desktop ecological assessment has been prepared to provide an overview of the biodiversity values and potential constraints and impacts within the onshore (terrestrial) area of the Referral Area, which includes the onshore connection point, and the onshore portion of the export cable corridor investigation area.

The desktop assessment has been informed by the following:

- Review of public access database searches for historical species records. It examines a wide Referral Area, within which a much smaller area of potential direct and indirect impacts and disturbance is ultimately anticipated.
- Review of literature and government reports to inform species habitat preferences and species distributions. The identified databases were examined to review the known and modelled biodiversity values in and within 10 km of the Referral Area, as well as planning controls under Wellington Planning Scheme relevant to biodiversity.
- Likelihood of occurrence assessment of all Matters of National Environmental Significance (**MNES**) and *Flora and Fauna Guarantee Act 1988* (**FFG Act**) listed species and communities found within database searches. Biodiversity values considered in this assessment were informed by analysis of desktop sources and will be updated based on the findings of recommended future field surveys.

The information gathered herein will be used to inform design considerations for the onshore components of the Project to minimise potential impacts to biodiversity values and ensure adherence to all related planning controls and legislative obligations and approvals.

Planning Overview

The onshore Referral Area is mostly comprised of large agricultural properties across approximately 23,000 ha (230 km²) of predominantly flat terrain within the Gippsland Plains bioregion, in the Wellington Shire Local Government Area. The area is within the Gippsland

Coastal Plains local area of the West Gippsland Catchment Management Authority region. All associated agricultural properties are within the Farming Zone under the Wellington Planning Scheme. An Environmental Significance Overlay applies to the Coastal and Gippsland environs and to Wetlands environs. The whole onshore Referral Area is within a designation Bushfire Prone Area, with a Bushfire Management Overlay present in association with high-risk bushfire hazards. No other planning overlays relating to ecological matters apply.

Native Vegetation

Historically the Referral Area has supported a diverse array of terrestrial woodland and grassland habitat, and aquatic habitat. Due to historic clearing for agricultural practices, the remaining area encompasses only around 3,320 ha of remnant native vegetation across the Referral Area. Remnant native vegetation is largely restricted to road reserves, the various Protected Areas within the Referral Area, isolated pockets of woodland and grassland within the agricultural matrix, and as sparse scattered trees.

Modelling of native vegetation extent by the Victorian Department of Energy, Environment and Climate Action (**DEECA**) suggests these remnants now only cover approximately 14% of the area. All native vegetation in the onshore Referral Area is likely representative of Ecological Vegetation Classes that have a Biodiversity Conservation Status of the following: Depleted (90.50 ha or 0.39%), Least Concern (382.14 ha or 1.64%), Endangered (164.37 ha or 0.71%) or Vulnerable (2,484.66 ha or 10.69%).

Fauna Habitat

Fauna habitat within the onshore Referral Area is highly fragmented and includes woodlands and scattered trees, grasslands (primarily on roadsides), aquatic habitats in the form of farm dams, narrow drainage channels, creek lines and minor tributaries, as well as potential large ephemeral wetlands. Most of this habitat is likely of low to moderate quality due to the small size, relative paucity across the landscape, and past and ongoing disturbance (i.e., agricultural practices), including the introduction of non-native plants and pest animals. Fauna utilising this habitat is likely to be primarily restricted to common species able to adapt to these modified environments. However, there remains the potential for threatened species to occur, particularly in association with Protected Areas and for those species with long ranges.

Landscape Context

A set of Protected Areas exist within the Referral Area (i.e., Fresh-water Swamp, Woodside Beach Wildlife Reserve, Warrigal Creek Streamside Reserve, Darriman H29 Bushland Reserve, Woodside H28 Bushland Reserve, Woodside H27 Bushland Reserve, Darriman H33 Bushland Reserve, Mcloughlins Beach – Seaspray Coastal Reserve), representing areas of high ecological value due primarily to their isolation and relative size making them unique for the region.

The broader landscape (within 10 km) surrounding the Referral Area is of similar land use, including cleared agricultural areas but with significant remnant vegetation, wetlands, and/or protected areas of high biodiversity value. Of note are the Mullungdung Nature Conservation Reserve to the north-west, Jack Smith Lake to the south-east, and the Gippsland Lakes and Corner Inlet Ramsar wetlands to the north-east and south-west respectively. Each of these areas is likely to have habitat that is contiguous and of similar character to that at the edges of, but within, the Referral Area boundary.

Threatened, Migratory Species and Ecological Communities

An assessment of the likelihood of occurrence of threatened flora, fauna and ecological communities determined the potential presence of:

- Ten flora species listed as threatened under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**)
- Thirty-five flora species listed as threatened under the FFG Act
- Thirty-four fauna species listed as threatened under the EPBC Act
- Twenty-two migratory fauna species protected under the EPBC Act
- Fifty-seven fauna species listed as threatened under the FFG Act
- Two threatened ecological communities (**TECs**) listed under the EPBC Act, and
- Two ecological communities listed under the FFG Act.

Listed flora species and ecological communities are likely restricted to Protected Areas, coastal areas including dunes and wetlands, and narrow roadside and riparian corridors. While these areas are also likely to support threatened and migratory fauna, many of such species, being aerial, are likely to traverse the broader landscape.

Legislative and Approvals Considerations

Environment Protection and Biodiversity Conservation Act 1999

Field surveys are recommended to determine the presence of any MNES present and to identify opportunities to avoid and minimise impacts to these matters. Any impacts to species or TECs listed under the EPBC Act will require assessment against relevant significant impact criteria. There is considerable opportunity to reduce onshore potential impacts to an acceptable level through avoidance and mitigation.

Environment Effects Act 1978

Potential impacts to biodiversity values within, or in proximity to, the onshore Referral Area will be considered in a referral under the Environment Effects Act. Given the small scale of remnant native vegetation in the Referral Area, and the generally moderate-quality fauna habitat throughout the surrounding landscape, there is likely to be ample opportunity to avoid and minimise potential impacts to native vegetation and threatened species.

Planning and Environment Act 1987

Any impacts to native vegetation will require a permit under Clause 52.17 of the Wellington Planning Scheme. Assessment of native vegetation, calculation of impacts, offsetting, and permit application requirements must be in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2017).

Flora and Fauna Guarantee Act 1988

Under the FFG Act, a permit will be required for any impacts to protected species on public land.

Catchment and Land Protection Act 1994

Management of weeds and pest animals on the properties during construction and operation of the onshore components of the Project are likely to be required under the *Catchment and Land Protection Act 1994*.

Marine and Coastal Act 2018

Consent is required under the *Marine and Coastal Act 2018* (**MACA**) for any Project works to be undertaken on marine and coastal Crown land. Applications under the MACA require an assessment of potential environmental impacts.

Conclusion and Recommendations

As this preliminary assessment was based on desktop studies only, the findings presented should be used to inform field surveys and assessments to verify the existing environmental values in the Referral Area and to inform preliminary decision-making and design for the Project. The recommendations outlined below would provide detailed information about the biodiversity values in the Referral Area, the risks to these values resulting from the Project, how any potential impacts can be avoided or mitigated to ensure no net loss to biodiversity, and to satisfy the requirements under relevant Victorian and Commonwealth legislation.

Recommendations:

- Conduct flora and fauna field assessments within the Referral Area to assist the Project design development, as well as to contextualise the extent and condition of native vegetation, the type, condition, and connectivity of fauna habitat, and the potential presence of threatened species and ecological communities within the area where direct and indirect impacts may occur. An initial site assessment may be undertaken at any time of the year unless local conditions preceding the survey render the results unrepresentative, such as after fire or a particularly harsh dry season.
- If potential presence of threatened or protected species and ecological communities is identified, conduct targeted seasonal fauna and flora surveys, in accordance with relevant federal or State survey guidelines, within the area where direct and indirect impacts may occur.
- Allow for ecology input to inform design development. Utilise avoid and minimise principles in determining the final Project design, including siting and design of the onshore portion of the export cable corridor and connection point, during each stage of the design process; and ensure this process is adequately documented to demonstrate the efforts undertaken in response to identified biodiversity constraints.
- Prioritise avoidance of locations containing EPBC and/or FFG Act threatened communities, species and their relevant habitat and all Protected Areas, so far as is reasonably practicable. It is recommended that interactions with reserves, bushland, riparian creek lines, coastal heath and most wooded areas be avoided or minimised so far as is reasonably practicable. If avoidance is not possible, the use of appropriate technologies to minimise and manage impacts wherever these values are located is recommended. Such mitigation may also include implementing no-go zones and/or controls during sensitive life-stages for priority shorebird habitats during shoreline construction activities and consideration of migration patterns of other birds found to utilise habitat in the Referral Area.
- To the extent practicable, co-locate project infrastructure with existing easements or on previously cleared land. Additionally, the use of trenchless construction methods should be considered to reduce impacts to dune vegetation and integrity and to protect adjacent saltmarsh vegetation, which may be of a listed community as well as habitat for numerous threatened fauna.

- Design the project to allow for micro-siting of infrastructure to minimise impacts to vegetation, particularly in areas with high Habitat Importance Map values for individual species, reducing or eliminating the need for offsets in the form of Species Habitat Units.
- Setback and bushfire management requirements may result in additional vegetation removal and should be considered in the design phase of the Project. Placing infrastructure away from forested areas can help minimise the need for vegetation removal and habitat loss for bushfire management.
- A permit under Clause 52.17 of the Wellington Planning Scheme will be required for any residual impacts to native vegetation resulting from the Project.
- A Protected Flora Permit will be required for any residual impacts on public land to protected flora or ecological communities listed under the FFG Act.
- Consent under the MACA will be required for the use and development of marine and coastal land extending up to 200 m inland from the high-water mark.

1. INTRODUCTION

Iberdrola Australia OW 2 Pty Limited (**Iberdrola Australia**) proposes to construct and operate the Aurora Green Offshore Wind Project (**the Project**), a renewable energy development to be located off the Gippsland coast of Victoria, Australia.

Environmental Resources Management Australia Pty Ltd has been engaged by Iberdrola Australia as lead consultant to undertake environmental studies and assessments for the purpose of obtaining primary and secondary approvals for the Project.

A preliminary assessment of potential environmental impacts has been carried out to inform the project referrals under Commonwealth and Victorian legislation, environmental assessments and approvals, and project development processes. This desktop report documents the preliminary assessment and recommendations for further studies on the terrestrial ecology to inform the Project.

1.1 PROJECT OVERVIEW

Aurora Green is a 3 GW offshore wind project being developed by Iberdrola Australia in Gippsland, located 25+ kms from the coast. The Project is proposed offshore between Seaspray/Honeysuckles and Woodside Beach within Commonwealth's Declared Area OEI-01-2022 in Gippsland.

The electricity would be transmitted to a connection point onshore, via a transmission system of cables and substations, and would connect into the National Electricity Market (**NEM**) to deliver electricity to homes and businesses (Figure 1-1). With a proposed operational life of 30-40 years, the Project would be developed in stages to align with the development of the industry and supporting infrastructure.

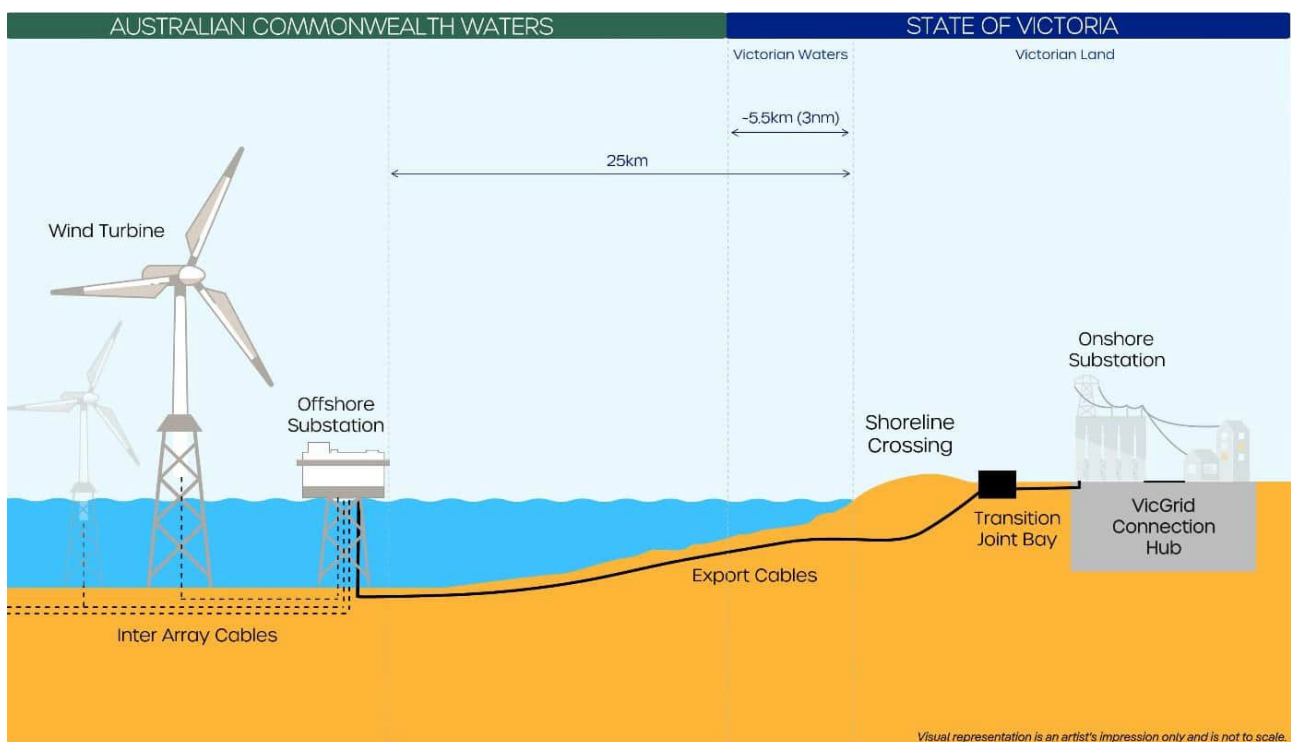


FIGURE 1-1 PROJECT COMPONENTS OVERVIEW (SECTION VIEW)

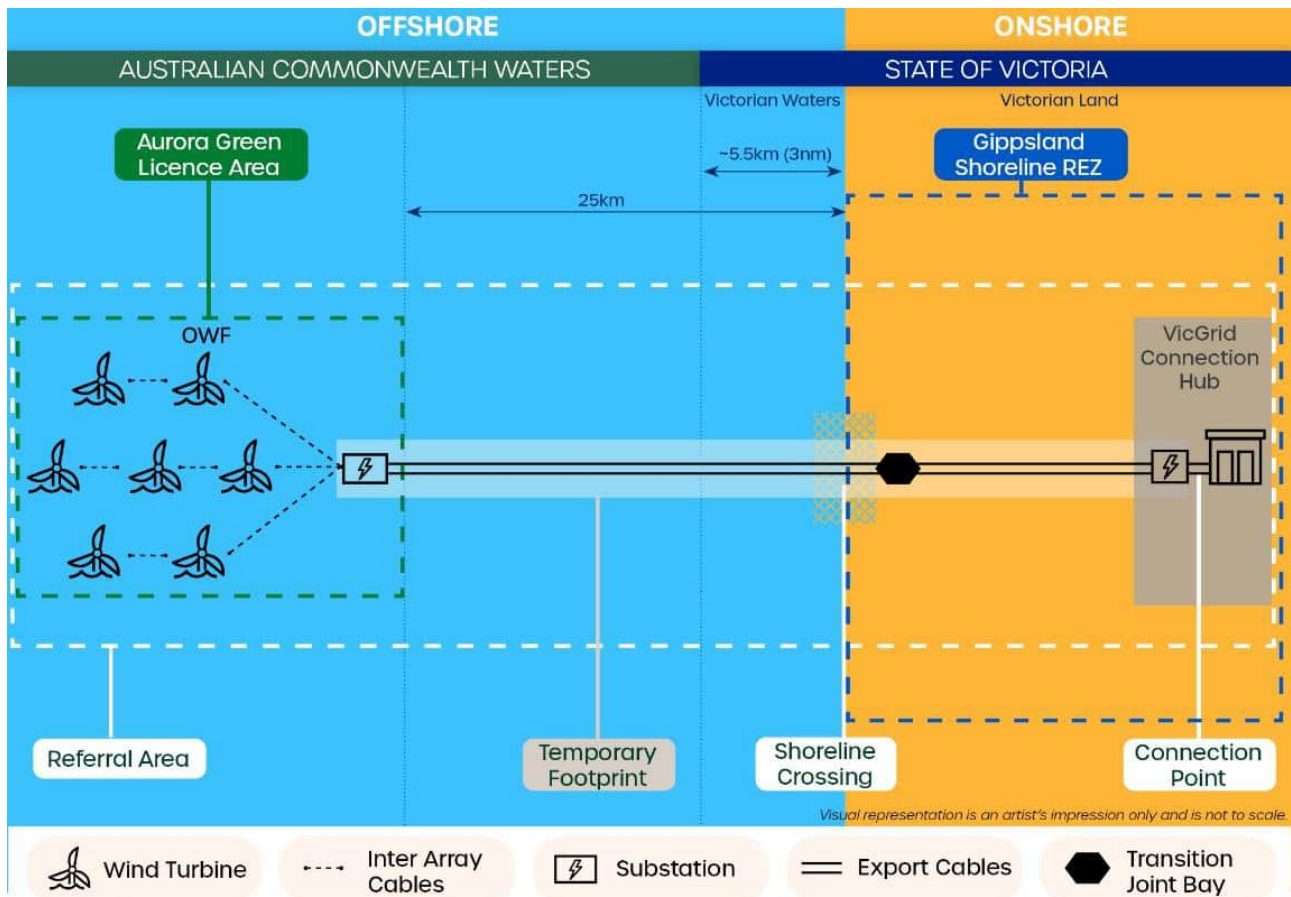


FIGURE 1-2 PROJECT COMPONENTS AND AREAS OVERVIEW (PLAN VIEW)

Once complete, it is expected that the delivery of the Project by Iberdrola Australia would provide the following benefits to the State of Victoria and Australia:

- Up to 3 GW of offshore wind power generating capacity
- Clean energy to power up to 2.25 million households
- 600 long-lasting, skilled jobs during operation
- 1800+ jobs during construction
- \$8 billion boost to the Victorian economy

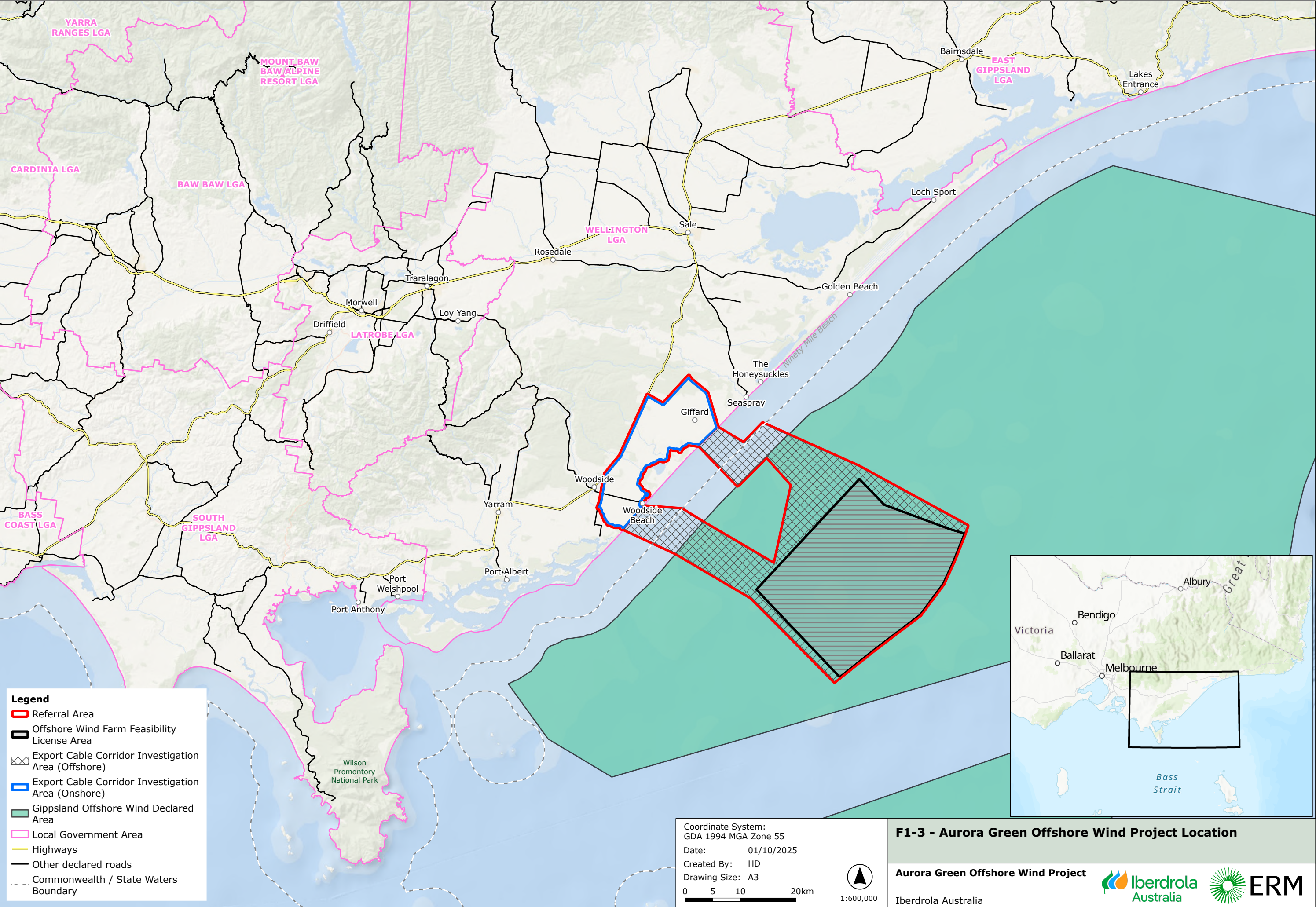
Grow and support local talent through apprenticeships, scholarships and research programs

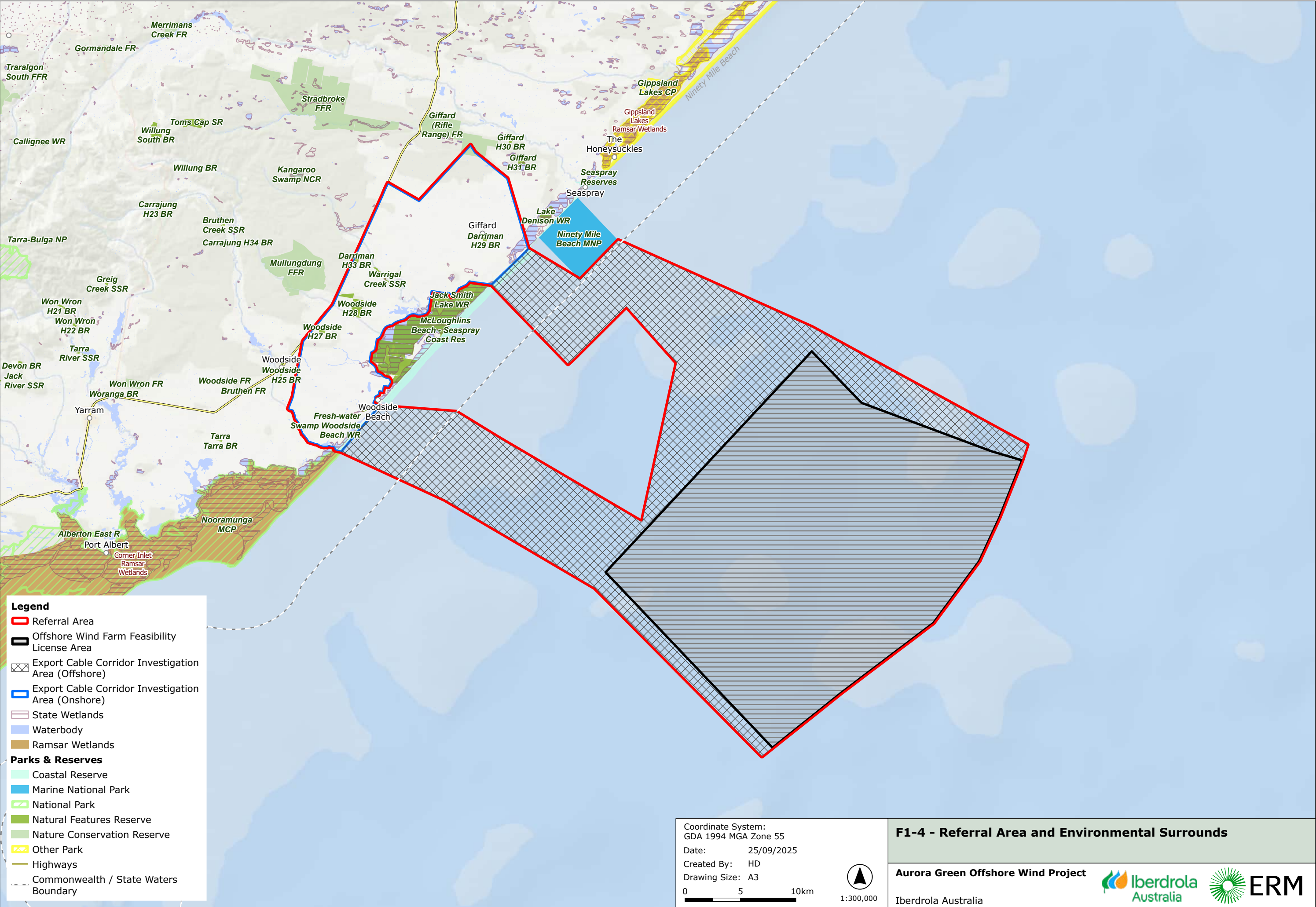
The Project comprises both offshore and onshore components (described herein and illustrated in Figure 1-1 and Figure 1-2), and it is proposed to be developed within the Referral Area shown in Figure 1-3 and Figure 1-4.

- **Offshore wind farm (OWF)**, in Commonwealth waters, located between approximately 25 km and 50 km offshore from the towns of Woodside Beach and Seaspray/Honeysuckles, covering an area of 700 km², in water depth ranging from approximately 40 m to 60 m. The OWF would comprise up to approximately 150 wind turbines depending on the final design. It also includes inter array cables (**IAC**) and offshore substation(s).

- **Export cable corridor (ECC)**, to transmit the electricity generated from the turbines to the onshore connection point, encompassing offshore and onshore export cable portions spanning across both Commonwealth and Victorian State waters and land. The export cables would make landfall at a shore crossing location, with the offshore and onshore cable portions connected via underground cable transition joint bays (**TJB**) located within approximately 500 m of the coast. An Export Cable Corridor Investigation Area is currently being assessed to determine a final export cable corridor.
- **Onshore connection point**, comprising an onshore substation to be located within the VicGrid Connection Hub located in the Gippsland Shoreline Renewable Energy Zone (**REZ**).
- **Operations and Maintenance (O&M) facility**, to support the ongoing operation and maintenance of the project. The O&M facility shall be located at an existing nearby port. The O&M facility is not part of the Referral Area.

The delivery of the VicGrid Connection Hub does not form part of this Project. Iberdrola Australia would work with the party ultimately chosen by VicGrid to build, own and operate the transmission infrastructure in Gippsland that will facilitate the connection of offshore wind developments in the region.





1.2 PURPOSE OF ASSESSMENT

This report has been developed in support of Project referrals under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) and the *Environment Effects Act 1978* (**EE Act**). This desktop ecological assessment has been prepared to provide an overview of the potential biodiversity values and constraints for the onshore (terrestrial) project components within the Referral Area, which includes the Onshore Connection Point, and the onshore areas of the Export Cable Corridor.

The objectives of this assessment comprise:

- Identification of potential presence, type and extent of native vegetation;
- Identification of likely fauna habitat within the Onshore Referral Area;
- The potential for the onshore Referral Area to support Matters of National Environmental Significance (**MNES**) including flora, fauna and Threatened Ecological Communities (**TECs**) listed under the EPBC Act;
- The potential for the onshore Referral Area to support flora, fauna and ecological communities listed under the *Flora and Fauna Guarantee Act 1988* (**FFG Act**);
- Likely implications for the Project under Commonwealth, Victorian and local legislation and policies relevant to biodiversity; and
- To provide recommendations for further studies to inform project development and project assessment and approval requirements.

2. METHODS

The sections below outline the methodologies used to inform the desktop assessments for the biodiversity values present within the Referral Area. The Desktop Assessment utilises the following to inform the desktop assessment:

- public access database searches for historical species records;
- reviewed literature and government reports to inform species habitat preferences and species distributions; and
- a likelihood of occurrence assessment of all MNES and FFG-listed species and communities found within database searches.

2.1 DATABASE SEARCH

A desktop assessment of ecological values known or predicted to be present within the Referral Area was undertaken using the government databases and spatial datasets outlined in Table 2-1 below. These databases were examined to review the known and modelled biodiversity values within 10 km of the Referral Area (the 'Locality'), as well as planning controls under Wellington Planning Scheme relevant to biodiversity.

TABLE 2-1 DATABASE DESKTOP SEARCHES

Data Source	Description
<i>EPBC Act Protected Matters Search Tool*</i>	The Protected Matters Search Tool (PMST) provides predictive results on the occurrence of MNES based on mapping of known and potential species distribution, habitat, TECs and wetlands within a defined area. For assessments of large projects, areas with connectivity or habitat linkages to regions of high biodiversity or potentially poorly studied areas, a standard buffer of 10 km is applied to the onshore Referral Area to capture a more comprehensive predictive dataset. The tool also provides information on Nationally Important Wetlands.
<i>Victorian Biodiversity Atlas</i>	The Victorian Biodiversity Atlas (VBA) database provides a list of flora and fauna species recorded within a 10 km radius of the onshore Referral Area. VBA searches were limited to the restricted 1M grid species and the VBA_25 database. VBA_100 database records were disregarded based on locational uncertainty. This database has a locational uncertainty ranging from 500 m-10 km (DEECA, 2025a).
<i>NatureKit</i>	<i>NatureKit</i> provides GIS mapping, maintained by DEECA including modelled mapping of extant and pre-1750 EVCs and known threatened species records (DEECA, 2025b).
<i>Native Vegetation Removal Map</i>	The <i>Native Vegetation Removal Map</i> tool provides the Location Map, the Current Wetland Layer, the Strategic Biodiversity Score and the Native Vegetation Condition Score for the Referral Area.
<i>VicPlan</i>	<i>VicPlan</i> is an online tool maintained by the Department of Transport and Planning (DTP) that provides mapping of Planning Scheme controls including those related to biodiversity (DTP, 2025)
<i>VicFlora</i>	<i>VicFlora</i> is an online database created and maintained by the Royal Botanic Gardens Melbourne and provides information on Victorian flora species including habitat requirements and distribution (Royal Botanic Gardens Victoria, 2025).

*The *EPBC Act Protected Matters Report* is provided in Appendix A.

2.2 LIKELIHOOD OF OCCURRENCE

A preliminary likelihood of occurrence assessment was undertaken. Biodiversity values considered in this assessment were informed by analysis of desktop sources and will be updated based on the findings of future field surveys.

Threatened flora, fauna and ecological communities listed under the EPBC Act and/or FFG Act were assessed for their likelihood of occurrence based on whether they have been recorded previously, or are predicted to occur, within 10 km of the onshore Referral Area. The 10 km buffer zone, inclusive of the onshore Referral Area, is herein referred to as the 'Locality'.

Species records and modelled habitat information was sourced from the VBA and the PMST. Habitat and distribution information for MNES was sourced from the Species Profile and Threats Database (**SPRAT**) database and/or Conservation Advice where available, supplemented by the other primary sources (e.g., published literature for fauna and *VicFlora* for flora).

Determination of known, likely, potential or unlikely occurrence of listed matters was initially based on the criteria outlined in the matrix below (Table 2-2), with supplementary information for some species also considered where applicable. Species and communities for which presence cannot be discounted are categorized as having the potential to occur. The preliminary likelihood of occurrence is provided in Appendix B for flora and Appendix C for fauna.

TABLE 2-2 LIKELIHOOD OF OCCURRENCE CRITERIA

Description	Preferred habitat exists	General habitat exists ²	Habitat does not exist ³
Records ¹ within the onshore Referral Area	Known	Known	Known
Records within the Locality ⁴	Likely	Potential	Unlikely
No records within the Locality, but the onshore Referral Area is within known distribution	Potential	Potential	Unlikely
No records in the Locality, and the onshore Referral Area is outside of known distribution	Unlikely	Unlikely	Unlikely

1. Records considered are those that have been recorded in the last 30 years.

2. Habitat may be considered general, but not preferred, because: some desired habitat features may be present, but not all; habitat may have poor connectivity; or habitat may be known to be disturbed.

3. Based on sources reviewed and/or field survey results.

4. 'Locality' refers to a 10 km buffer around the Referral Area and is inclusive of the Referral Area.

2.3 LIMITATIONS

No field surveys have been conducted for this report. This desktop assessment and results analysis are based on the data obtained from the various sources outlined in Section 2.1 and Table 2-1. The accuracy of information in these databases is reliant on internal standards and procedures. However, accuracy of historical records cannot be guaranteed. The absence of a species from a database list or observational studies does not confirm its absence within the Referral Area. The lack of existing records from databases may indicate a low historic sampling effort in the region, as opposed to an absence of a species.

Determinations of a species' likelihood of occurrence may be altered with information provided by site surveys.

The extent, type and condition of native vegetation within the Referral Area presented in this report is as per modelling by DEECA. Verification of this data requires site assessment by a suitably qualified and accredited ecologist.

3. PRELIMINARY ASSESSMENT RESULTS

3.1 REFERRAL AREA DESCRIPTION

The location of the onshore portion of the Referral Area within government and environmental regions is summarised in Table 3-1. It is situated within the Wellington Shire Council local government area (**LGA**) which is under the West Gippsland Catchment Management Authority (**CMA**) and within the Gippsland Plains bioregion of Victoria, the latter being part of the South East Coastal Plains national bioregion as per the Interim Biogeographic Regionalisation for Australia, version 7 (**IBRA7**).

TABLE 3-1 REFERRAL AREA OVERVIEW

LGA	CMA	Bioregion	
		National (IBRA7)	State
Wellington Council	West Gippsland	South East Coastal Plains	Gippsland Plains

The landscape of the overall Referral Area is predominately agricultural land. Broad-scale historical clearing has mostly resulted in native vegetation remnants being confined to isolated reserves, patches within paddocks, or along roadsides and creek lines, with a band retained along the coastline. Agricultural infrastructure and residential buildings area also present throughout the Referral Area.

The Referral Area comprises a mix of private and Crown land.

3.2 PLANNING OVERVIEW

The Wellington Planning Scheme is a statutory document under the *Planning and Environment Act 1987 (PE Act)*.

The following local and State planning provisions within the Wellington Planning Scheme are relevant to ecological considerations for the proposed development of the terrestrial component of the Project.

3.2.1 CLAUSE 12.01 BIODIVERSITY

Clause 12.01 of the Victorian Planning Provisions aims to ensure that consideration is given to biodiversity issues when assessing an application for a planning permit, with an emphasis on ensuring any impacts to native vegetation do not result in a net loss to biodiversity. It directs decision making to consider cumulative impacts, fragmentation, and the spread of pest animals, plants and pathogens into natural ecosystems, and provides guidance in the form of consulting State biodiversity information maintained by DEECA and relevant publications, including the *Guidelines for the removal, destruction or lopping of native vegetation* (the **Guidelines**) (DEWLP, 2017).

The ecological studies needed to satisfy the permit application requirements of Clause 52.17 and Clause 52.32 of the Wellington Planning Scheme are anticipated to ensure that effects on biodiversity values are adequately addressed.

3.2.2 CLAUSE 52.17 NATIVE VEGETATION

Under Clause 52.17 of the Victorian Planning Provisions, a permit is required to remove, destroy, or lop native vegetation. Exemptions are available such as for planted vegetation, which may be applicable to vegetation within the Referral Area.

Any native vegetation within the Referral Area, impacts resulting from the Project, and provision of permit application requirements to remove, destroy, or lop native vegetation will need to be assessed in accordance with the Guidelines. This includes:

- Vegetation Quality Assessment (**VQA**) of remnant patches and assessment of scattered trees by an accredited ecologist
- Provision of an Avoid and Minimise Statement demonstrating efforts undertaken to avoid or minimise impacts to native vegetation under a strategic plan or site-based development design considerations
- Provision of a Native Vegetation Removal Report issued by DEECA showing calculation of appropriate offsets including:
- The amount of offsets required in General Habitat Units (**GHUs**) or Species Habitat Units (**SHUs**), as appropriate
 - The minimum Strategic Biodiversity Score (**SBV**), and
 - The number of large trees.
- Provision of an Offset Statement indicating how required offsets will be secured (either via the establishment of a first-party offset site or purchase from a third-party provider through the Native Vegetation Credit Register, and
- Providing evidence that such offsets are available providing assessment of such an application will be conducted by the responsible authority under either the Basic, Intermediate, or Detailed pathway, as per the matrix presented below.

TABLE 3-2 ASSESSMENT PATHWAY FOR AN APPLICATION TO REMOVE, DESTROY OR LOP NATIVE VEGETATION

Native vegetation to be removed	Location Category		
	Location 1	Location 2	Location 3
< 0.5 ha and no Large Trees	Basic	Intermediate	Detailed
< 0.5 ha and at least one Large Tree	Intermediate	Intermediate	Detailed
≥ 0.5 ha	Detailed	Detailed	Detailed

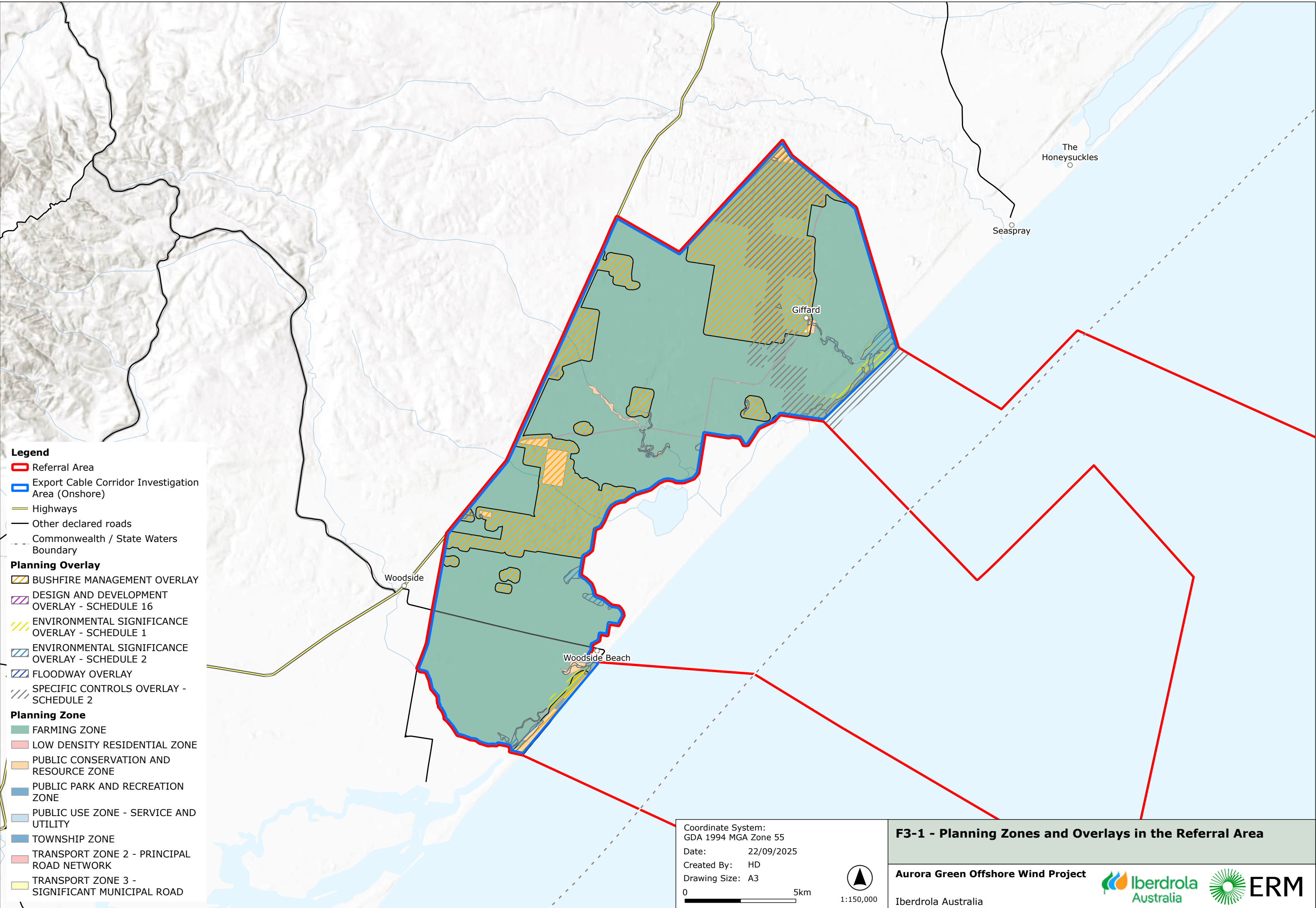
3.2.3 ZONING

Like much of the surrounding region, the Referral Area is situated predominantly within land declared as Farming Zone (**FZ**), with Public Conservation Reserve Zone (**PCRZ**) applied to the Giffard Nature Conservation Reserve, Giffard Bush Reserve, Mcloughlins Beach Seaspray Coastal Reserve, Lake Denison Wildlife Reserve, and Jack Smith Lake Wildlife Reserve, as delineated in Figure 3-1. The FZ is generally used to facilitate agricultural land uses, being strongly focused on protecting and promoting farming and agriculture. Small areas of

Transport Road Zone 3 (significant municipal roads (**TRZ3**)), residential zoning of Township Zone (**TZ**) and low density Residential (**LDRZ**) exist around the townships of Woodside Beach and Seaspray.

Before a decision is made on an application to construct or carry out any works within FZ zoning area, considerations of the authority relating to biodiversity values include:

- The impact of the proposal on the natural physical features and resources of the area on soil and water quality
- The impact of the use or development on the flora and fauna on the site and its surrounds
- The need to protect and enhance the biodiversity of the area, including the retention of vegetation and faunal habitat and the need to revegetate land including riparian buffers along waterways, gullies, ridgelines, property boundaries and saline discharge and recharge areas, and
- The location of on-site effluent disposal areas to minimize the impact of loads on waterways and native vegetation.



3.2.4 OVERLAYS

Overlays relating to ecological matters are presented in Table 3-3 with each discussed in greater detail below.

TABLE 3-3 PLANNING OVERLAYS WITHIN THE REFERRAL AREA

Overlay	Associated with Referral Area
ESO1	Associated with Coastal and Gippsland Lakes Environs
ESO2	Associated with Wetlands
BMO	Areas within 50 m of an elevated bushfire risk

3.2.4.1 ENVIRONMENTAL SIGNIFICANCE OVERLAY

A permit is required for the removal, destruction, or lopping of vegetation, unless that vegetation is specifically exempted within Clause 42.01-3 (Table of Exemptions) or the associated schedules to this Clause (Schedules 1 and 2).

The Environmental Significance Overlay (**ESO**) located within the Referral Area is shown in Figure 3-1 and applies to the Coastal and Gippsland Lakes environs (Schedule 1) and wetlands environs (Schedule 2). Development in these areas will require a planning permit.

3.2.4.2 BUSHFIRE MANAGEMENT OVERLAY

All the Referral Area lies within a designated Bushfire Prone Area (**BPA**), with high-risk bushfire hazards also under a Bushfire Management Overlay (**BMO**).

Setback and bushfire management requirements may result in additional vegetation removal and should be considered in the design phase of the Project.

3.3 NATIVE VEGETATION

3.3.1 ECOLOGICAL VEGETATION CLASSES

Investigation of VBA Ecological Vegetation Class (**EVC**) mapping and modelling determined that where remnant vegetation remains it is likely to represent a range of woodland, grassland, chenopod shrubland and mallee vegetation communities.

Figure 3-2 shows those EVCs modelled to have been present throughout the Referral Area prior to European colonization. A description of these and their respective Bioregional Conservation Status (**BCS**) is provided in Table 3-4.

TABLE 3-4 MODELLED EVCS WITHIN THE REFERRAL AREA

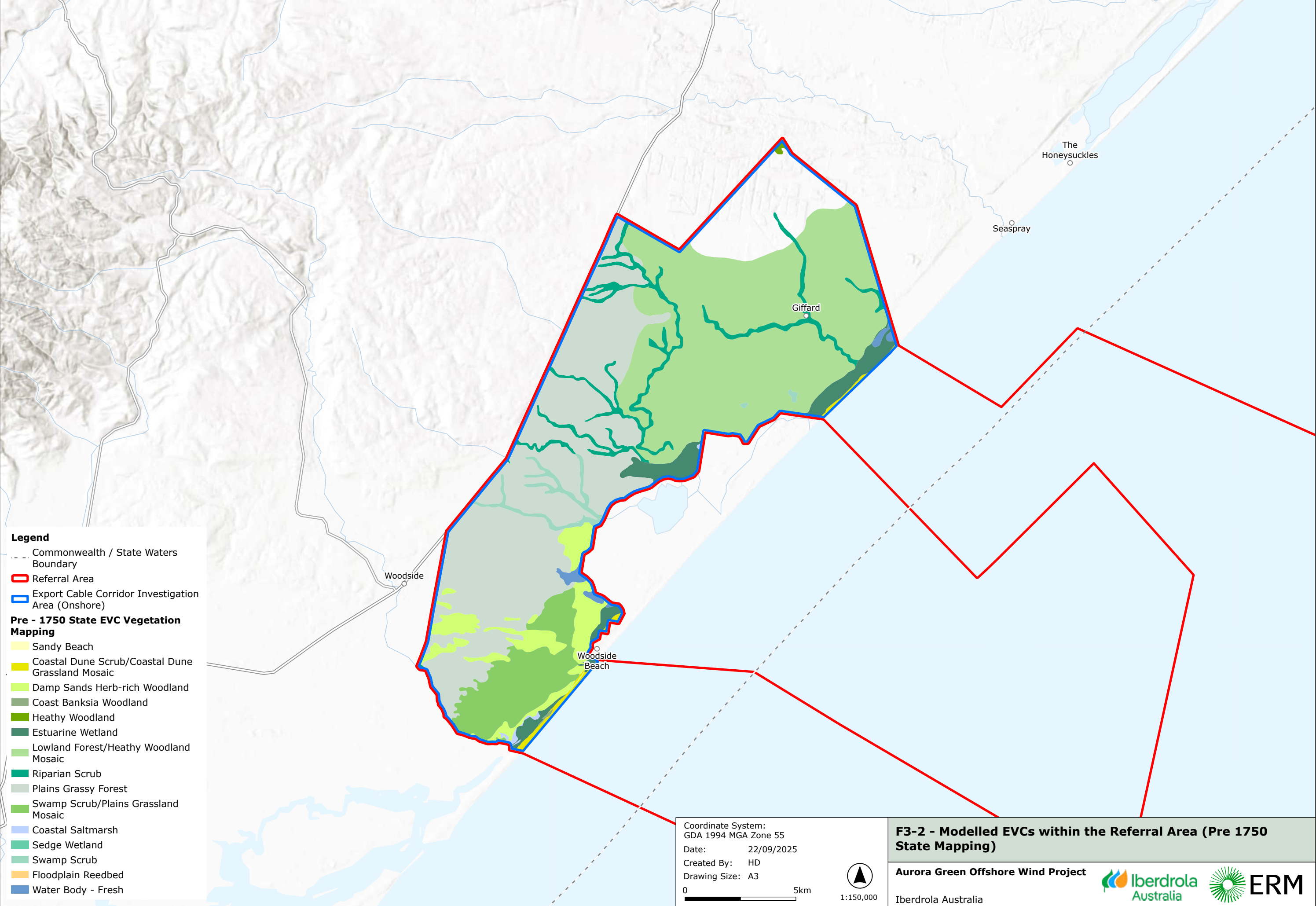
Ecological Vegetation Class	Description*	BCS	FFG Act community
EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic	Coastal Dune Scrub - Closed scrub to 5 m tall with occasional emergents occurring on secondary dunes along ocean and bay beaches and lake shores. Occupies siliceous and calcareous sands that are subject to high levels of salt spray and continuous disturbance from onshore winds. Coastal Dune Grassland - Consists of grasses and halophytes (salt-tolerant species) that colonise the foredunes of ocean beaches. Soils are siliceous sands that have a very low humus content.	Depleted	Coastal Moonah Woodland (associated with the Coastal Dune Scrub EVC)
EVC 2 – Coastal Banksia Woodland	Restricted to near coastal localities on secondary or tertiary dunes behind Coastal Dune Scrub. Usually dominated by a woodland overstorey of Coast Banksia (<i>Banksia integrifolia</i>) to 15 m tall over a medium shrub layer. The understorey consists of numerous herbs and sedges, including scramblers.	Vulnerable	N/A
EVC 3 – Damp Sands Herb-rich Woodland	A low, grassy or bracken-dominated eucalypt forest or open woodland to 15 m tall with a large shrub layer and ground layer rich in herbs, grasses, and orchids. Occurs mainly on flat or undulating areas on moderately fertile, relatively well-drained, deep sandy or loamy topsoils over heavier subsoils (duplex soils).	Vulnerable	N/A
EVC 9 – Coastal Saltmarsh	Occurs on and immediately above marine and estuarine tidal flats and contains distinct floristic communities as bands or zones in the same location, depending on the positioning of the various floristic communities in relation to the saline environment. Consists of a range of life forms including succulent herbs, low succulent shrubs, rushes and sedges.	Least Concern	N/A
EVC 10 – Estuarine Wetland	Grows on anaerobic peat-rich muds on the edges of estuarine waterbodies such as creeks, rivers and lagoons with intermediate salinity conditions. Vegetation is determined by fluctuating salinity, which varies in time from occasionally fresh to brackish or occasionally saline according to river flood and marine tide events. Dominated by graminoids and halophytic herbs and often fringed by a tall scrub layer of Swamp Paperbark <i>Melaleuca ericifolia</i> at the landward edge.	Least Concern	N/A

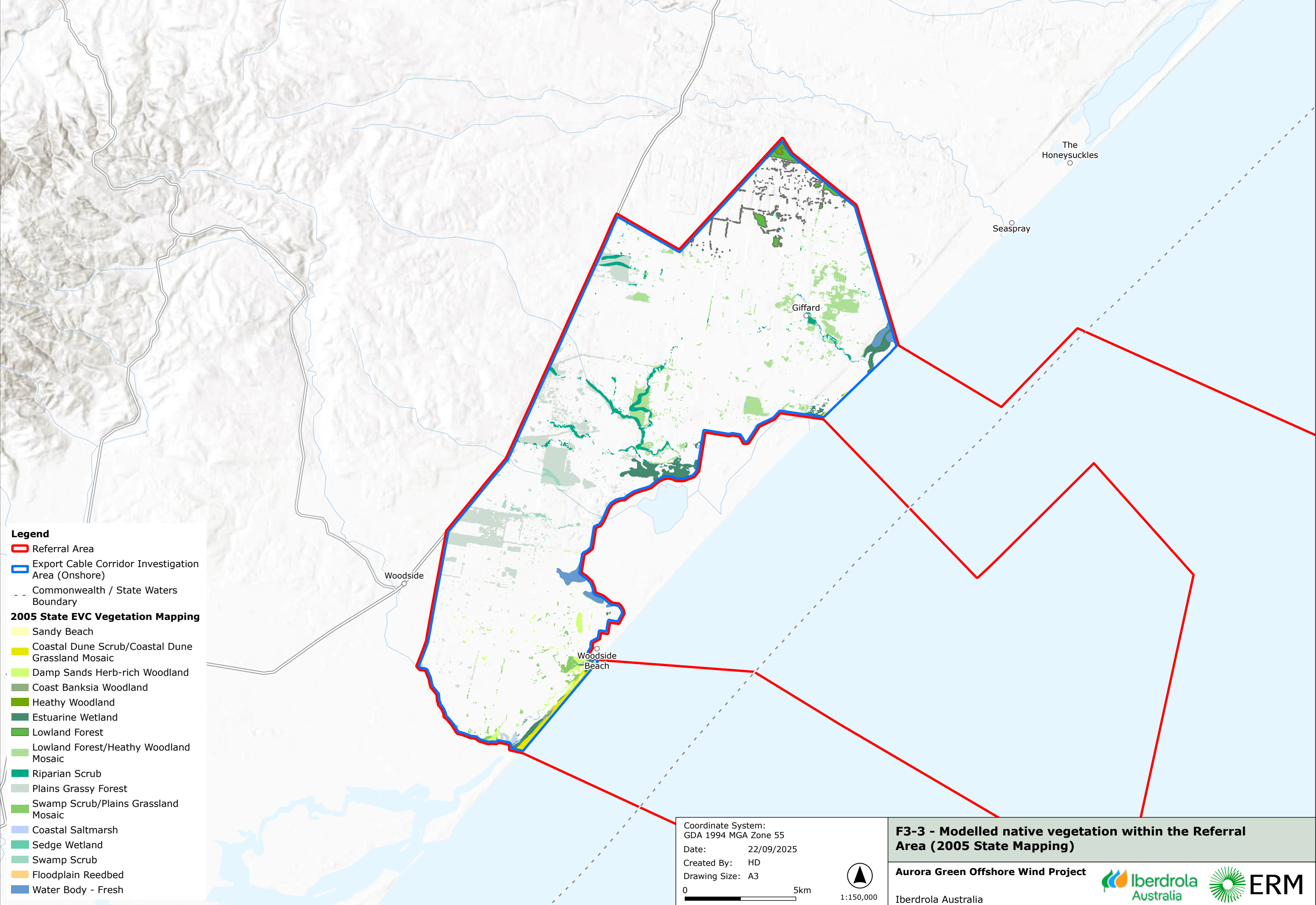
EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic	Coastal Dune Scrub - Closed scrub to 5 m tall with occasional emergents occurring on secondary dunes along ocean and bay beaches and lake shores. Occupies siliceous and calcareous sands that are subject to high levels of salt spray and continuous disturbance from onshore winds. Coastal Dune Grassland - Consists of grasses and halophytes (salt-tolerant species) that colonise the foredunes of ocean beaches. Soils are siliceous sands that have a very low humus content.	Depleted	Coastal Moonah Woodland (associated with the Coastal Dune Scrub EVC)
EVC 16 - Lowland Forest	Eucalypt forest to 20 m tall on relatively fertile, moderately well-drained soils in areas of relatively high rainfall. Characterised by the diversity of life forms and species in the understorey including a range of shrubs, grasses and herbs.	Vulnerable	N/A
EVC 53 – Swamp Scrub	Closed scrub to 8 m tall at low elevations on alluvial deposits along streams or on poorly drained sites with higher nutrient availability. The EVC is dominated by Swamp Paperbark (<i>Melaleuca ericifolia</i>) or sometimes Woolly Tea-tree (<i>Leptospermum lanigerum</i>) which often forms a dense thicket, out-competing other species. Occasional emergent eucalypts may be present. Where light penetrates to ground level, a moss/ lichen/ liverwort or herbaceous ground cover is often present. Dry variants have a grassy/ herbaceous ground layer.	Endangered	N/A
EVC 151 – Plains Grassy Forest	Open forest to 20 m tall often above a heathy shrub layer and a diverse grassy, sedgy and herbaceous ground layer. Occurs on lowland plains and old river terraces made up of gravelly sandy clays.	Vulnerable	N/A
EVC 191 – Riparian Scrub	A dense shrubland to 6 m tall with occasional eucalypt emergent growing on waterlogged substrates often with a peaty surface horizon. Emergent eucalypts may be occasionally present. The understorey is often species-poor and consists typically of sedges tolerant of seasonal waterlogging. Occurs along creeks and minor stream tributaries of the lowland plains.	Vulnerable	N/A
EVC 687 – Swamp Scrub/ Plains Grassland Mosaic	Swamp Scrub – refer to description above. Plains Grassland – Treeless or with occasional scattered trees above a largely grassy understorey on grey silty-loamy soils, often seasonally waterlogged. Shrubs may be also occasionally present (description from EVC 132_62 – South Gippsland Plains Grassland).	Endangered	Central Gippsland Plains Grassland (associated with the Plains Grassland EVC)

EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic	Coastal Dune Scrub - Closed scrub to 5 m tall with occasional emergents occurring on secondary dunes along ocean and bay beaches and lake shores. Occupies siliceous and calcareous sands that are subject to high levels of salt spray and continuous disturbance from onshore winds. Coastal Dune Grassland - Consists of grasses and halophytes (salt-tolerant species) that colonise the foredunes of ocean beaches. Soils are siliceous sands that have a very low humus content.	Depleted	Coastal Moonah Woodland (associated with the Coastal Dune Scrub EVC)
EVC 698 – Lowland Forest/ Heathy Woodland Mosaic	Lowland Forest – Eucalypt forest to 20 m tall on relatively fertile, moderately well-drained soils in areas of relatively high rainfall. Characterised by the diversity of life forms and species in the understorey including a range of shrubs, grasses and herbs. Heathy Woodland - Spans a variety of geologies but is generally associated with nutrient-poor soils including deep uniform sands (aeolian or outwash) and Tertiary sand/clay which has been altered to form quartzite gravel. Eucalypt-dominated low woodland to 10 m tall lacking a secondary tree layer and generally supporting a diverse array of narrow or ericoid-leaved shrubs except where frequent fire has reduced this to a dense cover of bracken. Geophytes and annuals can be quite common, but the ground cover is normal sparse.	Vulnerable	N/A
EVC 985 – Sandy Beach	N/A	N/A	N/A
EVC 992 – Water Body (Fresh)	N/A	N/A	N/A

Source: *NatureKit* (DEECA, 2025b)

*Relevant EVC description taken from DSE.





3.3.2 PATCHES

Figure 3-3 indicates the locations in the Referral Area where remnant native vegetation is modelled to persist and their associated EVCs. The area of each of these patches and total remnant across the Referral Area is also provided in Table 3-5.

This suggests that only 3,318.8 ha (approximately 14%) of the Referral Area supports native vegetation, and this is primarily in the form of various types of woodlands, primarily in moderate to small sized patches in reserves.

TABLE 3-5 MODELLED NATIVE VEGETATION IN THE REFERRAL AREA

Ecological Vegetation Class	BCS	Area (ha)	% of native vegetation	% of Referral Area
EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic	Depleted	90.50	2.75	0.39
EVC 2 – Coastal Banksia Woodland	Vulnerable	7.80	0.24	0.03
EVC 3 – Damp Sands Herb-rich Woodland	Vulnerable	126.56	3.84	0.54
EVC 9 – Coastal Saltmarsh	Least Concern	30.65	0.93	0.13
EVC 10 – Estuarine Wetland	Least Concern	351.49	10.68	1.51
EVC 16 – Lowland Forest	Vulnerable	144.34	4.38	0.62
EVC 53 – Swamp Scrub	Endangered	67.81	2.06	0.29
EVC 151 – Plains Grassy Forest	Vulnerable	1,193.23	36.25	5.14
EVC 191 – Riparian Scrub	Vulnerable	269.84	8.20	1.16
EVC 687 – Swamp Scrub/ Plains Grassland Mosaic	Endangered	96.56	2.93	0.42
EVC 698 – Lowland Forest/ Heathy Woodland Mosaic	Vulnerable	742.89	22.57	3.20
EVC 985 – Sandy Beach	N/A	20.43	0.62	0.09
EVC 992 – Water Body (Fresh)	N/A	149.71	4.55	0.64
Total		3,318.81		

This information should be considered predictive only and a site survey is required to determine the true type, extent, condition, and potential impacts of identified native vegetation patches. It is likely that such modelling is an over-estimate of the actual presence, due to assumptions and ongoing degradation. However, there is also the possibility large areas of native vegetation has been misclassified as exotic, and smaller patches missed.

3.3.3 SCATTERED TREES

The modelling of remnant vegetation in the Referral Area as described above does not include scattered trees, which are also considered native vegetation under the Guidelines. Examination of aerial imagery indicates the presence of numerous scattered trees throughout many of the agricultural fields. These require on-ground assessment to determine the species, conservation status, size class (based on Diameter at Standard Height (**DSH**)), and individual Notional Root Zone (**NRZ**) values beyond which development of the land may occur without impacts.

3.4 FLORA

3.4.1 THREATENED SPECIES

The likelihood of occurrence assessment for listed flora is provided in Appendix B and the results summarized in Table 3-6 below. Seven of these species are listed under both Acts. Records of the species are visualised in Figure 3-4 and Figure 3-5.

TABLE 3-6 THREATENED FLORA LIKELIHOOD OF OCCURRENCE OUTCOMES

Listing	Number of Species
EPBC Act	10
FFG Act	35

3.4.1.1 EPBC ACT

The likelihood of occurrence analysis for flora (Appendix B) determined that ten (10) species listed as threatened under the EPBC Act had at least the potential to be present in the Referral Area (Figure 3-4). These are shown in Table 3-7 below, along with their respective conservation status. Note that the display of species records in Figure 3-4 excludes those in the Locality that have been deemed unlikely to occur in the Referral Area as per the likelihood of occurrence table in Appendix B.

TABLE 3-7 EPBC ACT THREATENED FLORA SPECIES

Scientific name	Common name	EPBC Act listing conservation status
<i>Amphibromus fluitans</i>	River Swamp Wallaby-grass	Vulnerable
<i>Caladenia orientalis</i> *	Eastern Spider Orchid	Endangered
<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid	Vulnerable
<i>Commersonia prostrata</i> *	Dwarf Kerrawang	Endangered
<i>Dianella amoena</i> *	Matted Flax-lily	Endangered
<i>Dodonaea procumbens</i>	Trailing Hop-bush	Vulnerable
<i>Prasophyllum frenchii</i> *	Maroon Leek-orchid	Endangered
<i>Prasophyllum spicatum</i>	Dense Leek-orchid	Vulnerable
<i>Pterostylis chlorogramma</i> *	Green-striped Greenhood	Vulnerable

Scientific name	Common name	EPBC Act listing conservation status
<i>Thelymitra epipactoides</i> *	Metallic Sun-orchid	Endangered

*Also listed under the FFG Act.

Of these, records exist within the Referral Area for the following species:

- Matted Flax-lily (*Dianella amoena*)

3.4.1.2 FFG ACT

The likelihood of occurrence analysis (Appendix B) determined that 35 flora species listed as threatened under the FFG Act have at least the potential to be present in the Referral Area (Figure 3-5). These species are shown in Table 3-8 below, along with their conservation status. Note that the display of species records in Figure 3-5 excludes those in the Locality that have been deemed unlikely to occur in the Referral Area as per the likelihood of occurrence table in Appendix B.

TABLE 3-8 FFG ACT THREATENED FLORA SPECIES

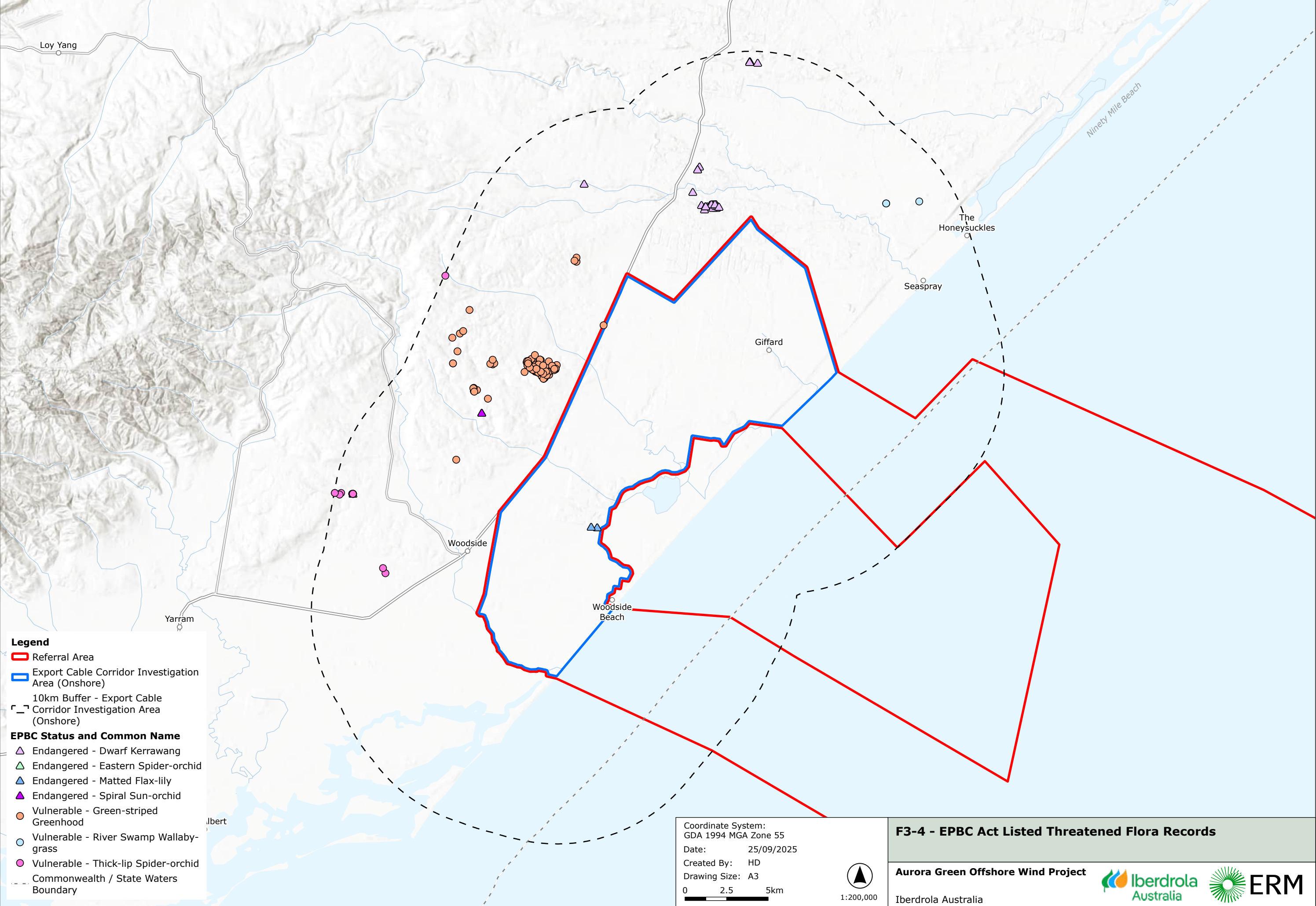
Scientific name	Common name	FFG Act listing conservation status
<i>Acacia howittii</i>	Sticky Wattle	Vulnerable
<i>Althenia marina</i>	Sea Water-mat	Endangered
<i>Astrotricha parvifolia</i> subsp. 1	Small-leaf Star-hair	Critically Endangered
<i>Austrostipa rudis</i> subsp. <i>australis</i>	Veined Spear-grass	Endangered
<i>Avicennia marina</i> subsp. <i>australasica</i>	Grey Mangrove	Endangered
<i>Bossiaea heterophylla</i>	Variable Bossiaea	Endangered
<i>Caladenia aurantiaca</i>	Orange-tip Finger-orchid	Endangered
<i>Caladenia orientalis</i> *	Eastern Spider Orchid	Endangered
<i>Calochilus imberbis</i>	Naked Beard-orchid	Critically Endangered
<i>Commersonia prostrata</i> *	Dwarf Kerrawang	Endangered
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting	Critically Endangered
<i>Corybas fimbriatus</i>	Fringed Helmet-orchid	Endangered
<i>Dianella amoena</i> *	Matted Flax-lily	Critically Endangered
<i>Dianella longifolia</i> var. <i>grandis</i> s.l.	Glaucous Flax-lily	Critically Endangered
<i>Diuris punctata</i> var. <i>punctata</i>	Purple Diuris	Endangered
<i>Eucalyptus arenicola</i>	Gippsland Lakes Peppermint	Critically Endangered
<i>Eucalyptus bosistoana</i>	Coast Grey-box	Endangered

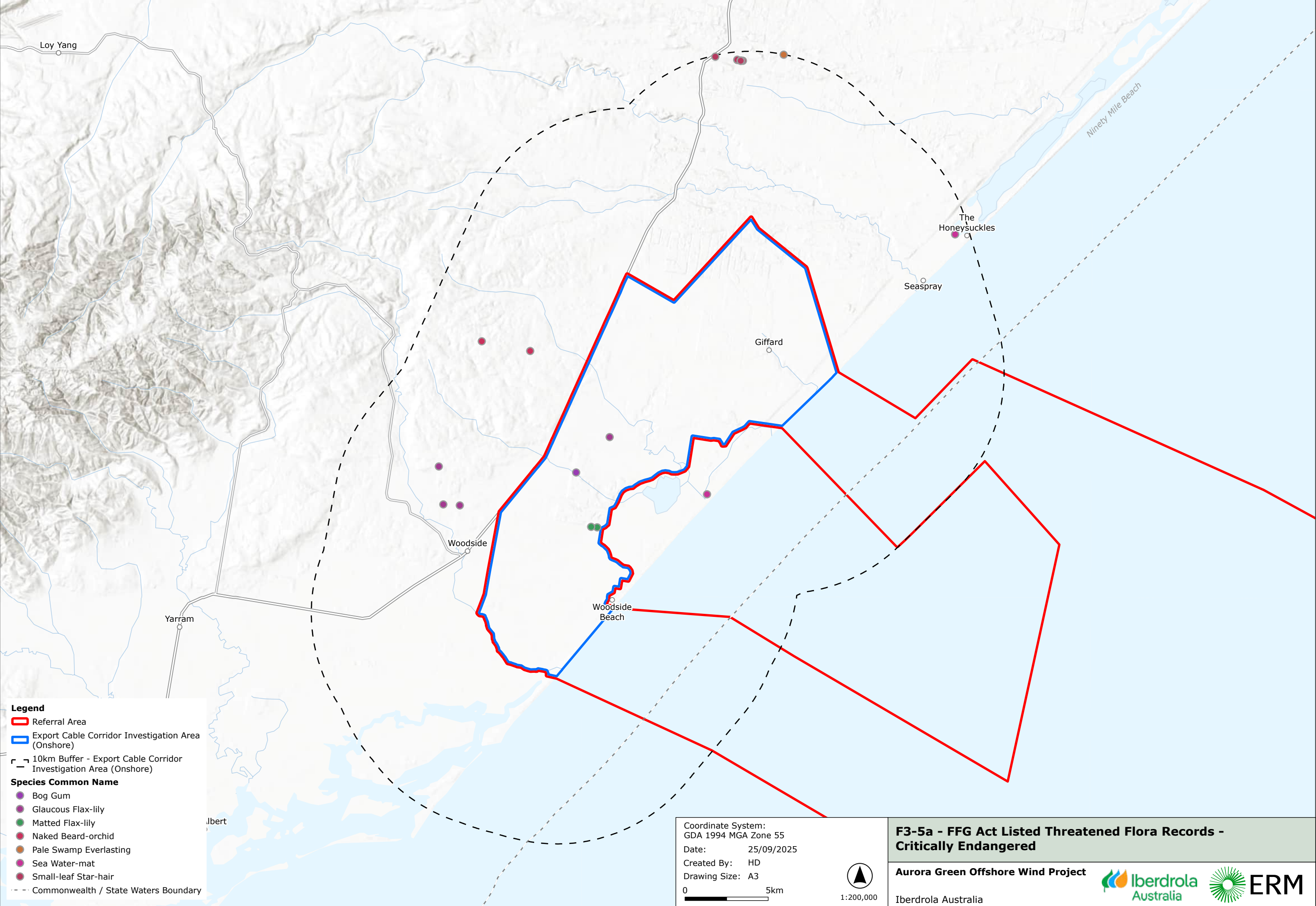
Scientific name	Common name	FFG Act listing conservation status
<i>Eucalyptus kitsoniana</i>	Bog Gum	Critically Endangered
<i>Grevillea chrysophaea</i>	Golden Grevillea	Vulnerable
<i>Juncus revolutus</i>	Creeping Rush	Endangered
<i>Lachnagrostis robusta</i>	Salt Blown-grass	Endangered
<i>Lachnagrostis semibarbata</i> var. <i>filifolia</i>	Purple Blown-grass	Endangered
<i>Lachnagrostis semibarbata</i> var. <i>semibarbata</i>	Purple Blown-grass	Endangered
<i>Lawrencia spicata</i>	Salt Lawrencia	Endangered
<i>Leptorhynchus elongatus</i>	Lanky Buttons	Endangered
<i>Oxalis rubens</i>	Dune Wood-sorrel	Endangered
<i>Pomaderris apetala</i> subsp. <i>maritima</i>	Tasman Pomaderris	Endangered
<i>Prasophyllum frenchii</i> *	Maroon Leek-orchid	Endangered
<i>Prasophyllum spicatum</i> *	Dense Leek-orchid	Critically Endangered
<i>Pseudanthus ovalifolius</i>	Oval-leaf Pseudanthus	Vulnerable
<i>Pterostylis chlorogramma</i> *	Green-striped Greenhood	Endangered
<i>Pterostylis fischiorum</i>	Fisch's Greenhood	Endangered
<i>Pterostylis grandiflora</i>	Cobra Greenhood	Endangered
<i>Thelymitra epipactoides</i> *	Metallic Sun-orchid	Endangered
<i>Zieria veronicea</i> subsp. <i>veronicea</i>	Pink Zieria	Endangered

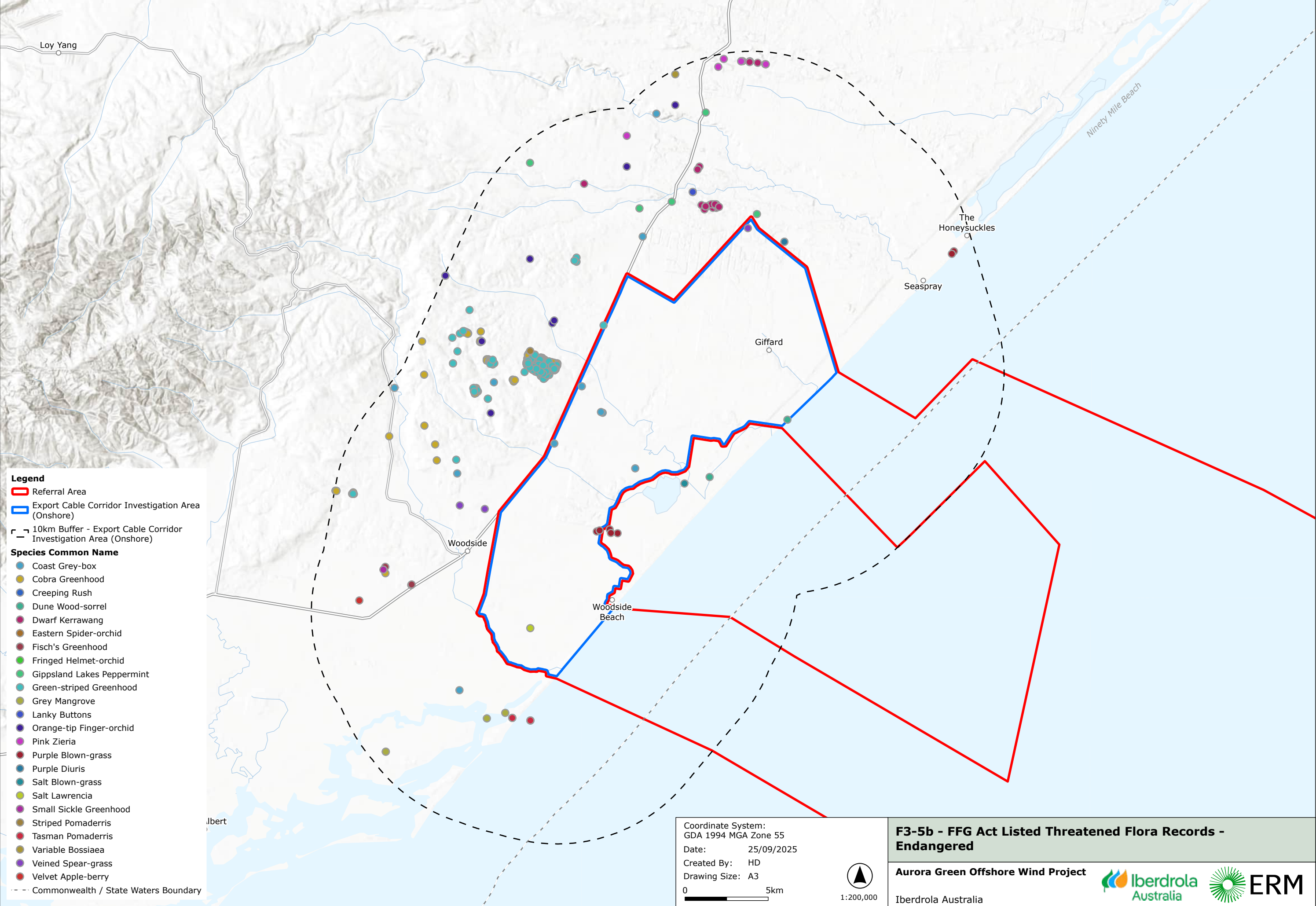
*Also listed under the EPBC Act.

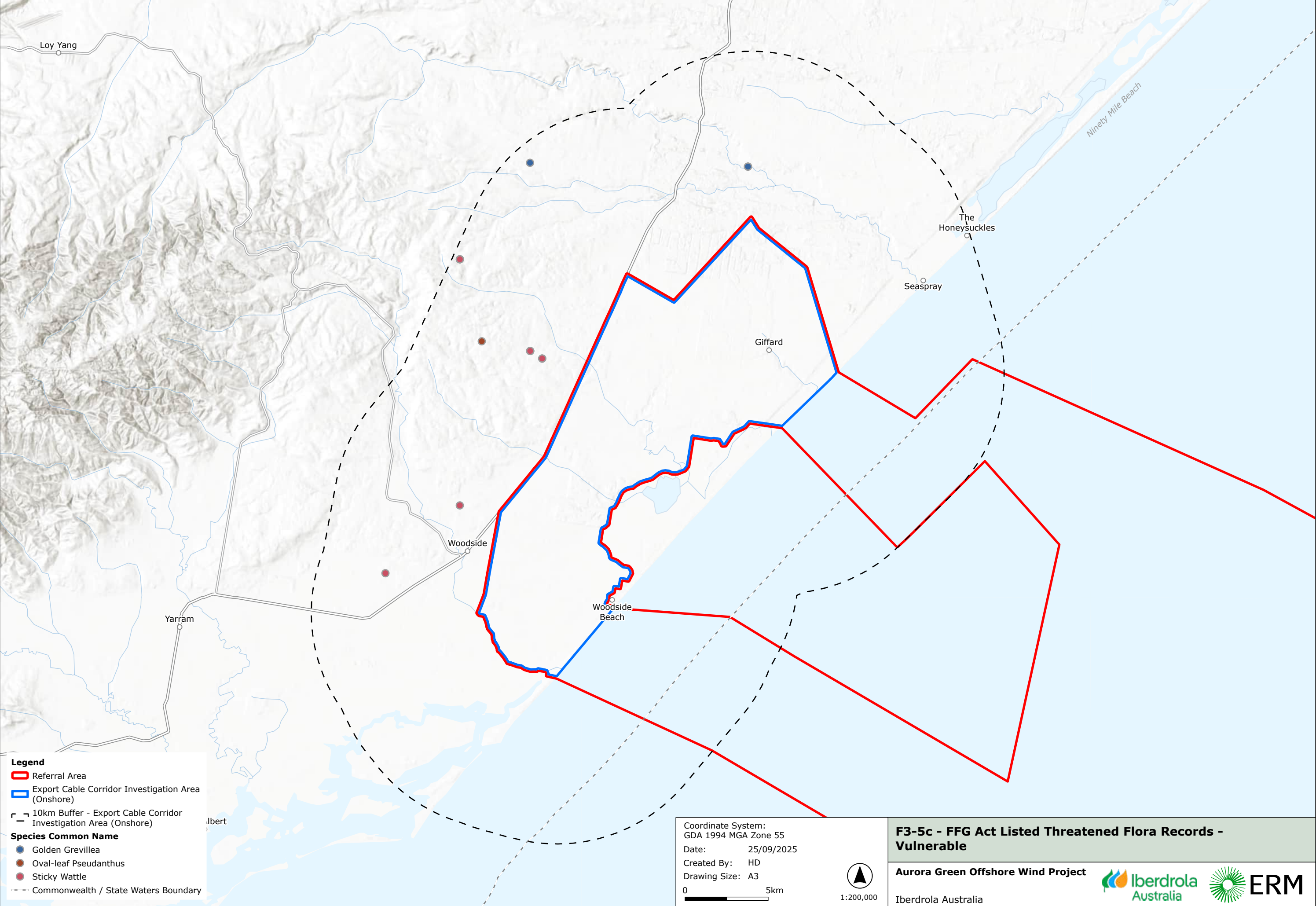
Of these, records exist within the Referral Area for the following nine (9) species:

- Bog Gum (*Eucalyptus kitsoniana*)
- Coast Grey-box (*Eucalyptus bosistoana*)
- Dune Wood-sorrel (*Oxalis rubens*)
- Glaucous Flax-lily (*Dianella longifolia* subsp. *glauca*)
- Matted Flax-lily (*Dianella amoena*)
- Purple Blown-grass (*Lachnagrostis semibarbata* var. *filifolia*)
- Purple Blown-grass (*Lachnagrostis semibarbata* var. *semibarbata*)
- Pale Swamp Everlasting (*Coronidium gunnianum*)
- Salt Lawrencia (*Lawrencia spicata*)









3.5 FAUNA

3.5.1 HABITAT

3.5.1.1 GRASSLAND – AGRICULTURAL

Most of the land in the Referral Area is dryland pastures used to produce beef, lamb, and wool. Small areas of rich alluvial soils with irrigation that supports broad acre cropping and hay production dominate the region, and provide foraging habitat for avifauna, particularly small to medium raptors. Exotic grass species and commonly associated weeds are expected to dominate regrowth in and around these cropped areas when cleared or fallow.

3.5.1.2 GRASSLAND – NATIVE

Native grassland is likely to be limited in the Referral Area due in part to the natural prevalence of wooded vegetation in the region but also because of ease of suitability for and ease of conversion to agricultural uses. Modelling of EVCs suggests native grasslands, if present, are small patches within a mosaic of scrub vegetation, primarily restricted to the south of the Referral Area. Due to their size and scarcity in the landscape, these are unlikely to support fauna that are grassland specialists due to insufficient extent, a lack of connectivity, and competition from more adaptable, occasional foragers of these habitats.

Roadsides throughout the Referral Area are likely to be mostly grasslands but may be highly disturbed, comprising a mix of native grassland flora and introduced, often invasive species. Introduced species commonly found in the region include Rye Grass (*Lolium* spp.), Brome (*Bromus* spp.), Plantain (*Plantago* spp.), Spear Thistle (*Cirsium vulgare*), Common Sow-thistle (*Sonchus oleraceus*), and Cat's Ear (*Hypochoeris radicata*). Derived grasslands comprising remnant understorey vegetation from habitat cleared of tree and shrub layers may be prevalent along road reserves.

Cropping land and pasture generally provide low-quality of habitat for a range of small mammals, reptiles and grassland birds. Cropping is likely to provide habitat for a range of other fauna including snakes, lizards, and small mammals (such as native and invasive rodents).

Grasslands in the Referral Area may still support listed matters including grassland fauna, depending on specific habitat values. The Referral Area also potentially includes grasslands along the coastal fringe. Most of this vegetation is modelled as EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic, and examination of aerial imagery suggest that scrub vegetation dominates with grassland, when present, is restricted to the foredunes. While narrow, this grassland may extend considerable distances along shoreline and may provide important habitat for fauna particularly species that breed in such habitat including numerous threatened fauna such as Hooded Plover (*Thinornis cucullatus cucullatus*).

3.5.1.3 WOODED VEGETATION

Based on the modelled EVC mapping, the Referral Area supports approximately 2,800 ha of woodland vegetation. While some of this is restricted to road reserves and more significant but isolated patches are retained within the agricultural matrix on private property, most is in Protected Areas and riparian zones throughout the Referral Area.

Large treed areas are likely dominated or at least represented by a large variety of *Eucalyptus* species such as Rough-barked Manna Gum (*E. viminalis* subsp. *pryoriana*), Jimmy's Shining Peppermint (*E. willsii*), Messmate Stringybark (*E. obliqua*), Narrow-leaf Peppermint (*E. radiata*), Yellow Stringybark (*E. muelleriana*), But But (*E. bridgesiana*), Red Box (*E. polyanthemos*), Red Stringybark (*E. macrorhyncha*), and Yertchuk (*E. consideniensis*). The eucalypts likely provide foraging habitat for a range of common nectar-eating and insectivorous woodland birds, as well as nesting hollows for birds such as parrots, and for bats and other mammals. Linear corridors of roadside vegetation are of high habitat value and provide connectivity in an otherwise largely cleared and fragmented environment with few sizeable areas of woodland remaining.

Understorey vegetation in these woodlands is likely limited to a ground layer of grasses and small or prostrate shrubs, providing little in the form of a larger shrub layer valuable to many birds. Unless regularly removed, logs are likely to be abundant creating habitat for reptiles and mammals.

Scattered trees within grassland or cropping fields may play a valuable role in providing connectivity and foraging or breeding habitat outside of the higher quality woodlands, particularly for avifauna with large ranges, including Wedge-tailed Eagle (*Aquila audax*), White-bellied Sea-Eagle (*Haliaeetus leucogaster*), and Little Eagle (*Hieraaetus morphnoides*). While apparently scarce in the region (based on aerial imagery) such trees are typically of considerable age, enhancing their potential habitat value by providing nesting hollows.

Within and around the Referral Area, the woodlands associated with Protected Areas are known regions of high biodiversity value.

Planted trees throughout the landscape in road reserves, surrounding residences or agricultural infrastructure, and potentially as windbreaks, whether native or not, may offer valuable resources for fauna in an otherwise limited landscape, and can provide movement corridors to more higher quality habitat.

3.5.1.4 SCRUB

Shrublands in the Referral Area are likely dominated or at least well represented by a mix of banksias (*Banksia serrata* and *B. intergrifolia*), Coast Wattle (*Acacia longifolia* subsp. *sophorae*), paperbarks (*Melaleuca ericifolia* and *M. squarrosa*), and Tea-trees (*Leptospermum lanigerum*, *L. continentale* and *Gaudium laevigatum* syn. *Leptospermum laevigatum*). These shrublands are subjected to high levels of salt spray and continuous disturbance from onshore winds, thus providing important sheltering resources for important fauna species such as the Swamp Skink (*Lissolepis coventryi*) and New Holland Mouse (*Pseudomys novaehollandiae*), depending on specific habitat values present. The scrub in the Referral Area may provide foraging or shelter for fauna that is distinct from other wooded vegetation and therefore potentially hosting a unique suite of species.

3.5.1.5 AQUATIC HABITAT

Based on EVC modelling, the Referral Area supports approximately 2,037.23 ha of aquatic habitat in the form of estuarine wetlands (including saltmarsh), sedge wetlands, and floodplain reedbeds. Within the Referral Area there are also several artificial waterbodies and channels that may hold important habitat values for fauna within the landscape. Merriman Creek and other smaller tributaries present within the Referral Area connect the broader landscape to the

larger wetlands, providing important movement corridors for aquatic fauna within the region. There is a high density of farm dams scattered across the Referral Area, but these are likely devoid of aquatic and/or fringing vegetation and isolated within cropping fields, providing little habitat for aquatic fauna and poor foraging or breeding habitat for other species. Ephemeral wetlands may appear in periods of heavy rainfall and especially were associated with remnant native woodland, may provide important habitat for a range of fauna including amphibians such as the Southern Toadlet (*Pseudophryne semimarmorata*) and Martin's Toadlet (*Uperoleia martini*), wetland birds, and those that prey on them and/or their young.

3.5.2 LANDSCAPE CONTEXT AND CONNECTIVITY

The surrounding broader landscape is generally consistent with that in the Referral Area, comprising large private properties heavily utilised for large scale agriculture, creating a highly modified and uniform environment. Native vegetation is primarily confined to Protected Area, road reserves and small patches within private properties or as sparsely scattered trees throughout the landscape. The Referral Area contains various Protected Areas, supporting remnant woodland and exotic plantation forestry existing outside the Referral Area. The former is potentially a refuge for threatened species. The riparian habitat associated with Merriman Creek and other smaller tributaries offers the nearest significant feature of its kind and is located within the Referral Area.

The Referral Area is located east of and adjacent to the Mullungdung State Forest, which also encompasses the Mullungdung Nature Conservation Reserve and Kangaroo Swamp Nature Conservation Reserve. The State Forest is predominantly characterised by EVCs such as Plains Grassy Forest, Lowland Forest, and Riparian Scrub. These communities support significant woodland vegetation and provide habitat for numerous EPBC and FFG listed species including the Powerful Owl (*Ninox strenua*), Southern Greater Glider (*Petauroides volans*), Yellow-bellied Glider (*Petaurus australis*), Gang-gang Cockatoo (*Callocephalon fimbriatum*), Grey-headed Flying-fox (*Pteropus poliocephalus*) and Lace Monitor (*Varanus varius*). Surrounding land use between the State Forest and the Referral Area consists primarily of dryland pasture, however, vegetation from the State Forest maintains low - moderate connectivity into the landscape via scattered trees and isolated patches of remnant vegetation on private property. Additionally, vegetation on secondary dunes, in the form of the Dune Scrub EVC, provides a narrow but effectively unbroken band for approximately 30 km along the coastline and may be of significant value as core habitat or a dispersal corridor for numerous fauna species.

Scattered large trees within and west of the Referral Area—particularly species such as Red Stringybark (*Eucalyptus macrorhyncha*), Yellow Stringybark (*E. muelleriana*), But But (*E. bridgesiana*), and Red Box (*E. polyanthemus*) play a critical role in sustaining functional connectivity. These trees provide essential resources such as hollows, nectar, and foraging habitat, enabling fauna to move across an otherwise cleared landscape. Arboreal mammals like the Southern Greater Glider (*Petauroides volans*) and Yellow-bellied Glider (*Petaurus australis*) rely on connected canopies for movement and feeding, while woodland birds such as the Gang-gang Cockatoo (*Callocephalon fimbriatum*) use scattered trees as movement corridors during dispersal. Nocturnal raptors, including the Powerful Owl (*Ninox strenua*), utilise these corridors for hunting and roosting. Given the Referral Area's adjacency to the Mullungdung State Forest and associated reserves, it forms part of the broader ecological landscape and acts as a link between forested habitats. Modifications within these areas may influence faunal movement, reduce habitat linkages and compromise landscape scale connectivity.

Additionally, the Referral Area is located within proximity to two nationally important wetlands, Jack Smith Lake State Game Reserve and Corner Inlet located adjacent to the Referral Area. Another large wetland area, Lake Denison Wildlife Reserve, abuts the northern coastal extent of the Referral Area. These wetlands are characterised by Estuarine Wetland, Coastal Saltmarsh and Swamp Scrub EVCs, supporting significant estuarine vegetation and providing feeding, breeding and refuge habitats for a range of threatened species. Notable fauna that have utilised these wetlands include migratory waterbirds such as Musk Duck (*Biziura lobata*), Hooded Plover (*Thinornis cucullatus*), White-bellied Sea Eagle (*Haliaeetus leucogaster*), Caspian Tern (*Hydroprogne caspia*), Pacific Golden Plover (*Pluvialis fulva*), Eastern Great Egret (*Ardea modesta*), Ruddy Turnstone (*Arenaria interpres*), White-throated Needletail (*Hirundapus caudacutus*), and Eastern Curlew (*Numenius madagascariensis*), as well as amphibians like the Southern Toadlet (*Pseudophryne semimarmorata*) and Martin's Toadlet (*Uperoleia martini*).

Each of these wetlands has associated waterways that intercept the Referral Area, (i.e. making them functionally connected) and provide key hydrological and ecological links between wetlands systems, forming an important network for fauna movement across the landscape. Species such as the Southern Toadlet and Martin's Toadlets utilise these linkages as they offer pathways that facilitate dispersal between foraging and breeding sites. For migratory birds and other avifauna, the wetlands act as seasonal stopovers and foraging ground, with creek corridors enhancing connectivity between wetland habitats.

Fauna habitat connectivity is dependent on the requirements of specific fauna for distribution. For example, while some avifauna such as larger birds including parrots and raptors may traverse the landscape relatively freely, others requiring cover may be more constrained and unlikely to venture far from woodland or riparian refuges.

Connectivity to the Protected Areas from habitat in the Referral Area and the surrounding area is limited due to the fragmented nature and land use of the broader landscape; however, fauna mobility and movement through linear corridors on roadsides or even across cropping fields between larger remnants can still occur. While the capacity for roadside vegetation to provide connectivity through the landscape is low, it is nonetheless of high value due to its scarcity. Connectivity of aquatic habitats is limited to major creek lines and minor tributaries with moderate habitat quality can provide suitable movement corridors for aquatic species.

3.5.3 THREATENED SPECIES

The likelihood of occurrence assessment for listed fauna is provided in Appendix C and the results summarized in Table 3-9 below. Thirty-one of the species listed under the EBBC Act were also listed under the FFG Act. Records of listed fauna species are presented in Figure 3-6, Figure 3-7 and Figure 3-8.

TABLE 3-9 THREATENED FAUNA LIKELIHOOD OF OCCURRENCE OUTCOMES

Listing	Number of Species
EPBC Act Threatened	34
EPBC Act Migratory	22
FFG Act	57

3.5.3.1 EPBC ACT

Thirty-four threatened fauna species listed under the EPBC Act presented in Table 3-10 below were determined to at least have the potential to occur in the Referral Area. Species records are shown in Figure 3-6. Note that the display of species records in Figure 3-6 excludes those in the Locality that have been deemed unlikely to occur in the Referral Area as per the likelihood of occurrence table in Appendix C. Also, due to records of observations at some location being of multiple species, not all species are represented in the figure legend.

A preliminary assessment of potential impacts to threatened fauna species is provided in Table 3-13 and Table 3-14.

TABLE 3-10 EPBC ACT THREATENED FAUNA SPECIES

Scientific name	Common name	EPBC Act listing conservation status
<i>Ardenna grisea</i>	Sooty Shearwater	Vulnerable
<i>Arenaria interpres</i> *	Ruddy Turnstone	Vulnerable
<i>Botaurus poiciloptilus</i> *	Australasian Bittern	Endangered
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Vulnerable
<i>Calidris canutus</i> *	Red Knot	Vulnerable
<i>Calidris ferruginea</i> *	Curlew Sandpiper	Critically Endangered
<i>Calidris tenuirostris</i> *	Great Knot	Vulnerable
<i>Callocephalon fimbriatum</i> *	Gang-gang Cockatoo	Endangered
<i>Charadrius leschenaultia</i> *	Greater Sand Plover	Vulnerable
<i>Charadrius mongolus</i> *	Lesser Sand Plover	Endangered
<i>Galaxiella pusilla</i> *	Dwarf Galaxias	Endangered
<i>Gallinago hardwickii</i>	Latham's Snipe	Vulnerable
<i>Hirundapus caudacutus</i> *	White-throated Needletail	Vulnerable
<i>Lathamus discolor</i> *	Swift Parrot	Critically Endangered
<i>Limosa lapponica</i> *	Bar-tailed Godwit	Endangered
<i>Limosa limosa</i> *	Black-tailed Godwit	Endangered
<i>Lissolepis coventryi</i> *	Swamp Skink	Endangered
<i>Litoria aurea</i> *	Green and Golden Bell Frog	Vulnerable
<i>Litoria raniformis</i> *	Growling Grass Frog	Vulnerable
<i>Neophema chrysogaster</i> *	Orange-bellied Parrot	Critically Endangered
<i>Neophema chrysostoma</i>	Blue-winged Parrot	Vulnerable
<i>Numenius madagascariensis</i> *	Eastern Curlew	Critically Endangered

Scientific name	Common name	EPBC Act listing conservation status
<i>Petauroides volans</i> *	Southern Greater Glider	Endangered
<i>Petaurus australis australis</i>	Yellow-bellied Glider	Vulnerable
<i>Pluvialis squatarola</i> *	Grey Plover	Vulnerable, Migratory
<i>Pseudomys novaehollandiae</i> *	New Holland Mouse	Vulnerable
<i>Pteropus poliocephalus</i> *	Grey-headed Flying-fox	Vulnerable
<i>Pycnoptilus floccosus</i> *	Pilotbird	Vulnerable
<i>Rostratula australis</i> *	Australian Painted-snipe	Endangered
<i>Sternula nereis nereis</i> *	Fairy Tern	Vulnerable
<i>Thinornis cucullatus</i> *	Hooded Plover	Vulnerable
<i>Tringa nebularia</i> *	Common Greenshank	Endangered
<i>Uperoleia martini</i> *	Martin's Toadlet	Endangered
<i>Xenus cinereus</i> *	Terek Sandpiper	Vulnerable

*Also listed under the FFG Act.

Of these, records exist within the Referral Area for the following twenty-one (21) species:

- Australasian Bittern (*Botaurus poiciloptilus*)
- Australian Painted-snipe (*Rostratula australis*)
- Bar-tailed Godwit (*Limosa lapponica*)
- Black-tailed Godwit (*Limosa limosa*)
- Blue-winged Parrot (*Neophema chrysostoma*)
- Common Greenshank (*Tringa nebularia*)
- Curlew Sandpiper (*Calidris ferruginea*)
- Eastern Curlew (*Numenius madagascariensis*)
- Fairy Tern (*Sternula nereis nereis*)
- Gang-gang Cockatoo (*Callocephalon fimbriatum*)
- Grey Plover (*Pluvialis squatarola*)
- Growling Grass Frog (*Litoria raniformis*)
- Hooded Plover (*Thinornis cucullatus*)
- Latham's Snipe (*Gallinago hardwickii*)
- Lesser Sand Plover (*Charadrius mongolus*)
- Orange-bellied Parrot (*Neophema chrysogaster*)
- Red Knot (*Calidris canutus*)
- Ruddy Turnstone (*Arenaria interpres*)
- Sharp-tailed Sandpiper (*Calidris acuminata*)

- Terek Sandpiper (*Xenus cinereus*)
- White-throated Needletail (*Hirundapus caudacutus*)

Although not recorded in the Referral Area, one additional species, Grey-headed Flying-fox (*Pteropus poliocephalus*) has a known camp and records just beyond the boundary on both the western and eastern sides, indicating utilisation of the Referral Area.

In addition to fauna species listed as threatened under the EPBC Act, 22 listed migratory species were also determined to have at least the potential to occur in the Referral Area (Figure 3-7). These are presented in Table 3-11. Note that the display of species records in Figure 3-7 excludes those in the Locality that have been deemed unlikely to occur in the Referral Area as per the likelihood of occurrence table in Appendix C. Also, due to records of observations at some location being of multiple species, not all species are represented in the figure legend.

A preliminary assessment of potential impacts to threatened fauna species is provided in Table 3-15.

TABLE 3-11 EPBC ACT MIGRATORY SPECIES

Scientific name	Common name
<i>Actitis hypoleucos</i>	Common Sandpiper
<i>Ardenna grisea</i>	Sooty Shearwater
<i>Arenaria interpres</i>	Ruddy Turnstone
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper
<i>Calidris canutus</i>	Red Knot
<i>Calidris tenuirostris</i>	Great Knot
<i>Charadrius bicinctus</i>	Double-banded Plover
<i>Charadrius leschenaultia</i>	Greater Sand Plover
<i>Charadrius mongolus</i>	Lesser Sand Plover
<i>Gallinago hardwickii</i>	Latham's Snipe
<i>Hirundapus caudacutus</i>	White-throated Needletail
<i>Hydroprogne caspia</i>	Caspian Tern
<i>Limosa lapponica</i>	Bar-tailed Godwit
<i>Limosa limosa</i>	Black-tailed Godwit
<i>Numenius madagascariensis</i>	Eastern Curlew
<i>Numenius phaeopus</i>	Whimbrel
<i>Pluvialis squatarola</i>	Grey Plover
<i>Sternula albifrons</i>	Little Tern

Scientific name	Common name
<i>Tringa brevipes</i>	Grey-tailed Tattler
<i>Tringa nebularia</i>	Common Greenshank
<i>Tringa stagnatilis</i>	Marsh Sandpiper
<i>Xenus cinereus</i>	Terek Sandpiper

All but four of these species are known to occur in the Referral Area. Common Sandpiper, Great Knot, Greater Sand Plover have, however, been recorded in the Locality, while the Referral Area offers coastal habitat that may be utilised by Sooty Shearwater for breeding.

3.5.3.2 FFG ACT

The likelihood of occurrence analysis (Appendix C) determined that 57 fauna species listed as threatened under the FFG Act have at least the potential to be present in the Referral Area (Figure 3-7). These species are shown in Table 3-12 below, along with their conservation status. Note that the display of species records in Figure 3-8 excludes those in the Locality that have been deemed unlikely to occur in the Referral Area as per the likelihood of occurrence table in Appendix C. Also, due to records of observations at some location being of multiple species, not all species are represented in the figure legend.

TABLE 3-12 FFG ACT THREATENED FAUNA SPECIES

Scientific name	Common name	FFG Act listing conservation status
<i>Accipiter novaehollandiae</i>	Grey Goshawk	Endangered
<i>Actitis hypoleucos</i> *	Common Sandpiper	Vulnerable
<i>Anseranas semipalmata</i>	Magpie Goose	Vulnerable
<i>Ardea alba modesta</i>	Eastern Great Egret	Vulnerable
<i>Ardea intermedia plumifera</i>	Plumed Egret	Critically Endangered
<i>Arenaria interpres</i> *	Ruddy Turnstone	Endangered
<i>Biziura lobata</i>	Musk Duck	Vulnerable
<i>Botaurus poiciloptilus</i> *	Australasian Bittern	Critically Endangered
<i>Calamanthus pyrrhopygius</i> *	Chestnut-rumped Heathwren	Vulnerable
<i>Calidris canutus</i> *	Red Knot	Endangered
<i>Calidris ferruginea</i> *	Curlew Sandpiper	Critically Endangered
<i>Calidris tenuirostris</i> *	Great Knot	Critically Endangered
<i>Callocephalon fimbriatum</i> *	Gang-gang Cockatoo	Endangered
<i>Charadrius leschenaultia</i> *	Greater Sand Plover	Vulnerable

Scientific name	Common name	FFG Act listing conservation status
<i>Charadrius mongolus</i> *	Lesser Sand Plover	Endangered
<i>Egretta garzetta</i>	Little Egret	Endangered
<i>Galaxiella pusilla</i>	Dwarf Galaxias	Endangered
<i>Gelochelidon macrotarsa</i>	Australian Gull-billed Tern	Endangered
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	Endangered
<i>Hieraaetus morphnoides</i>	Little Eagle	Vulnerable
<i>Hirundapus caudacutus</i> *-	White-throated Needletail	Vulnerable
<i>Hydroprogne caspia</i> *	Caspian Tern	Vulnerable
<i>Ixobrychus dubius</i> *	Australian Little Bittern	Endangered
<i>Lathamus discolor</i> *	Swift Parrot	Critically Endangered
<i>Lewinia pectoralis</i>	Lewin's Rail	Vulnerable
<i>Limosa lapponica</i> *	Bar-tailed Godwit	Vulnerable
<i>Limosa limosa</i> *	Black-tailed Godwit	Critically Endangered
<i>Lissolepis coventryi</i> *	Swamp Skink	Endangered
<i>Litoria raniformis</i> *	Growling Grass Frog	Vulnerable
<i>Nannoperca</i> sp. 1	Flinders Pygmy Perch	Vulnerable
<i>Neophema chrysogaster</i> *	Orange-bellied Parrot	Critically Endangered
<i>Ninox connivens</i>	Barking Owl	Critically Endangered
<i>Ninox strenua</i>	Powerful Owl	Vulnerable
<i>Numenius madagascariensis</i> *	Eastern Curlew	Critically Endangered
<i>Numenius phaeopus</i> *	Whimbrel	Endangered
<i>Oxyura australis</i>	Blue-billed Duck	Vulnerable
<i>Petaurus australis australis</i>	Yellow-bellied Glider	Vulnerable
<i>Petauroides volans</i> *	Southern Greater Glider	Endangered
<i>Pezoporus wallicus</i>	Ground Parrot	Endangered
<i>Pluvialis fulva</i>	Pacific Golden Plover	Vulnerable
<i>Pluvialis squatarola</i> *	Grey Plover	Vulnerable
<i>Pseudemoia rawlinsoni</i>	Glossy Grass Skink	Endangered
<i>Pseudomys novaehollandiae</i> *	New Holland Mouse	Endangered

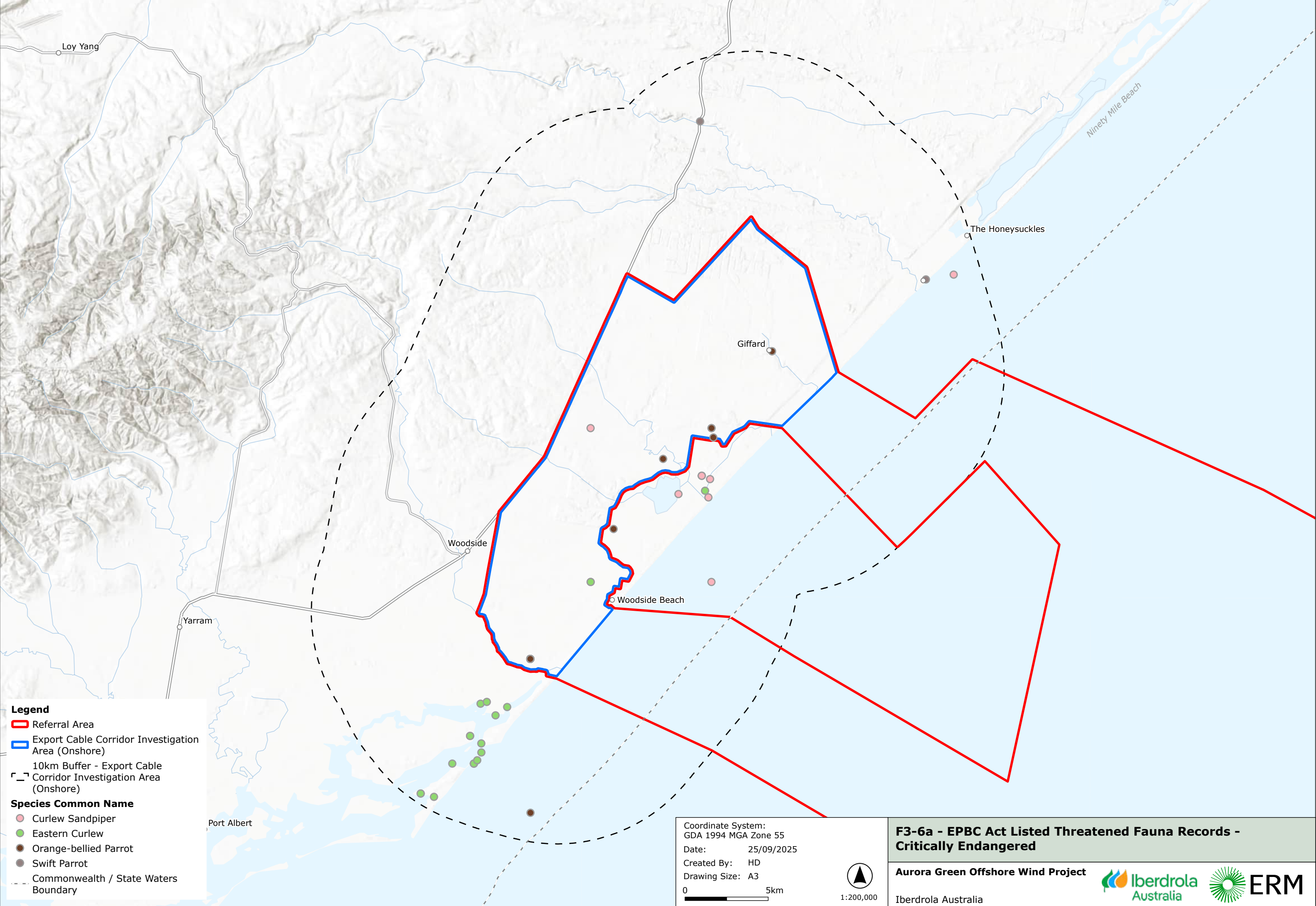
Scientific name	Common name	FFG Act listing conservation status
<i>Pseudophryne semimarmorata</i>	Southern Toadlet	Endangered
<i>Pteropus poliocephalus</i> *	Grey-headed Flying-fox	Vulnerable
<i>Rostratula australis</i> *	Australian Painted-snipe	Critically Endangered
<i>Spatula rhynchotis</i>	Australasian Shoveler	Vulnerable
<i>Sternula albifrons</i> *	Little Tern	Critically Endangered
<i>Sternula nereis</i> *	Fairy Tern	Critically Endangered
<i>Stictonetta naevosa</i>	Freckled Duck	Endangered
<i>Thinornis cucullatus</i> *	Hooded Plover	Vulnerable
<i>Tringa brevipes</i> *	Grey-tailed Tattler	Critically Endangered
<i>Tringa nebularia</i> *	Common Greenshank	Endangered
<i>Tringa stagnatilis</i> *	Marsh Sandpiper	Endangered
<i>Uperoleia martini</i> *	Martin's Toadlet	Critically Endangered
<i>Varanus varius</i>	Lace Monitor	Endangered
<i>Xenus cinereus</i>	Terek Sandpiper	Endangered

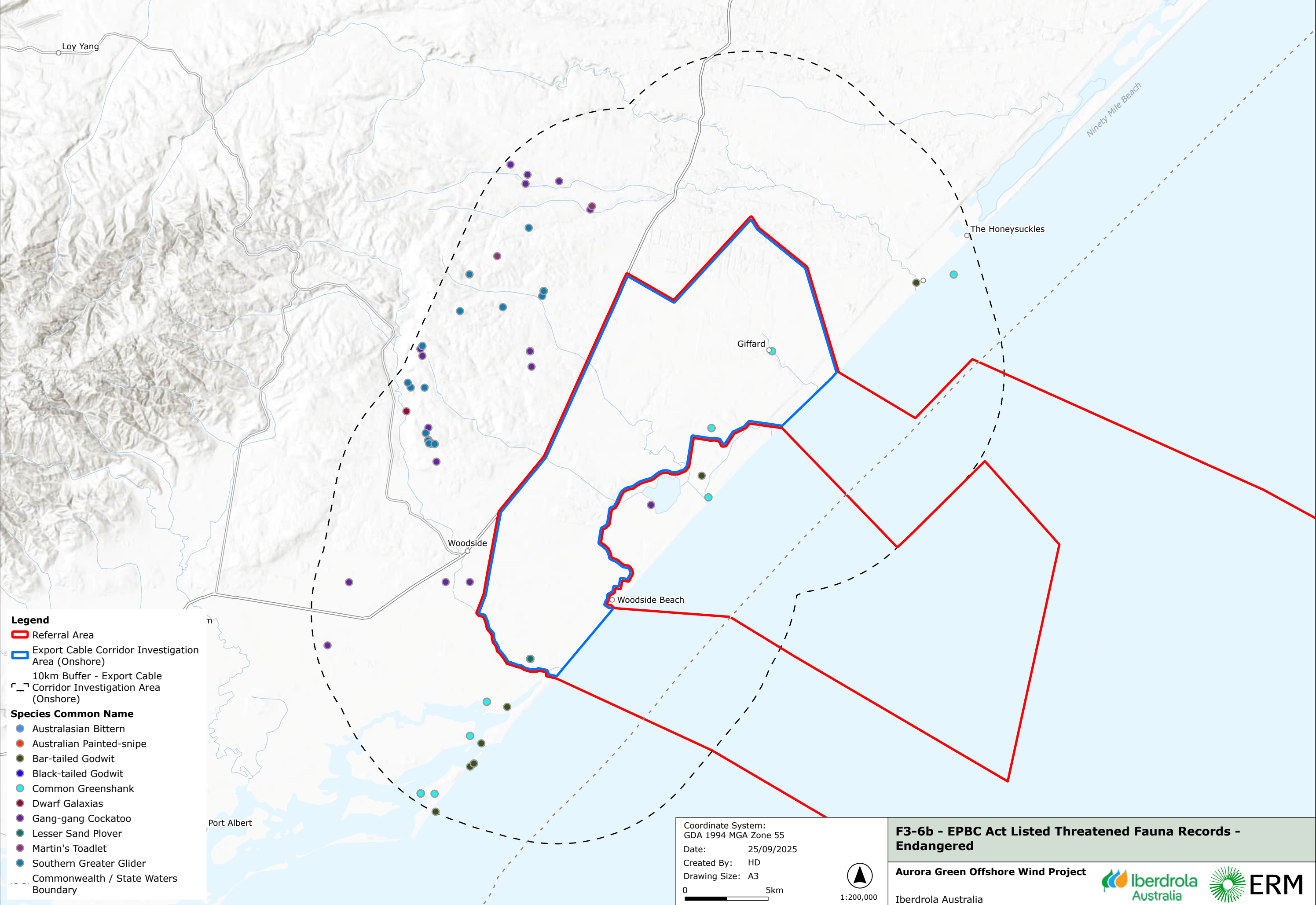
*Also listed under the EPBC Act.

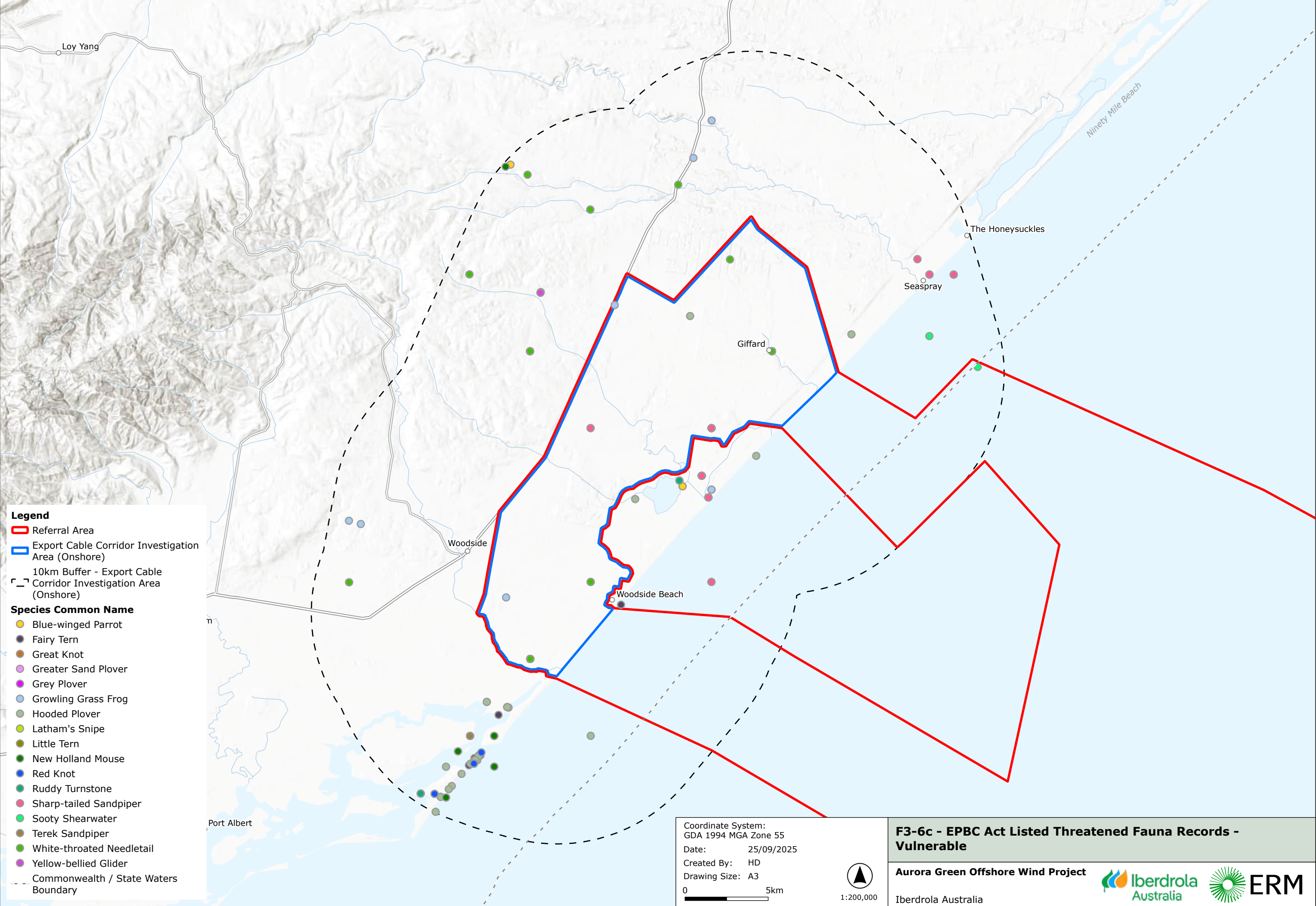
Of these, records exist within the Referral Area for the following 38 species:

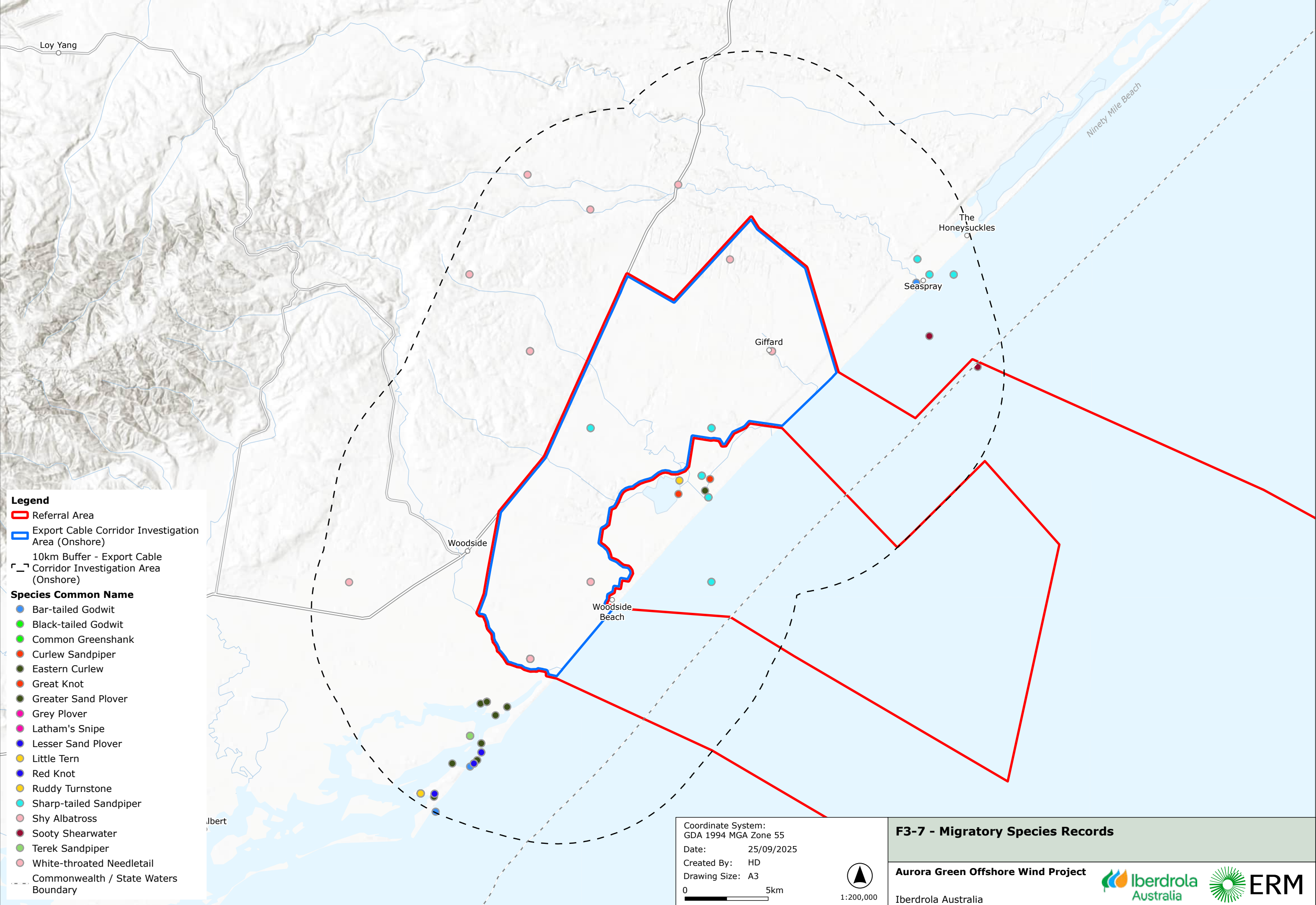
- Australasian Bittern (*Botaurus poiciloptilus*)
- Australasian Shoveler (*Spatula rhynchotis*)
- Australian Gull-billed Tern (*Gelochelidon macrotarsa*)
- Australian Painted-snipe (*Rostratula australis*)
- Bar-tailed Godwit (*Limosa lapponica*)
- Black-tailed Godwit (*Limosa limosa*)
- Caspian Tern (*Hydroprogne caspia*)
- Chestnut-rumped Heathwren (*Calamanthus pyrrhopygius*)
- Common Greenshank (*Tringa nebularia*)
- Curlew Sandpiper (*Calidris ferruginea*)
- Eastern Curlew (*Numenius madagascariensis*)
- Fairy Tern (*Sternula nereis*)
- Freckled Duck (*Stictonetta naevosa*)
- Gang-gang Cockatoo (*Callocephalon fimbriatum*)
- Grey Goshawk (*Accipiter novaehollandiae*)
- Grey Plover (*Pluvialis squatarola*)
- Grey-tailed Tattler (*Tringa brevipes*)

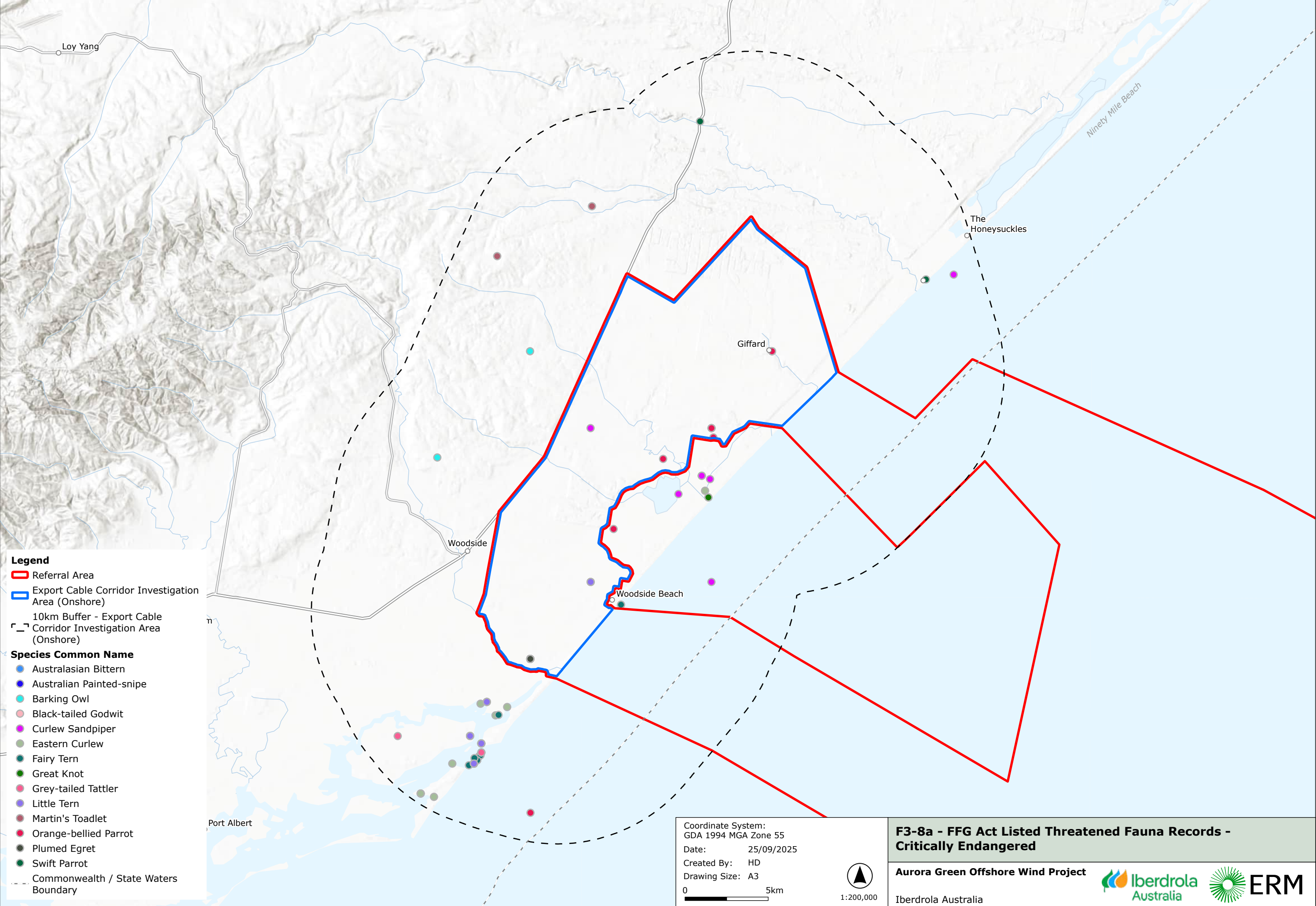
- Ground Parrot (*Pezoporus wallicus*)
- Growling Grass Frog (*Litoria raniformis*)
- Hooded Plover (*Thinornis cucullatus*)
- Lace Monitor (*Varanus varius*)
- Lesser Sand Plover (*Charadrius mongolus*)
- Lewin's Rail (*Lewinia pectoralis*)
- Little Eagle (*Hieraaetus morphnoides*)
- Little Egret (*Egretta garzetta*)
- Little Tern (*Sternula albifrons*)
- Marsh Sandpiper (*Tringa stagnatilis*)
- Musk Duck (*Biziura lobata*)
- Orange-bellied Parrot (*Neophema chrysogaster*)
- Pacific Golden Plover (*Pluvialis fulva*)
- Plumed Egret (*Ardea intermedia plumifera*)
- Red Knot (*Calidris canutus*)
- Ruddy Turnstone (*Arenaria interpres*)
- Southern Toadlet (*Pseudophryne semimarmorata*)
- Terek Sandpiper (*Xenus cinereus*)
- Whimbrel (*Numenius phaeopus*)
- White-bellied Sea-Eagle (*Haliaeetus leucogaster*)
- White-throated Needletail (*Hirundapus caudacutus*)

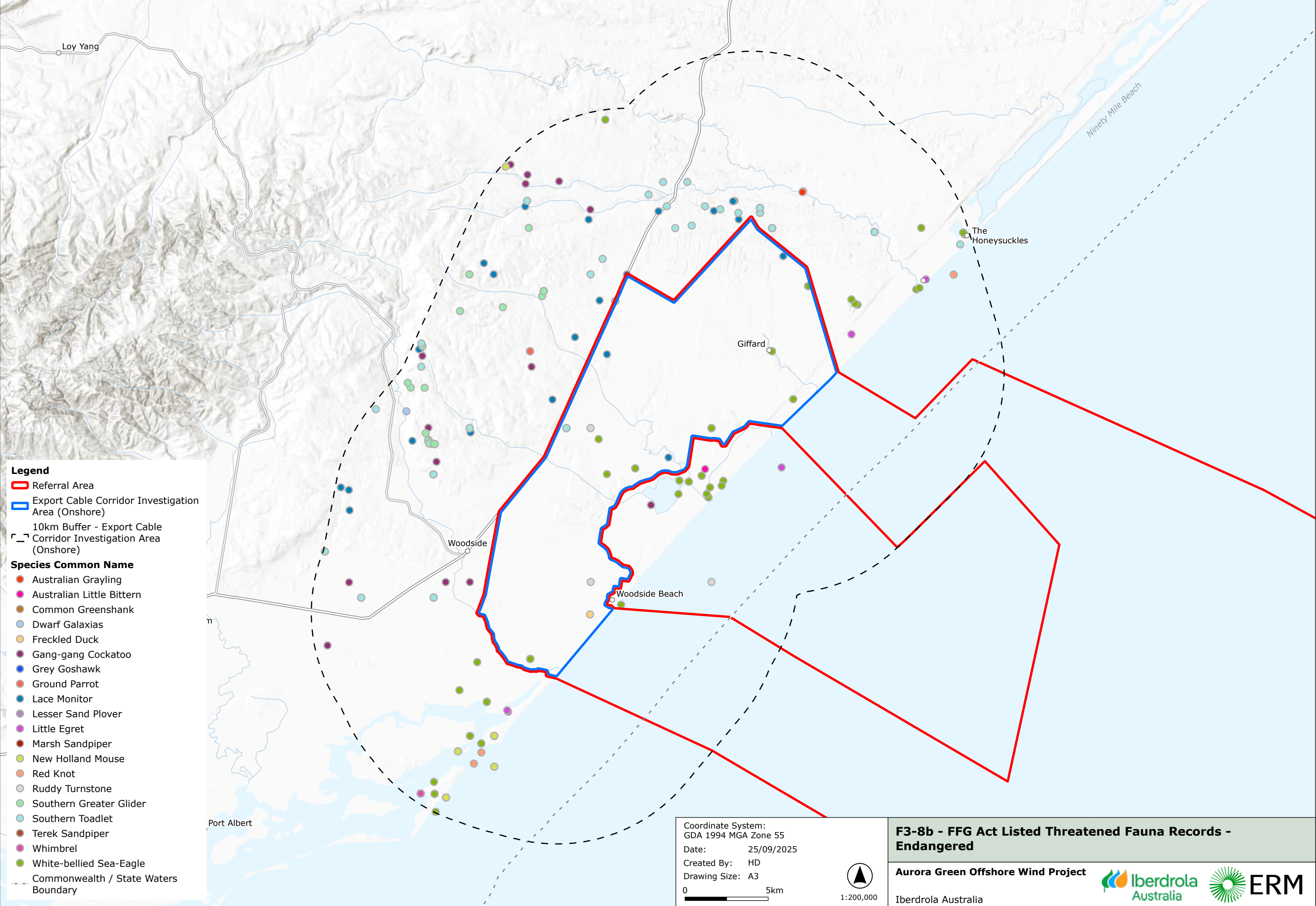












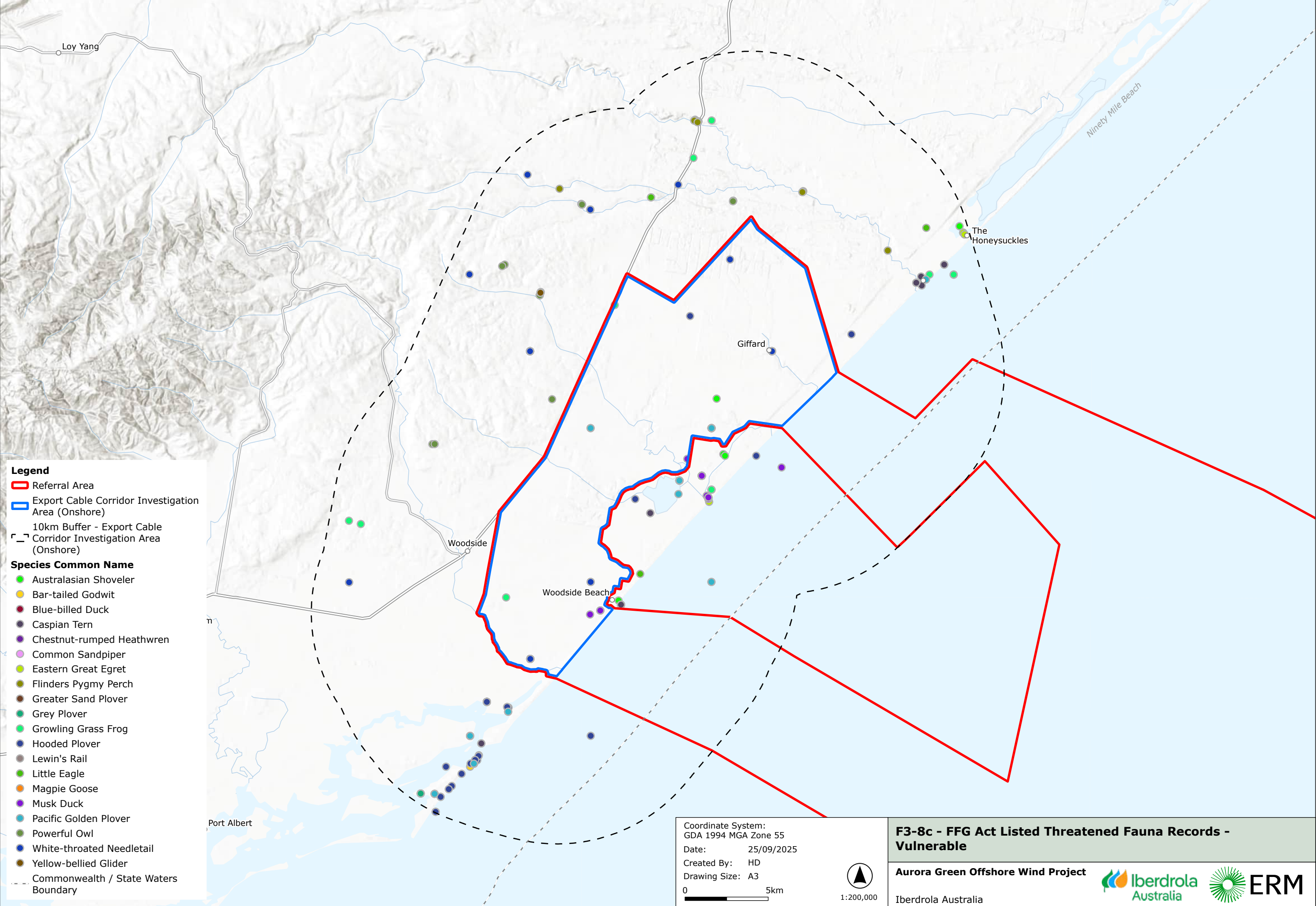


TABLE 3-13 POTENTIAL IMPACTS TO MNES: CRITICALLY ENDANGERED AND ENDANGERED SPECIES

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered species	Potential significance of impact
An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will:		
Lead to a long-term decrease in the size of the population	<i>Flora</i> No Critically Endangered flora species are considered to have the potential to occur in the Referral Area. The potential occurrence of Endangered flora is likely to be restricted to Protected Area and small, fragmented patches of suitable habitat, such as roadsides and riparian strips. There is considerable opportunity within the Referral Area to avoid these areas. Impacts on flora resulting from the development will likely be limited to direct losses over the short-term. Additionally, micro-siting of infrastructure and construction mitigation measures may be implemented to ensure any populations of Endangered flora are not reduced over the long-term. <i>Fauna</i> While the utilisation of avifauna within the Referral Area is likely to be highest within Protected Areas, movement across the broader landscape is also likely to be considerable. Additionally, small and/or fragmented habitats such as wetlands, and grasslands, and roadside woodland corridors may also support numerous Critically Endangered and Endangered fauna, including terrestrial species. Regardless, the Referral Area offers opportunities for development design and mitigation to ensure risks to these threatened species are reduced to an acceptable level unlikely to result in any long-term population reduction.	Unlikely to have a significant impact
Reduce the area of occupancy of the species	<i>Flora</i> No Critically Endangered flora species are considered to have the potential to occur in the Referral Area. The potential occurrence of Endangered flora is likely to be restricted to small, fragmented areas of suitable habitat. There is considerable opportunity within the Referral Area to avoid these areas, ensuring the area of occupancy of Endangered flora is not reduced. <i>Fauna</i> The Referral Area offers significant opportunity to limit impacts to already cleared or degraded fauna habitat. Provided identified important habitat is avoided and protected during the construction phase, it is unlikely that the area of occupancy of any Critically Endangered or Endangered fauna is reduced.	Unlikely to have a significant impact

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered species	Potential significance of impact
An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will:		
Fragment an existing population into two or more populations	Careful development design including micro-siting of infrastructure is unlikely to result in fragmentation of any species' population.	Unlikely to have a significant impact
Adversely affect habitat critical to the survival of the species	<i>Flora</i> For any Critically Endangered or Endangered species found within the Referral Area, there is considerable opportunity to avoid impacts to associated habitat and ensure unacceptable risks to the survival of such species are not undertaken. <i>Fauna</i> Except for within Protected Areas, most of the Referral Area is already highly modified habitat of low quality. Field surveys will provide greater assessment of the location and extent of remaining habitat for Critically Endangered and Endangered species, and guide development design to avoid impacts or restriction of access to such habitat. While there is the potential for indirect impacts to critical habitat, especially that associated with wetlands, appropriate timing of development and standard construction mitigation measures are likely to reduce the risk of adverse effects on the areas to an acceptable level.	Unlikely to have a significant impact
Disrupt the breeding cycle of a population	Appropriate timing of development is likely to ensure interruptions to the breeding cycle of Critically Endangered or Endangered species are avoided, where possible. Identification of breeding habitat for any of these species will inform the development footprint and allow avoidance measures to be undertaken.	Unlikely to have a significant impact
Modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Except for within Protected Areas, most of the Referral Area is already highly modified habitat of low quality. Field surveys will provide greater assessment of the location and extent of remaining habitat for Critically Endangered and Endangered species, and guide development design to avoid impacts or restriction of access to such habitat.	Unlikely to have a significant impact
Result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or	While some of the habitats within the Referral Area, especially those associated with the coastal fringes, may be highly susceptible to incursion by invasive species, especially weeds, standard construction management and hygiene protocols are likely to reduce the risk of introduction and establishment of invasive species.	Unlikely to have a significant impact

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered species	Potential significance of impact
An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will:		
critically endangered species' habitat		
Introduce disease that may cause the species to decline	The implementation of standard construction mitigation measures including appropriate hygiene protocols is unlikely to result in the introduction of disease to flora and fauna within the Referral Area.	Unlikely to have a significant impact
Interfere with the recovery of the species	Because of the opportunities within the Referral Area to avoid any impacts to Critically Endangered or Endangered flora and fauna population or habitat, the capacity for any such species present to have their recovery potential interfered with is considered unlikely to occur.	Unlikely to have a significant impact

TABLE 3-14 POTENTIAL IMPACTS TO MNES: VULNERABLE SPECIES

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered species	Potential significance of impact
An action is likely to have a significant impact on a threatened 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	<i>Flora</i> There is potential for important populations of Vulnerable flora to be present within the Referral Area, however, these are likely to be restricted to existing Protected Areas or within wetlands and vegetation along the coast. Micrositing of infrastructure and mitigation measures such as to minimise impacts provide opportunities to ensure any impacts to not decrease the size of identified important populations. <i>Fauna</i> For large and/or highly mobile fauna species, avoidance of impacts to habitat within existing Protected Areas is likely to ensure no long-term effects on important populations of Vulnerable species result from the Project. For less mobile fauna species, identification of habitat location and extent through field surveys will inform the development design and identify opportunities to reduce risks to any important population to an acceptable level.	Unlikely to be a significant impact
Reduce the area of occupancy of an important population	It is unlikely that the Referral Area supports an important population of any Vulnerable species outside of Protected Areas. Impacts to associated habitat are likely to be minimal and other disturbances temporary provided appropriate mitigation measures are implemented.	Unlikely to be a significant impact
Fragment an existing important population into two or more populations	There is sufficient opportunity within the referral Area to that impacts to any important populations of Vulnerable species are identified and they or their habitat avoided. Additionally, the extent of disturbance from the Project is unlikely to result population habitat or population fragmentation. For smaller populations, especially of flora species, micrositing of infrastructure is likely to ensure no population fragmentation occurs.	Unlikely to be a significant impact
Adversely affect habitat critical to the survival of a species	It is unlikely that the Referral Area support habitat critical to the survival of any Vulnerable species. Additionally, avoidance of Protected Areas, and development design informed by field surveys are likely to provide opportunities to avoid important habitats. Mitigation of impacts during the construction phase will likely further reduce risks to nearby or connected habitats to an acceptable level.	Unlikely to be a significant impact

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered species	Potential significance of impact
An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will:		
Disrupt the breeding cycle of an important population	Appropriate timing of development is likely to ensure interruptions to the breeding cycle of any Vulnerable species are avoided, where possible. Identification of breeding habitat for any of these species will inform the development footprint and allow appropriate avoidance and mitigation measures to be undertaken.	Unlikely to be a significant impact
Modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline	Most of the Referral Area is already highly degraded. Habitats within that are suitable for any Vulnerable species are likely restricted to Protected Areas or small, already fragmented patches. These latter are also likely to be well represented in adjacent areas of greater importance outside the Referral Area. Therefore, impacts to habitat, which are short-term and of limited extent, are considered unlikely to result in the decline of a Vulnerable species.	Unlikely to be a significant impact
Result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat	While some of the habitats within the Referral Area, especially those associated with the coastal fringes, may be highly susceptible to incursion by invasive species, especially weeds, standard construction management and hygiene protocols are likely to reduce the risk of introduction and establishment of invasive species.	Unlikely to be a significant impact
Introduce disease that may cause the species to decline	The implementation of standard construction mitigation measures including appropriate hygiene protocols is unlikely to result in the introduction of disease to flora and fauna within the Referral Area.	Unlikely to be a significant impact
Interfere substantially with the recovery of the species	It is unlikely that the Referral Area support habitat upon which the recovery of any Vulnerable species is reliant. Any unavoidable impacts are likely to be short-term or minor.	Unlikely to be a significant impact

TABLE 3-15 POTENTIAL IMPACTS TO MNES: MIGRATORY SPECIES

Significant Impact Criteria	Preliminary assessment of impacts to Migratory species	Potential significance of impact
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	There is the potential for works associated with construction to impact important habitat for migratory species, particularly those associated with caballing at landfall. These impacts are expected to be temporary and limited to construction only with no long-term impacts to habitat for migratory species. Suitable opportunity exists to apply micro-siting and design measures to ensure risks to important habitat for migratory species are reduced to within acceptable levels. It is unlikely that works associated with construction will result in alterations to fire regimes and potential risks will be mitigated through the implementation of standard construction and environmental management protocols.	Unlikely to be a significant impact
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	The implementation of standard environmental and hygiene protocols, including appropriate biosecurity practices, is unlikely to result in the introduction of invasive species that have the potential to be harmful to migratory species or their habitat.	Unlikely to be a significant impact
Seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species	There is the potential for works associated with construction to impact the lifecycle of migratory species, particularly those associated with caballing at landfall. These impacts are expected to be temporary and limited to construction. Areas of important value to the lifecycle of migratory species will be identified during field investigations and will inform opportunities to minimise impacts through design and micro-siting measures. Timing of construction works can be undertaken only during periods where migratory species are absent from the Referral Area in order to avoid potential impacts.	Unlikely to be a significant impact

3.6 LISTED ECOLOGICAL COMMUNITIES

3.6.1 EPBC ACT

The desktop assessment identified two TECs listed under the EPBC Act. Both are considered to at least have the potential to occur in the Referral Area. Determination of likelihood of occurrence is provided in Table 3-16. Further field surveys may be required to determine the presence and extent of TECs in proximity to the areas of potential direct and indirect impacts within the Referral Area. A preliminary assessment of potential impacts to threatened ecological communities is provided in Table 3-17.

TABLE 3-16 PMST SEARCH RESULTS FOR THREATENED ECOLOGICAL COMMUNITIES

Community name	Listing status	Likelihood of occurrence
<i>Natural Damp Grassland of the Victorian Coastal Plains</i>	Critically Endangered	Likely to occur
<i>Subtropical and Temperate Coastal Saltmarsh</i>	Vulnerable	Likely to occur

Natural Damp Grassland of the Victorian Coastal Plains

- This TEC is characterised by a grassy ground cover that commonly includes a range of tussock and non-tussock grasses, other graminoids, and forbs. The structure ranges from closed tussock grassland to open grassy woodland with a sparse canopy of woody species, such as Manna Gum (*Eucalyptus viminalis*), Swamp Gum (*E. ovata*), Narrow-leaf Peppermint (*E. radiata*), and/ or Coast Grey Box (*E. bosistoana*). The presence of tussock grasses, notably Kangaroo Grass (*Themeda triandra*) on drier sites, and Tussock Grass (*Poa labillardierei*) on wetter sites dominate these communities. Other grasses present include Mat Grass (*Hemarthria uncinata*), Weeping Grass (*Microlaena stipoides* var. *stipoides*), Smooth Wallaby-grass (*Rytidosperma laeve*), Heath Wallaby-grass (*Rytidosperma semiannulare*), Veined Spear-grass (*Austrostipa rudis*), and Blown Grasses (*Lachnagrostis* spp.).
- It is likely that the of this TEC being present in the Referral Area, with associated vegetation of patches of EVC 687 – Swamp Scrub/ Plains Grassland Mosaic (96.56 ha) present within the Referral Area.

Subtropical and Temperate Coastal Saltmarsh

- This TEC is characterised by salt-tolerant vegetation (halophytes) including grasses, herbs, rushes, and shrubs. Succulent herbs, shrubs and grasses generally dominate, and vegetation is generally of less than 0.5 m (except for some reeds and sedges). Many species of non-vascular plants are also found in saltmarsh, including epiphytic algae, diatoms, and cyanobacterial mats. In Victoria, the lower saltmarsh zone is often dominated by succulent shrubs of the genera *Tecticornia* and *Salicornia* (syn. *Sarcocornia*), while herbs and grasses are more commonly found in the landwards, upper-intertidal zones.
- There is a high likelihood of this TEC to occur within the Referral Area, with associated EVCs 9 – Coastal Saltmarsh (30.65 ha), and EVC 10 Estuarine Wetland (351.49 ha) present within the Referral Area. EVC 9 can occur as an aggregate community that comprises a variety of shrubby to herbaceous to grassy/ sedge vegetation.

TABLE 3-17 POTENTIAL IMPACTS TO MNES: CRITICALLY ENDANGERED AND ENDANGERED TECS

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered Threatened Ecological Communities	Potential significance of impact
An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will:		
Reduce the extent of an ecological community	There is sufficient opportunity within the Referral Area to identify the extent of potential impacts to threatened ecological communities and ensure they are avoided. Micrositing of infrastructure and suitable management and hygiene mitigations measures are likely to reduce the risk of impacts to threatened communities.	Unlikely to be a significant impact
Fragment or increase fragmentation of an ecological community, for example by clearing vegetation for roads or transmission lines	There is sufficient opportunity to identify the extent of threatened ecological communities within the Referral Area and suitably avoid potential fragmentation of communities. Micrositing of roads, transmission lines and associated infrastructure will be undertaken to avoid community fragmentation.	Unlikely to be a significant impact
Adversely affect habitat critical to the survival of an ecological community	Avoidance of areas likely to provide habitat critical to the survival of an ecological community is likely to ensure no long-term impacts to ecological communities within the Referral Area. Identification of occurrence and extent of habitat areas during field surveys will inform infrastructure design and allow for the identification of opportunities for minimising risks to ecological communities to an acceptable level.	Unlikely to be a significant impact
Modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for an ecological community's survival, including reduction of groundwater levels, or substantial alteration of surface water drainage patterns	There is the potential for works associated with the installation of cabling at landfall to disrupt hydrology and nutrient flow. These are expected to be temporary during construction. There is sufficient opportunity to identify the extent of ecological communities within the Referral Area and apply micrositing of infrastructure outside of habitat likely to support ecological communities. Standard construction and environmental management protocols are likely to minimise the risk of changes to hydrology, sediment and nutrient flow, or substantial alteration to ground water levels that may result in impacts to ecological communities.	Unlikely to be a significant impact
Cause a substantial change in the species composition of an occurrence of an ecological community, including	There is sufficient opportunity to identify potential impacts to the extent of threatened ecological communities within the Referral Area and suitably avoid impacts. It is unlikely that construction activities will result in the loss or decline	Unlikely to be a significant impact

Significant Impact Criteria	Preliminary assessment of impacts to Critically Endangered and Endangered Threatened Ecological Communities	Potential significance of impact
An action is likely to have a significant impact on a threatened species if there is a real chance or possibility that it will:		
causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting	of functionally important species or changes to fire regimes. Standard construction and hygiene protocols are likely to reduce the risk of introducing invasive species within the potential to substantially change species composition.	
Cause a substantial reduction in the quality or integrity of an occurrence of an ecological community, including, but not limited to: – assisting invasive species, that are harmful to the listed ecological community, to become established, or – causing regular mobilisation of fertilisers, herbicides or other chemicals or pollutants into the ecological community which kill or inhibit the growth of species in the ecological community	While threatened ecological communities within the Referral Area, especially those associated with the coastal fringes, may be highly susceptible to incursion by invasive species, especially weeds, standard construction management and hygiene protocols are likely to reduce the risk of introduction and establishment of invasive species. It is unlikely that the mobilisation of fertilisers, herbicides or other chemicals will result in impacts to a threatened ecological community within the Referral Area. Standard construction, environmental management, and hygiene protocols are likely to reduce the risk of transfer of chemicals and pollutants into the ecological communities.	Unlikely to be a significant impact
Interfere with the recovery of an ecological community	There is sufficient opportunity to identify the extent of potentially regenerating threatened ecological communities within the Referral Area and identify suitable opportunities to avoid impacts.	Unlikely to be a significant impact

3.6.2 FFG ACT

The Referral Area has the potential to support two native vegetation communities listed under the FFG Act, as outlined in Table 3-4 above. These are described below:

Coastal Moonah Woodland

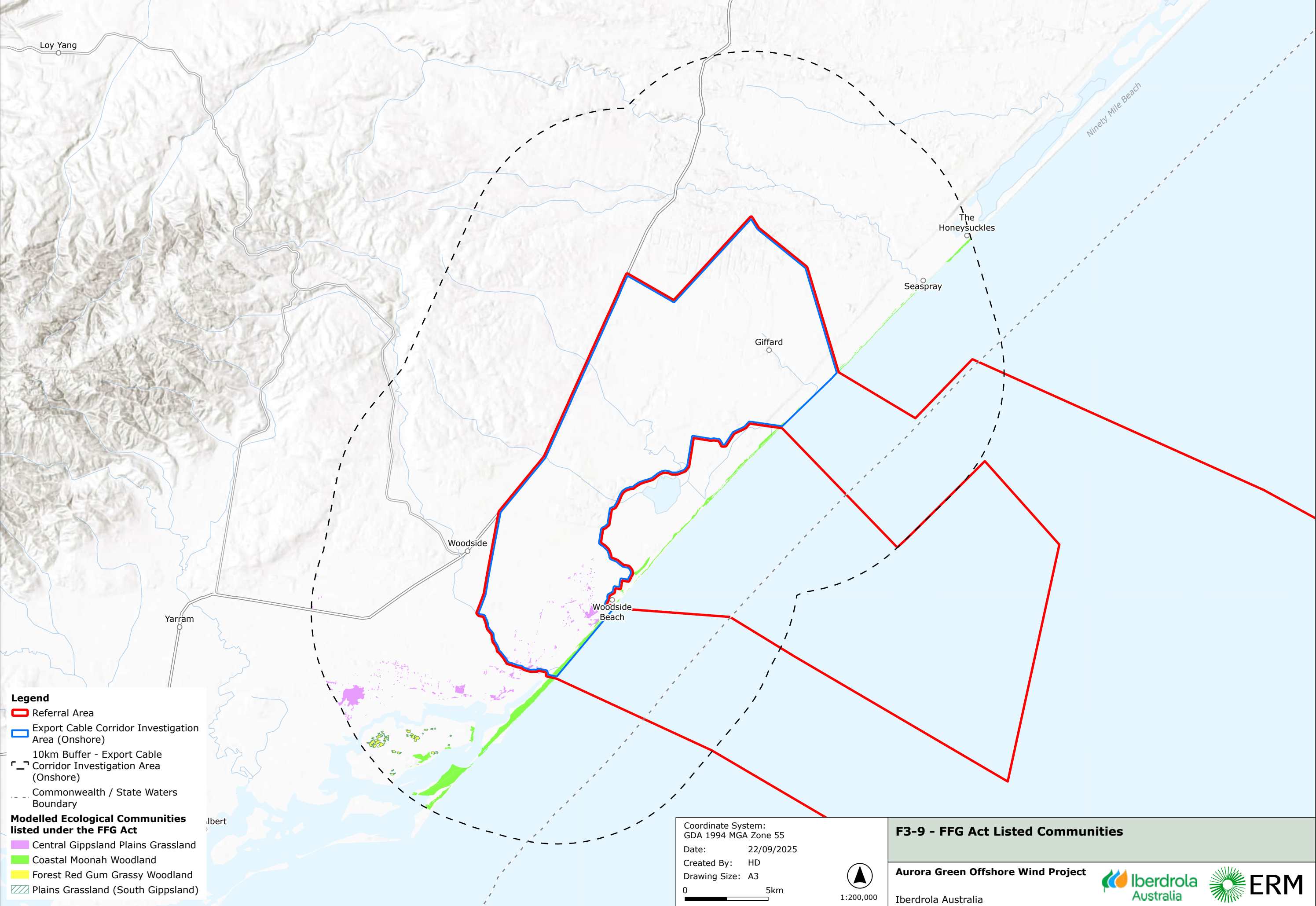
- This community is congruent with the presence of EVC 1 - Coastal Dune Scrub/Coastal Dune Grassland Mosaic. It is characterised by an open grassy woodland that is dominated by Moonah (*Melaleuca lanceolata* subsp. *lanceolata*) and found along parts of the Victorian coastline. This community tends to occur on high-level dunes along the coast where soils are strongly alkaline and developed on moderately organic aeolian sands or on dune calcarenites.
- As per Figure 3-3 and Table 3-4, 90.50 ha of EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic is modelled to occur within the Referral Area. EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic is likely to occur wherever wooded dune vegetation occurs in the Referral Area. On-ground assessment of this vegetation community is required to determine if Moonah is present (noting that this community is described to occur on alkaline soils between Phillip Island and Lorne so not expected to be present). If so, the listed community is also present because there is no condition thresholds applied to communities listed under the FFG Act. The community is likely to be restricted to EVC 897 – Coastal Dune Grassland, as part of EVC 1 – Coastal Dune Scrub/ Coastal Dune Grassland Mosaic, which is characterised by consisting of grasses and halophytes (succulents) that colonise the foredunes of ocean beaches and soils that are siliceous sands that have a very low humus content.

Central Gippsland Plains Grassland

- This community is congruent with the presence of EVC 687 – Swamp Scrub/ Plains Grassland Mosaic. It is characterised by a community dominated by Kangaroo Grass (*Themeda triandra*) and includes a range of native herbs including Golden Weather-glass (*Hypoxis hygrometrica*), Common Everlasting (*Chrysocephalum apiculatum*), Yellow Rush-lily (*Tricoryne elatior*), and Common Rice-flower (*Pimelea humilis*). Trees are rare although, in some places, there are thickets of Drooping She-oak (*Allocasuarina verticillata*), Burgan (*Kunzea* sp.), and saplings of Forest Red-gum (*Eucalyptus tereticornis*). The community is extremely restricted in distribution it is estimated that less than 20 to 30 ha remain.
- As per Figure 3-3 and Table 3-4, 96.56 ha of EVC 687 – Swamp Scrub/ Plains Grassland Mosaic is modelled to occur within the Referral Area. EVC 687 – Swamp Scrub/ Plains Grassland Mosaic, is likely to occur wherever treeless or occasional scattered trees with a grassy understorey or grassland dominant vegetation community occurs in the Referral Area. On-ground assessment of this vegetation is required to determine if the community is present. If so, the listed community is also present because there is no condition thresholds applied to communities listed under the FFG Act. The community is likely to be restricted to EVC 132_62 – South Gippsland Plains Grassland, as part of EVC 687 – Swamp Scrub/ Plains Grassland Mosaic, which is characterised by treeless or with occasional scattered trees above a largely grassy understorey on grey silt-loamy soils, often seasonally waterlogged, and shrubs may be also occasionally present.

There are no condition thresholds for these communities, and presence directly corresponds to that of associated EVCs were they occur in the Gippsland Plains bioregion.

The modelled distribution of the FFG Act-listed vegetation communities within the Referral Area is shown in Figure 3-9, however, the presence and extent of these communities requires ground-truthing for the presence of the associated EVCs and may occur elsewhere throughout the Referral Area.



3.7 WETLANDS

3.7.1 STATE MAPPED WETLANDS

Review of the DEECA current wetlands registry identifies 25 state mapped wetlands within the Referral Area (Figure 3-10). A total of 402 ha of state mapped wetlands are present within the Referral Area. These are mostly small ephemeral freshwater lakes and swamps or unclassified wetlands, scattered throughout the broader landscape. Other, unmapped wetlands, including farm dams and ephemeral wetlands in low-lying areas of cropping fields, may however be present in the Referral Area. Lake Denison extends within the north-east onshore portion of the Referral Area; the peripheries of Jack Smith Lake extend into the onshore portion of the Referral Area in small parts; and Lake Reeve is located north-east of the Referral Area and within the buffer. These wetlands are all coastal saltmarshes and commonly used for recreational activities such as bird watching, fishing, and hunting.

3.7.2 NATIONALLY IMPORTANT WETLANDS

There are two Nationally Important Wetlands in proximity to the Referral Area, Jack Smith Lake Wildlife Reserve and the Corner Inlet, both of which are adjacent to the Referral Area.

3.7.3 WETLANDS OF INTERNATIONAL IMPORTANCE

Two Ramsar sites were identified in the PMST (Appendix A) in proximity to the Referral Area, Corner Inlet and Gippsland Lakes.

The Corner Inlet Ramsar Site is located in the southern reaches of Victoria, bounded by the South Gippsland coastline to the west and the north, a series of barrier islands, sandy spits and the Bass Strait to the south-east, and the hills of Wilsons Promontory to the south (Department of Sustainability, Environment, Water, Population and Communities, 2021). It consists of a chain of barrier islands, multiple beach ridges, lagoons and swamps, tidal creeks, tidal deltas, and tidal washovers. The Ramsar site boundary for Corners Inlet abuts the south-western extent of the Referral Area for approximately 0.6 km, however, contiguous functional wetland habitat and waterways and vegetation associated with the Ramsar site extend within. The mainland coast and several sandy islands are covered with mangroves, saltmarshes, sandy beaches, and very extensive intertidal mudflats whilst containing the only extensive bed of the Broad-leafed Seagrass (*Posidonia australis*) in Victoria. The Ramsar site supports high biodiversity of fauna and flora species, especially birds with thirty-two wader species recorded and, and nationally threatened fauna such the Orange-bellied Parrot, Growling Grass Frog, Australian Grayling, and Swift Parrot utilising the site.

The Gippsland Lakes Ramsar Site (60,015 ha) is approximately 8 km north-east of the Referral Area along the Gippsland coastline, and consists of a series of large, shallow, coastal lagoons approximately 70 km in length and 10 km wide, separated from the sea by sand dunes. The Ramsar site is composed of three main water bodies: Lake Wellington, Lake Victoria, and Lake King. Together, these form the largest navigable inland waterway in Australia. The Ramsar site contains 11 wetland habitat types including coastal lagoons, subtidal seagrass and algal beds, and a range of saline, brackish and freshwater marsh environments. It supports a high biodiversity of fauna and flora species, such as the nationally threatened Swamp Everlasting, Growling Grass Frog, Green and Golden Bell Frog, and including various threatened birds such as Australasian Bittern, Australian Fairy Tern, and Hooded Plover.

Both Ramsar sites present high ecological significance, however, Corner Inlet is more likely to potentially be affected by the proposed developments in the Referral Area, than the Gippsland lakes. Due to Corner Inlet having contiguous functional wetland habitat and watercourses from the Referral Area, any changes to landform, vegetation presence, or hydrological changes have a higher likely likelihood of causing some form of impact to Corner Inlet Ramsar site. Whilst Gippsland Lakes provide an amplitude of ecological significance to various biotic and abiotic factors, the Gippsland Lakes are located a greater distance away from the Referral Area, thus would see less potential impacts from the proposed development in direct comparison to Corner Inlet.

A preliminary assessment of potential impacts to the Ramsar site is provided in Table 3-18.

3.8 PROTECTED AREAS

There are eight terrestrial protected areas within the Referral Area (Figure 3-11):

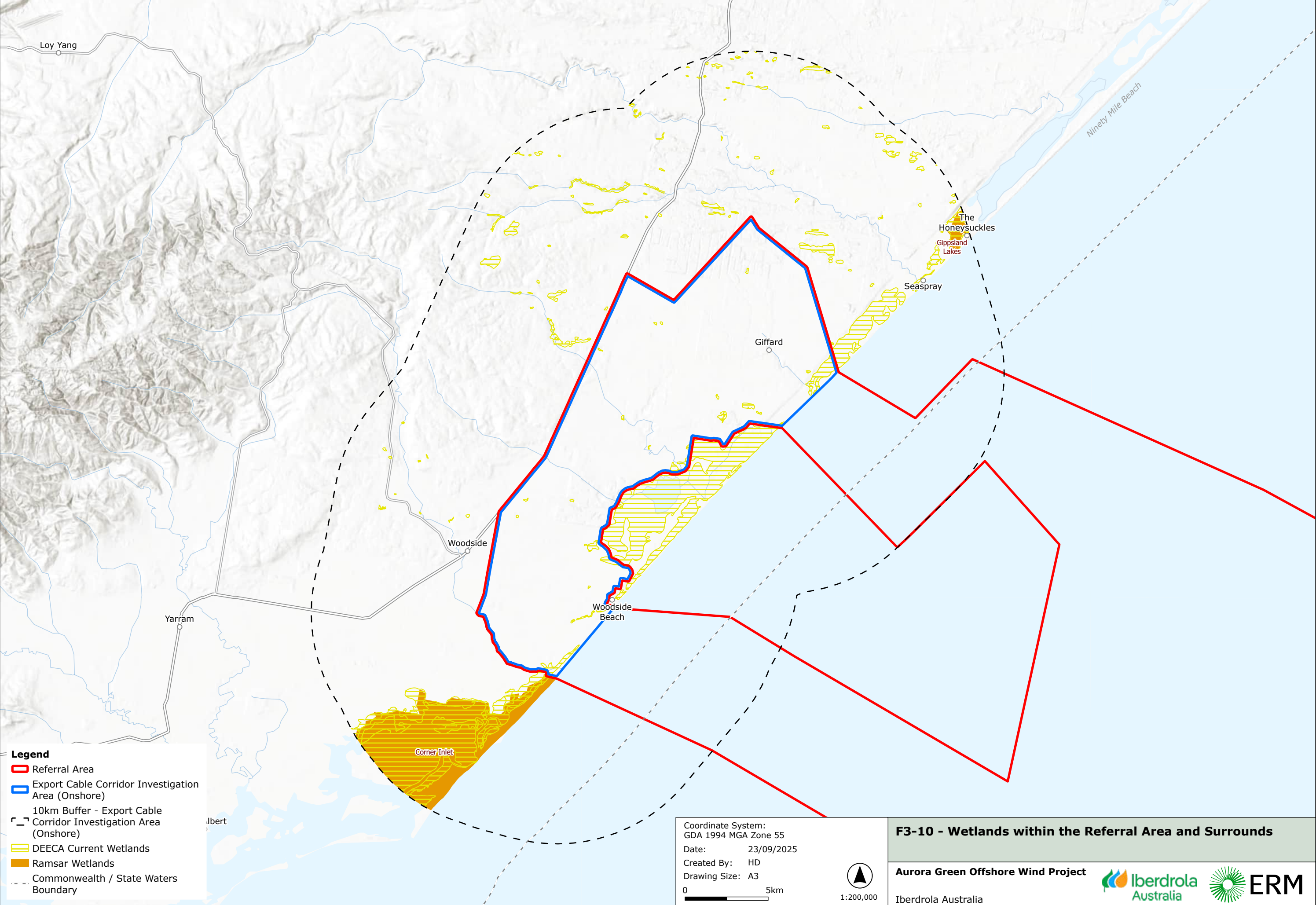
- Fresh-water Swamp, Woodside Beach Wildlife Reserve
- Warrigal Creek Streamside Reserve
- Darriman H29 Bushland Reserve
- Woodside H28 Bushland Reserve
- Woodside H27 Bushland Reserve
- Darriman H33 Bushland Reserve
- McLoughlins Beach – Seaspray Coastal Reserve
- Giffard (Rifle Range) Flora Reserve

There is an additional 18 terrestrial protected areas within 10 km of the Referral Area of various reserve types:

- Jack Smith Lake Wildlife Reserve (abuts the Referral Area)
- Nooramunga Marine and Coastal Park (abuts the Referral Area)
- Gippsland Lakes Coastal Park
- Lake Denison Wildlife Reserve
- Mullungdung State Forest (abuts the Referral Area)
- Mullungdung Fauna and Flora Reserve
- Kangaroo Swamp Nature Conservation Reserve
- Stradbroke Flora and Fauna Reserve
- Woodside H26 Bushland Reserve
- Woodside H25 Bushland Reserve
- Giffard H30 Bushland Reserve
- Giffard H31 Bushland Reserve
- Seaspray Reserves
- Won Wron State Forest
- Holey Plains State Park
- Bruthen Flora Reserve
- Woodside Flora Reserve

- Tarra Tarra Bushland Reserve

Due to the fragmented nature of the landscape and wide-scale clearing for agriculture, habitat connectivity between remnant vegetation in the Referral Area and protected areas is highly limited and primarily restricted to roadside corridors. This greatly limits biodiversity movement to predominantly aerial species able to traverse open distances, some aquatic species moving via creek lines and flooded wetlands, and coastal dune specialists – the latter with habitat spanning the breadth of the Referral Area and buffer region entirely.



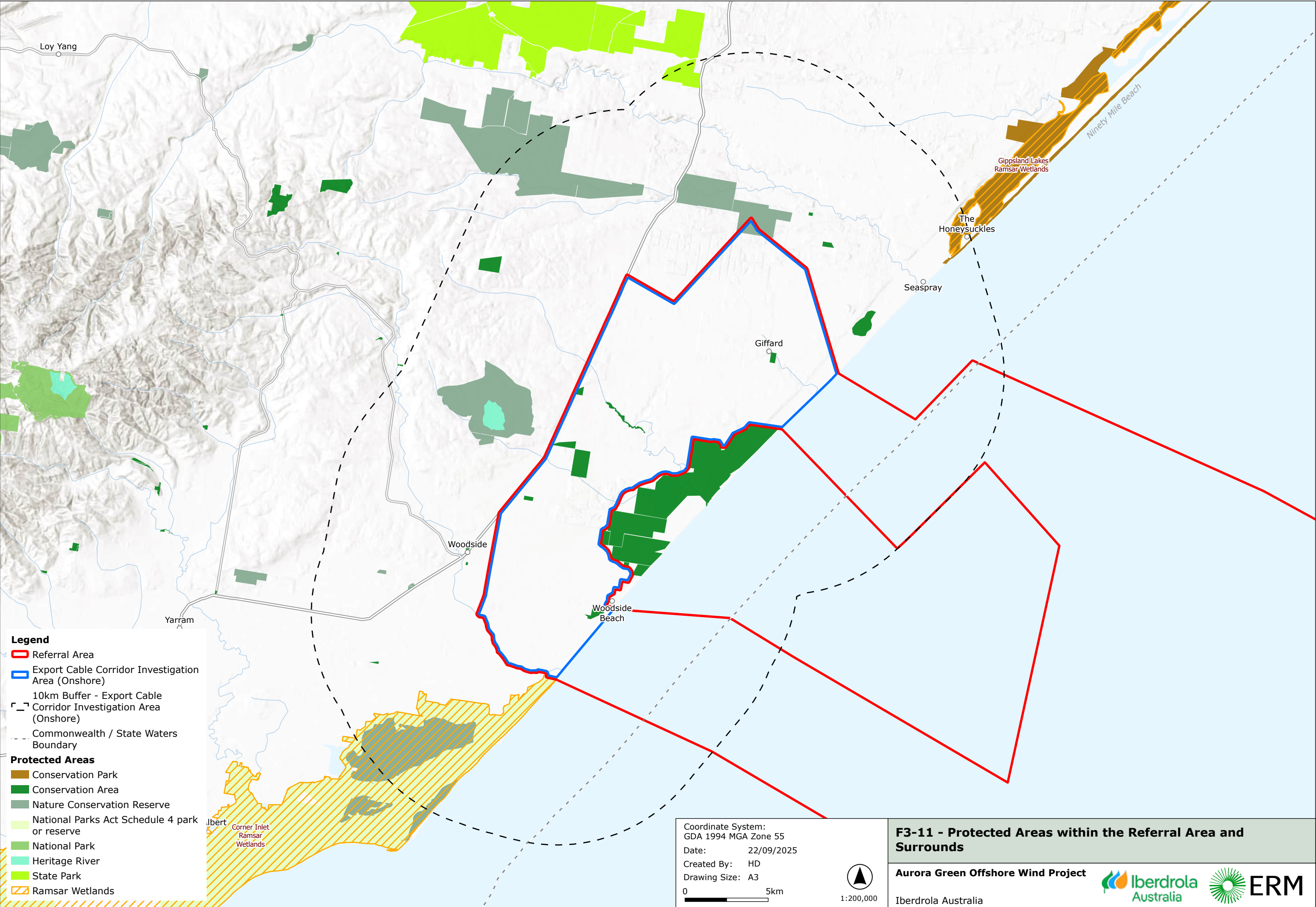


TABLE 3-18 POTENTIAL IMPACTS TO MNES: RAMSAR WETLANDS

Significant Impact Criteria	Preliminary assessment of impacts to Ramsar Wetlands	Potential significance of impact
An action is likely to have a significant impact on the ecological character of a declared Ramsar wetland if there is a real chance or possibility that it will result in:		
Areas of the wetland being destroyed or substantially modified	While the Corner Inlet Ramsar Site is located directly to the south of the Referral Area, no areas of the Ramsar Site will be directly impacted. There is sufficient opportunity to microsite infrastructure outside of areas with the potential to result in indirect impacts and modifications to the Ramsar site. Standard construction and hygiene protocols will likely result in the risk of impacts to the Site reduced to acceptable levels.	Unlikely to have a significant impact
A substantial and measurable change in the hydrological regime of the wetland, for example, a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland	There is potential for works associated with the installation of cabling at landfall to disrupt water flows south towards Corner Inlet Ramsar Site, however, such impact are likely to be short-term and mitigated through design and construction measures.	No significant impact
The habitat or lifecycle of native species, including invertebrate fauna and fish species, dependant upon the wetland being seriously affected	While the Corner Inlet Ramsar Site is located directly south of the Referral Area, no habitat of native species will be impacted within the Referral Area. Suitable opportunity exists to implement appropriate design and environmental management measures to ensure the risk of potential impacts are within acceptable levels.	Unlikely to have a significant impact
A substantial and measurable change in the water quality of the wetland – for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland, or water temperature which may adversely impact on biodiversity, ecological integrity, social amenity or human health.	There is the potential for works associated with construction to alter and disrupt the quality of water flows south towards Corner Inlet Ramsar Site, however such impacts are likely to be short term. Appropriate design and environmental management measures will likely limit the risk of potential impacts to within acceptable levels.	Unlikely to have a significant impact
An invasive species that is harmful to the ecological character of the wetland being established (or an existing invasive species being spread) in the wetland.	The implementation of standard environmental management and hygiene practices is unlikely to result in the introduction of invasive species to the Corner Inlet Ramsar Site.	Unlikely to have a significant impact

3.9 LEGISLATIVE AND APPROVAL CONSIDERATIONS

3.9.1 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

It was determined that the following MNES had a potential or greater likelihood of being present within the Referral Area:

- Ten species of threatened flora, with one of these known to occur
- Thirty-three species of threatened fauna, with twenty-one of these known to occur
- Twenty-two listed migratory species, eighteen of which are known to occur
- Two TECs

This analysis will be further refined once initial habit and native vegetation assessments are completed, and the number of potentially present MNES may be reduced. Given the likely paucity of native vegetation within the Referral Area, and the opportunities for avoidance and mitigation measures, there is potential to ensure that no MNES are significantly impacted by the onshore Project components.

A preliminary assessment of potential impacts to MNES resulting from the Project has been conducted against the relevant criteria provided in *Matters of National Environmental Significance: significant impact guidelines 1.1* (DEWHA, 2013). This is provided for Critically Endangered and Endangered species (Table 3-13), Vulnerable species (Table 3-14), Migratory species (Table 3-15), Endangered and Critically Endangered TECs (Table 3-17), and Ramsar wetlands (Table 3-18). These assessments determined that significant impacts to MNES in the onshore Referral Area are unlikely.

However, due to the level of uncertainty at this early stage regarding the route the transmission corridor will eventually take and unknown constraints on such, as well as the potentially high number of threatened species occurring in the Referral Area, including Critically Endangered species, and the proximity to and connectivity with sensitive areas, a referral under the EPBC Act is considered required.

3.9.2 ENVIRONMENT EFFECTS ACT 1978

The *Ministerial Guidelines for Assessment of Environmental Effects under the Environment Effects Act 1978* (DTP, 2023) provide referral criteria that provide guidance to proponents on whether a project should be referred to the Victorian Minister for Planning to determine if an assessment under EE Act is required. The individual referral criteria relate to potential impacts that, in isolation, are significant enough to warrant a referral to the Minister. The combined referral criteria relate to multiple smaller impacts that, when combined, are significant enough to warrant a referral. Criteria relevant to biodiversity are provided in both categories. Table 3-19 provides a preliminary assessment of the project against the criteria relevant to terrestrial biodiversity. Based on this preliminary assessment, there is potential for one of the individual referral criteria to be met, noting the assessment is precautionary at this stage as the final construction footprint of the project is yet to be determined and desktop information is yet to be ground-truthed. However, it is noted that there is ample opportunity to avoid and minimise impacts to native vegetation which may result in native vegetation being well below the criteria. It is also noted that native vegetation impacts, in isolation, can be managed through the requirements of the PE Act.

TABLE 3-19 PRELIMINARY ASSESSMENT AGAINST INDIVIDUAL REFERRAL CRITERIA OF THE EE ACT

Individual referral criteria	Criteria met	Comments
Potential removal, destruction or lopping of 10 ha or more of native vegetation that consists of, or comprises, a combination of: - an EVC classified as endangered in the bioregion, or - an EVC that is classified as vulnerable (with a condition score of 0.5 or more) or rare (with a condition score of 0.6 or more), and - is not authorized for removal under an approved forest management plan or fire protection plan.	Potential	The extent of native vegetation clearance is not yet known but expected to be less than 10 ha. Given the historical land use (agricultural and pastoral use) and associated disturbance, most of the Referral Area is unlikely to support native vegetation. Only 14% of the Referral Area is classed as native vegetation. Where native vegetation is present, it is likely to primarily occur in moderate to small sized patches in reserves, narrow road reserves and along drainage channels. These patches can be easily avoided or may require removal of a small amount of native vegetation. Although there is potential for remnant grasses to persist under such land usage in sufficient density to qualify as native vegetation under the Guidelines, such patches are unlikely to achieve a Condition Score above 0.5, but may be representative of an Endangered EVC. As the Project design and assessment processes progress, mapping of native vegetation in the Referral Area will determine opportunities to avoid and minimise impacts by directing the positioning of crossovers in line with existing gaps in roadsides and in windrows of native vegetation between agricultural fields, as well as across waterways. Further, mitigation measures including avoidance and use of trenchless construction techniques are likely to reduce impacts to well below 10 ha.
Potential clearing of an area determined as 'critical habitat' under the <i>Flora and Fauna Guarantee Act 1988</i> .	Unlikely	The historical clearing of much of the Referral Area and similarly throughout the broader landscape where remnant vegetation is likely of comparable biodiversity value and potential to support listed species, combine to suggest it is highly unlikely that 'critical habitat' is present.
Potential for loss of a significant proportion (e.g. 1 % or greater) of known remaining habitat or population of a threatened species within Victoria.	Unlikely	There is unlikely to be any vegetation in the Referral Area that represents a significant proportion of remaining habitat for any threatened species, nor any habitat that supports a significant population of any threatened species. Any large patches of native vegetation within the Referral Area that could support threatened species may be easily avoided.

Individual referral criteria	Criteria met	Comments
Potential for long-term change to the ecological character of a wetland listed under the Ramsar Convention or in <i>A Directory of Important Wetlands in Australia</i> .	Unlikely	Given the ample opportunity to locate infrastructure away from Corner Inlet Ramsar Site and other wetlands and the availability of standard environmental management measures during construction, even temporary impacts to wetlands are unlikely to occur.
Potential for extensive or major effects on the use and environmental values of water resources due to changes in water quality, water availability, stream flows, water system function, or regional groundwater levels, or the health or biodiversity of aquatic, estuarine or marine ecosystems, over the long term.	Unlikely	The nature of the Project and paucity of significant aquatic environments within and in proximity to the Referral Area, combined with suitable, relevant Project controls during construction, mean that even temporary changes to water quality and availability, stream flow, aquatic system function, groundwater levels, or functionality and biodiversity of any aquatic ecosystems are unlikely to occur.

TABLE 3-20 ASSESSMENT AGAINST COMBINED REFERRAL CRITERIA OF THE EE ACT

Combined referral criteria	Criteria met	Comments
Potential removal, destruction or lopping of 10 ha or more of native vegetation, unless it is authorised for removal under an approved forest management plan or fire protection plan.	Potential	As discussed above, the Project is unlikely to result in the removal of 10 ha of native vegetation due to the paucity of such within the Referral Area and the opportunities for avoidance and mitigation to ensure impacts are minimised (noting, however, that impacts from the creation of new access roads may quickly accumulate in area if design outcomes cannot feasibly respond to this constraint).
Matters listed under the <i>Flora and Fauna Guarantee Act 1988</i>: - potential loss of a significant area of a listed ecological community; or - potential loss of a genetically important population of an endangered or threatened species (listed or nominated for listing), including from loss or fragmentation of habitats; or - potentially significant effects on habitat values of a wetland supporting migratory bird species.	Unlikely	The extent of any listed community present is likely restricted to small, isolated pockets of native vegetation within agricultural fields or within road reserves. Due to their size and regularity throughout the broader landscape, such areas are unlikely to represent significant remnants. Should such occur, impacts to these remnants are unlikely to result in a significant loss. While some endangered threatened species are known to occur in the Referral Area, and it is likely that more are indeed present, the limited extent of habitat within and the availability of similar habitat throughout the broader landscape mean that a genetically important population is unlikely to be present. Additionally, the opportunities for the Project to avoid and minimise impacts to habitat mean that were such a population found to be present, and detrimental effects are likely to be minimal.

Combined referral criteria	Criteria met	Comments
		Due to the paucity of wetlands within the Referral Area, likely poor quality and extent of any present, and lack of proximity to any significant wetlands in the broader landscape, effect on such habitat values supporting migratory bird species is unlikely.

3.9.3 FLORA AND FAUNA GUARANTEE ACT 1988

A Protected Flora Permit is required to remove any flora species or ecological communities protected under the FFG Act, where they occur on public land such as along roadsides. A declared protected flora species under the FFG Act includes all threatened species, species that are included in threatened ecological community lists and declared protected flora. Obtaining a protected flora permit requires an application through DEECA, detailing the number and species of protected flora proposed for removal. Approval is contingent on provision of a valid planning permit specifying the associated removal.

3.9.4 PLANNING AND ENVIRONMENT ACT 1987

Implications under the PE Act relate to the requirements for a permit application in accordance with the Wellington Planning Scheme.

3.9.5 CATCHMENT AND LAND PROTECTION ACT 1984

Under the *Catchment and Land Protection Act 1994* (**CaLP Act**) all landowners have the responsibility make reasonable attempts to control the spread of, eradicate, or report to DEECA the presence of noxious weeds and pest animals on their property.

Control of weeds will be required to be included within construction and operational managements plans for the Project in the form of a Weed Management Plan (**WMP**). Pest animals may require ongoing management.

3.9.6 WILDLIFE ACT 1975

Under the *Wildlife Act 1975* it is an offence to cause injury to native fauna.

Any clearing of habitat, whether involving native vegetation or not, may require pre-clearance surveys and, if appropriate, fauna salvage. Alternatively, works may need to be delayed (e.g., until any juvenile birds present in nests in trees to be impacted have fledged).

Any translocation of fauna must be conducted by a suitably qualified and licensed wildlife handler.

3.9.7 MARINE AND COASTAL ACT 2018

Provides an integrated approach to planning and managing the marine and coastal environment by enabling protection of the coastline and the ability to address the long-term challenges of climate change, population growth and ageing coastal structures.

The Project will require consent to undertake works on marine and coastal Crown land and would be required to align with requirements of any local coastal and marine management plans applicable to the Referral Area.

4. CONCLUSION

A preliminary assessment of potential environmental impacts has been carried out to inform the Aurora Green Offshore Wind Project referrals under Commonwealth and Victorian legislation, environmental approvals and project development processes. This desktop report documents the preliminary assessment and recommendations for further studies on the terrestrial environment to inform the Project.

Planning Overview

The onshore Referral Area is mostly comprised of large agricultural properties across approximately 23,000 ha (230 km²) of predominantly flat terrain within the Gippsland Plains bioregion, in the Wellington Shire Local Government Area. The area is within the Gippsland Coastal Plains local area of the West Gippsland CMA region. All associated agricultural properties are within the FZ under the Wellington Planning Scheme. An ESO applies to the Coastal and Gippsland environs and to Wetlands environs. The whole onshore Referral Area is within a designated BPA, with a BMO present in association with high-risk bushfire hazards. No other planning overlays relating to ecological matters apply.

Native Vegetation

Historically the Referral Area has supported a diverse array of terrestrial woodland and grassland habitat and aquatic habitat. Due to historic clearing for agricultural practices, the remaining area encompasses only around 3,320 ha of remnant native vegetation across the Referral Area. Remnant native vegetation is largely restricted to road reserves, the various Protected Areas within the Referral Area, isolated pockets of woodland and grassland within the agricultural matrix, and as sparse scattered trees.

Modelling of native vegetation extent by DEECA suggests these remnants now only cover approximately 14% of the area. All native vegetation in the onshore Referral Area is likely representative of EVCs that have a BCS of the following: Depleted (90.50 ha or 0.39%), Least Concern (382.14 ha or 1.64%), Endangered (164.37 ha or 0.71%) or Vulnerable (2,484.66 ha or 10.69%).

Fauna Habitat

Fauna habitat within the onshore Referral Area is highly fragmented and includes woodlands and scattered trees, grasslands (primarily on roadsides), aquatic habitats in the form of farm dams, narrow drainage channels, creek lines and minor tributaries, as well as potential large ephemeral wetlands. Most of this habitat is likely of low to moderate quality due to the small size, relative paucity across the landscape, and past and ongoing disturbance (i.e., agricultural practices), including the introduction of non-native plants and pest animals. Fauna utilising this habitat is likely to be primarily restricted to common species able to adapt to these modified environments. However, there remains the potential for threatened species to occur, particularly in association with Protected Areas and for those species with long ranges.

Landscape Context

A set of Protected Areas exist within the Referral Area (Fresh-water Swamp, Woodside Beach Wildlife Reserve, Warrigal Creek Streamside Reserve, Darriman H29 Bushland Reserve, Woodside H28 Bushland Reserve, Woodside H27 Bushland Reserve, Darriman H33 Bushland Reserve, McLoughlins Beach – Seaspray Coastal Reserve), representing areas of high ecological value due primarily to their isolation and relative size making them unique for the region.

The broader landscape (within 10 km) surrounding the Referral Area is of similar land use, including cleared agricultural areas but with significant remnant vegetation, wetlands, and/or protected areas of high biodiversity value. Of note are the Mullungdung Nature Conservation Reserve to the north-west, Jack Smith Lake to the south-east, and the Gippsland Lakes and Corner Inlet Ramsar wetlands to the north-east and south-west respectively. Each of these areas is likely to have habitat that is contiguous and of similar character to that at the edges of, but within, the Referral Area boundary.

Threatened, Migratory Species and Ecological Communities

An assessment of the likelihood of occurrence of threatened flora, fauna and ecological communities determined the potential presence of:

- Ten flora species listed as threatened under the EPBC Act
- Thirty-five flora species listed as threatened under the FFG Act
- Thirty-four fauna species listed as threatened under the EPBC Act
- Twenty-two migratory fauna species protected under the EPBC Act
- Fifty-seven fauna species listed as threatened under the FFG Act
- Two TECs listed under the EPBC Act, and
- Two ecological communities listed under the FFG Act.

Listed flora species and ecological communities are likely restricted to Protected Areas, coastal zone vegetation including dunes and wetlands, and narrow roadside and riparian corridors. While these areas are also likely to support threatened and migratory fauna, many of such species are, being aerial, are likely to traverse the broader landscape.

Legislative and Approval Considerations

Environment Protection and Biodiversity Conservation Act 1999

Field surveys are recommended to determine the presence of any MNES present and to identify opportunities to avoid and minimise impacts to these matters. Any impacts to species or TECs listed under the EPBC Act will require assessment against relevant significant impact criteria. There is considerable opportunity to reduce onshore potential impacts to an acceptable level through avoidance and mitigation.

Environment Effects Act 1978

Potential impacts to biodiversity values within, or in proximity to, the onshore Referral Area will be considered in a referral under the EE Act. Given the small scale of remnant native vegetation in the Referral Area, and the generally moderate-quality fauna habitat throughout the surrounding landscape, there is likely to be ample opportunity to avoid and minimise potential impacts to native vegetation and threatened species.

Planning and Environment Act 1987

Any impacts to native vegetation will require a permit under Clause 52.17 of the Wellington Planning Scheme. Assessment of native vegetation, calculation of impacts, offsetting, and permit application requirements must be in accordance with the Guidelines for the removal, destruction or lopping of native vegetation (DELWP, 2017).

Flora and Fauna Guarantee Act 1988

Under the FFG Act, a permit will be required for any impacts to protected species on public land.

Catchment and Land Protection Act 1994

Management of weeds and pest animals on the properties during construction and operation of the onshore components of the Project are likely to be required under the CaLP Act.

Marine and Coastal Act 2018

Consent is required under the MACA for any Project works to be undertaken on marine and coastal Crown land. Applications under the MACA require an assessment of potential environmental impacts.

Recommendations

As this preliminary assessment was based on desktop studies only, the findings presented should be used to inform field surveys and assessments to verify the existing environmental values in the Referral Area and to inform preliminary decision-making and design for the Project. The recommendations outlined below would provide detailed information about the biodiversity values in the Referral Area, the risks to these values resulting from the Project, how any potential impacts can be avoided or mitigated to ensure no net loss to biodiversity, and to satisfy the requirements under relevant Victorian and Commonwealth legislation.

Recommendations:

- Conduct flora and fauna field assessments within the Referral Area to assist the project design development, as well as to contextualise the extent and condition of native vegetation, the type, condition, and connectivity of fauna habitat, and the potential presence of threatened species and ecological communities within the area where direct and indirect impacts may occur. An initial site assessment may be undertaken at any time of the year unless local conditions preceding the survey render the results unrepresentative, such as after fire or a particularly harsh dry season.
- If required, conduct targeted seasonal fauna and flora surveys, in accordance with relevant federal or State survey guidelines, for threatened or protected species and ecological communities with a potential presence within the area where direct and indirect impacts may occur.
- Allow for ecology input to inform design development. Utilise avoid and minimise principles in determining the final Project design, including siting and design of the onshore portion of the export cable corridor, during each stage of the design process; and ensure this process is adequately documented to demonstrate the efforts undertaken in response to identified biodiversity constraints.

- Prioritise avoidance of locations containing EPBC and/or FFG Act threatened communities, species and their relevant habitat and all Protected Areas, so far as is reasonably practicable. It is recommended that interactions with reserves, bushland, riparian creek lines, coastal heath and most wooded areas be avoided or minimised so far as is reasonably practicable. If avoidance is not possible, the use of appropriate technologies to minimise and manage impacts wherever these values are located is recommended. Such mitigation may also include implementing no-go zones and/or controls during sensitive life-stages for priority shorebird habitats during shoreline construction activities and consideration of migration patterns of other birds found to utilise habitat in the Referral Area.
- To the extent practicable, co-locate project infrastructure with existing easements or on previously cleared land. Additionally, the use of trenchless construction methods should be considered to reduce impacts to dune vegetation and integrity and to protect adjacent saltmarsh vegetation, which may be of a listed community as well as habitat for numerous threatened fauna.
- Design the project to allow for micro-siting of infrastructure to minimise impacts to vegetation, particularly in areas with high Habitat Importance Map values for individual species, reducing or eliminating the need for offsets in the form of Species Habitat Units.
- Setback and bushfire management requirements may result in additional vegetation removal and should be considered in the design phase of the Project. Placing infrastructure away from forested areas can help minimise the need for vegetation removal and habitat loss for bushfire management.
- A permit under Clause 52.17 of the Wellington Planning Scheme will be required for any residual impacts to native vegetation resulting from the Project.
- A Protected Flora Permit will be required for any residual impacts on public land to protected flora or ecological communities listed under the FFG Act.
- Consent under the MACA will be required for the use and development of marine and coastal land extending up to 200 m inland from the high-water mark.

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APPENDIX A

PROTECTED MATTERS SEARCH TOOL 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: 22-Sep-2025

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)

Summary

Matters of National Environment Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	1
Listed Threatened Ecological Communities:	2
Listed Threatened Species:	96
Listed Migratory Species:	64

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	106
Whales and Other Cetaceans:	11
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:	26
Regional Forest Agreements:	1
Nationally Important Wetlands:	2
EPBC Act Referrals:	23
Key Ecological Features (Marine):	None
Biologically Important Areas:	10
Bioregional Assessments:	1
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar Wetlands)			[Resource Information]
Ramsar Site Name	Proximity	Buffer Status	
Corner inlet	Within Ramsar site	In feature area	
Gippsland lakes	Within Ramsar site	In feature area	

Commonwealth Marine Area		[Resource Information]
Approval is required for a proposed activity that is located within the Commonwealth Marine Area which has, will have, or is likely to have a significant impact on the environment. Approval may be required for a proposed action taken outside a Commonwealth Marine Area but which has, may have or is likely to have a significant impact on the environment in the Commonwealth Marine Area.		
Feature Name	Buffer Status	
Commonwealth Marine Areas (EPBC Act)	In buffer area only	

Listed Threatened Ecological Communities				[Resource Information]
For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps. Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.				
Community Name	Threatened Category	Presence Text	Buffer Status	
Natural Damp Grassland of the Victorian Coastal Plains	Critically Endangered	Community likely to occur within area	In feature area	
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area	In feature area	

Listed Threatened Species			[<u>Resource Information</u>]
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			
Anthochaera phrygia	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Regent Honeyeater [82338]			
Ardenna grisea	Vulnerable	Species or species habitat may occur within area	In feature area
Sooty Shearwater [82651]			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat known to occur within area	In feature area
Calyptorhynchus lathami lathami South-eastern Glossy Black-Cockatoo [67036]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In feature area
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat may occur within area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area	In feature 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	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Limosa lapponica baueri Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit [86380]	Endangered	Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]	Endangered	Roosting known to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat may occur within area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat known to occur within area	In feature area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pluvialis squatarola Grey Plover [865]	Vulnerable	Roosting known to occur within area	In feature area
Pterodroma leucoptera leucoptera Gould's Petrel, Australian Gould's Petrel [26033]	Endangered	Species or species habitat may occur within area	In feature area
Pycnoptilus floccosus Pilotbird [525]	Vulnerable	Species or species habitat known to 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
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area	In feature area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Species or species habitat known to occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Thinornis cucullatus cucullatus Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In feature area
FISH			
Galaxiella pusilla Eastern Dwarf Galaxias, Dwarf Galaxias [56790]	Endangered	Species or species habitat likely to occur within area	In feature area
Prototroctes maraena Australian Grayling [26179]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Seriolella brama Blue Warehou [69374]	Conservation Dependent	Species or species habitat known to occur within area	In feature area
FROG			
Heleioporus australiacus flavopunctatus Southern Owl Frog, Southern Giant Burrowing Frog [92014]	Endangered	Species or species habitat may occur within area	In buffer area only
Litoria aurea Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Litoria raniformis Southern Bell Frog, Growling Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Uperoleia martini Martin's Toadlet [1873]	Endangered	Species or species habitat known to occur within area	In feature area
MAMMAL			
Antechinus minimus maritimus Swamp Antechinus (mainland) [83086]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Dasyurus maculatus maculatus (SE mainland population) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern mainland population) [75184]	Endangered	Species or species habitat may occur within area	In feature area
Eubalaena australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Isoodon obesulus obesulus Southern Brown Bandicoot (eastern), Southern Brown Bandicoot (south- eastern) [68050]	Endangered	Species or species habitat likely to occur within area	In feature area
Mastacomys fuscus mordicus Broad-toothed Rat (mainland), Tooarrana [87617]	Endangered	Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Petauroides volans Greater Glider (southern and central) [254]	Endangered	Species or species habitat known to occur within area	In buffer area only
Petaurus australis australis Yellow-bellied Glider (south-eastern) [87600]	Vulnerable	Species or species habitat known to occur within area	In feature area
Potorous tridactylus trisulcatus Long-nosed Potoroo (southern mainland) [86367]	Vulnerable	Species or species habitat may occur within area	In feature area
Pseudomys novaehollandiae New Holland Mouse, Pookila [96]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pteropus poliocephalus Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area	In feature area
PLANT			
Amphibromus fluitans River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat known to occur within area	In feature area
Caladenia orientalis Eastern Spider Orchid [83410]	Endangered	Species or species habitat may occur within area	In buffer area only
Caladenia tessellata Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat known to occur within area	In feature area
Commersonia prostrata Dwarf Kerrawang [87152]	Endangered	Species or species habitat known to occur within area	In feature area
Dianella amoena Matted Flax-lily [64886]	Endangered	Species or species habitat known to occur within area	In feature area
Dodonaea procumbens Trailing Hop-bush [12149]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat may occur within area	In feature area
Lepidium hyssopifolium Basalt Pepper-cress, Peppercross, Rubble Pepper-cress, Pepperweed [16542]	Endangered	Species or species habitat likely to occur within area	In feature area
Prasophyllum frenchii Maroon Leek-orchid, Slaty Leek-orchid, Stout Leek-orchid, French's Leek-orchid, Swamp Leek-orchid [9704]	Endangered	Species or species habitat may occur within area	In buffer area only
Prasophyllum spicatum Dense Leek-orchid [55146]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Prostanthera galbraithiae Wellington Mintbush [64959]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Pterostylis chlorogramma Green-striped Greenhood [56510]	Vulnerable	Species or species habitat known to occur within area	In feature area
Senecio psilocarpus Swamp Fireweed, Smooth-fruited Groundsel [64976]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Thelymitra epipactoides Metallic Sun-orchid [11896]	Endangered	Species or species habitat likely to occur within area	In buffer area only
Thelymitra matthewsii Spiral Sun-orchid [4168]	Endangered	Species or species habitat may occur within area	In feature area
Thesium australe Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitat may occur within area	In feature area
Xerochrysum palustre Swamp Everlasting, Swamp Paper Daisy [76215]	Vulnerable	Species or species habitat likely to occur within area	In feature area

REPTILE

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area	In feature area
Lissolepis coventryi Swamp Skink, Eastern Mourning Skink [84053]	Endangered	Species or species habitat known to occur within area	In feature area

SHARK			
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Breeding known to occur within area	In feature area
Galeorhinus galeus School Shark, Eastern School Shark, Snapper Shark, Tope, Soupfin Shark [68453]	Conservation Dependent	Species or species habitat likely to occur within area	In buffer area only
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In feature area

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
Ardeenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardeenna grisea Sooty Shearwater [82651]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Sternula albifrons Little Tern [82849]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Migratory Marine Species			
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Caperea marginata Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In feature area
Carcharias taurus Grey Nurse Shark [64469]		Species or species habitat may occur within area	In feature area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Breeding known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caretta caretta Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area	In feature area
Eubalaena australis as Balaena glacialis australis Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In feature area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area	In feature area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area	In feature area
Migratory Terrestrial Species			
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area	In feature area
Migratory Wetlands Species			

Scientific Name	Threatened Category	Presence Text	Buffer Status
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area	In feature area
Arenaria interpres Ruddy Turnstone [872]	Vulnerable	Roosting known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Roosting known to occur within area	In feature area
Calidris alba Sanderling [875]		Roosting known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area	In feature area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting known to occur within area	In feature area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area	In feature area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area	In feature area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Charadrius veredus Oriental Plover, Oriental Dotterel [882]	Vulnerable	Species or species habitat known to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat known to occur within area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area	In feature area
Gallinago stenura Pin-tailed Snipe [841]	Endangered	Roosting likely to occur within area	In feature area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area	In feature area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area	In feature area
Pandion haliaetus Osprey [952]	Vulnerable	Species or species habitat known to occur within area	In feature area
Pluvialis fulva Pacific Golden Plover [25545]		Roosting known to occur within area	In feature area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area	In feature area
Tringa brevipes Grey-tailed Tattler [851]		Roosting known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa glareola Wood Sandpiper [829]	Endangered	Roosting known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area	In feature area

Other Matters Protected by the EPBC Act

Listed Marine Species	[Resource Information]		
Scientific Name	Threatened Category	Presence Text	Buffer Status
Bird			
Actitis hypoleucos Common Sandpiper [59309]	Vulnerable	Species or species habitat known to 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
Ardenna carneipes as Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area	In feature area
Ardenna grisea as Puffinus griseus Sooty Shearwater [82651]		Species or species habitat may occur within area	In feature area
Arenaria interpres Ruddy Turnstone [872]		Roosting known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
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	Roosting known to occur within area	In feature area
Calidris alba Sanderling [875]		Roosting known to occur within area	In feature area
Calidris canutus Red Knot, Knot [855]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area overfly marine area	In feature area
Calidris pugnax as Philomachus pugnax Ruff [91256]		Roosting known to occur within area overfly marine area	In feature area
Calidris ruficollis Red-necked Stint [860]		Roosting known to occur within area overfly marine area	In feature area
Calidris tenuirostris Great Knot [862]	Vulnerable	Roosting known to occur within area overfly marine area	In feature area
Charadrius bicinctus Double-banded Plover [895]		Roosting known to occur within area overfly marine area	In feature area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Roosting known to occur within area	In feature area
Charadrius ruficapillus Red-capped Plover [881]		Roosting known to occur within area overfly marine area	In feature area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat known to occur within area overfly marine area	In feature area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea antipodensis gibsoni as Diomedea gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Gallinago megala Swinhoe's Snipe [864]		Roosting likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Gallinago stenura Pin-tailed Snipe [841]	Vulnerable	Roosting likely to occur within area overfly marine area	In feature area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Breeding known to occur within area	In feature area
Halobaena caerulea Blue Petrel [1059]		Species or species habitat may occur within area	In buffer area only
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]	Vulnerable	Roosting known to occur within area overfly marine area	In feature area
Hirundapus caudacutus White-throated Needletail [682]		Species or species habitat known to occur within area overfly marine area	In feature area
Lathamus discolor Swift Parrot [744]		Species or species habitat known to occur within area overfly marine area	In feature area
Limosa lapponica Bar-tailed Godwit [844]	Endangered	Species or species habitat known to occur within area	In feature area
Limosa limosa Black-tailed Godwit [845]		Roosting known to occur within area overfly marine area	In feature area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]		Species or species habitat may occur within area	In feature area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Foraging, feeding or related behaviour 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
Monarcha melanopsis Black-faced Monarch [609]		Species or species habitat may occur within area overfly marine area	In buffer area only
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
Myiagra cyanoleuca Satin Flycatcher [612]		Breeding known to occur within area overfly marine area	In feature area
Neophema chrysogaster Orange-bellied Parrot [747]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Numenius minutus Little Curlew, Little Whimbrel [848]		Roosting likely to occur within area overfly marine area	In feature area
Numenius phaeopus Whimbrel [849]		Roosting known to occur within area	In feature area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat known to occur within area	In feature area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area	In feature area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Pluvialis fulva Pacific Golden Plover [25545]	Vulnerable	Roosting known to occur within area	In feature area
Pluvialis squatarola Grey Plover [865]		Roosting known to occur within area overfly marine area	In feature area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Roosting known to occur within area overfly marine area	In feature area
Rhipidura rufifrons Rufous Fantail [592]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]		Species or species habitat likely to occur within area overfly marine area	In feature area
Stercorarius antarcticus as Catharacta skua Brown Skua [85039]		Species or species habitat may occur within area	In buffer area only
Sterna striata White-fronted Tern [799]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Sternula albifrons as Sterna albifrons Little Tern [82849]		Species or species habitat may occur within area	In feature area
Thalassarche bulleri Buller's Albatross, Pacific Albatross [64460]		Species or species habitat may occur within area	In feature area
Thalassarche bulleri platei as Thalassarche sp. nov. Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area	In feature area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche chrysostoma Grey-headed Albatross [66491]	Endangered	Species or species habitat may occur within area	In feature area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche salvini Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	In feature area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour known to occur within area	In feature area
Thinornis cucullatus as Thinornis rubricollis Hooded Plover, Hooded Dotterel [87735]		Species or species habitat known to occur within area overfly marine area	In feature area
Thinornis cucullatus cucullatus as Thinornis rubricollis rubricollis Eastern Hooded Plover, Eastern Hooded Plover [90381]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
Tringa brevipes as Heteroscelus brevipes Grey-tailed Tattler [851]		Roosting known to occur within area	In feature area
Tringa glareola Wood Sandpiper [829]		Roosting known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Roosting known to occur within area overfly marine area	In feature area
Xenus cinereus Terek Sandpiper [59300]	Vulnerable	Roosting known to occur within area overfly marine area	In feature area
Fish			
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area	In feature area
Hippocampus abdominalis Big-belly Seahorse, Eastern Potbelly Seahorse, New Zealand Potbelly Seahorse [66233]		Species or species habitat may occur within area	In feature area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area	In feature area
Hippocampus minotaur Bullneck Seahorse [66705]		Species or species habitat may occur within area	In feature area
Histiogamphelus briggsii Crested Pipefish, Briggs' Crested Pipefish, Briggs' Pipefish [66242]		Species or species habitat may occur within area	In feature area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area	In feature area
Hypselognathus rostratus Knifesnout Pipefish, Knife-snouted Pipefish [66245]		Species or species habitat may occur within area	In feature area
Kaupus costatus Deepbody Pipefish, Deep-bodied Pipefish [66246]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Kimblaeus bassensis Trawl Pipefish, Bass Strait Pipefish [66247]		Species or species habitat may occur within area	In feature area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area	In feature area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area	In buffer area only
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area	In feature area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area	In feature area
Mitotichthys semistriatus Halfbanded Pipefish [66261]		Species or species habitat may occur within area	In feature area
Mitotichthys tuckeri Tucker's Pipefish [66262]		Species or species habitat may occur within area	In feature area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area	In feature area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area	In buffer area only
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area	In feature area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area	In buffer area only

Scientific Name	Threatened Category	Presence Text	Buffer Status
Solegnathus robustus Robust Pipehorse, Robust Spiny Pipehorse [66274]		Species or species habitat may occur within area	In feature area
Solegnathus spinosissimus Spiny Pipehorse, Australian Spiny Pipehorse [66275]		Species or species habitat may occur within area	In feature area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area	In feature area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area	In feature area
Stipecampus cristatus Ringback Pipefish, Ring-backed Pipefish [66278]		Species or species habitat may occur within area	In feature area
Syngnathoides biaculeatus Double-end Pipehorse, Double-ended Pipehorse, Alligator Pipefish [66279]		Species or species habitat may occur within area	In feature area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area	In feature area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area	In feature area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area	In feature area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area	In feature area
Mammal			
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Arctocephalus pusillus			
Australian Fur-seal, Australo-African Fur-seal [21]		Species or species habitat may occur within area	In feature area
Reptile			
Caretta caretta			
Loggerhead Turtle [1763]	Endangered	Species or species habitat known to occur within area	In feature area
Chelonia mydas			
Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area	In feature area
Dermochelys coriacea			
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Foraging, feeding or related behaviour known to occur within area	In feature area
Whales and Other Cetaceans			
[Resource Information]			
Current Scientific Name	Status	Type of Presence	Buffer Status
Mammal			
Balaenoptera acutorostrata			
Minke Whale [33]		Species or species habitat may occur within area	In feature area
Balaenoptera musculus			
Blue Whale [36]	Endangered	Species or species habitat likely to occur within area	In feature area
Caperea marginata			
Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur within area	In feature area
Delphinus delphis			
Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area	In feature area
Eubalaena australis			
Southern Right Whale [40]	Endangered	Species or species habitat known to occur within area	In feature area
Grampus griseus			
Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area	In feature area

Current Scientific Name	Status	Type of Presence	Buffer Status
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area	In feature area
Megaptera novaeangliae Humpback Whale [38]		Species or species habitat known to occur within area	In feature area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat likely to occur within area	In feature area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area	In feature area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Bruthen F.R	Nature Conservation Reserve	VIC	In buffer area only
Carrajung H34 B.R	Natural Features Reserve	VIC	In buffer area only
Darriman H29 B.R	Natural Features Reserve	VIC	In feature area
Darriman H33 B.R	Natural Features Reserve	VIC	In feature area
Fresh-water Swamp, Woodside Beach W.R	Natural Features Reserve	VIC	In feature area
Giffard (Rifle Range) F.R.	Nature Conservation Reserve	VIC	In feature area
Giffard H30 B.R	Natural Features Reserve	VIC	In buffer area only
Giffard H31 B.R	Natural Features Reserve	VIC	In buffer area only
Gippsland Lakes Coastal Park	Conservation Park	VIC	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Holey Plains	State Park	VIC	In buffer area only
Jack Smith Lake W.R	Natural Features Reserve	VIC	In feature area
Kangaroo Swamp N.C.R.	Natural Features Reserve	VIC	In buffer area only
Lake Denison W.R	Natural Features Reserve	VIC	In buffer area only
Mullungdung	Reference Area	VIC	In buffer area only
Mullungdung F.F.R	Nature Conservation Reserve	VIC	In buffer area only
Ninety Mile Beach	Marine National Park	VIC	In buffer area only
Nooramunga Marine & Coastal Park	National Parks Act Schedule 4 park or reserve	VIC	In feature area
NOORAMUNGA STATE FAUNAL RESERVE	Nature Conservation Reserve	VIC	In buffer area only
Stradbroke F.F.R.	Nature Conservation Reserve	VIC	In buffer area only
Tarra Tarra B.R	Natural Features Reserve	VIC	In buffer area only
Warrigal Creek SS.R.	Natural Features Reserve	VIC	In feature area
Woodside F.R	Nature Conservation Reserve	VIC	In buffer area only
Woodside H25 B.R	Natural Features Reserve	VIC	In buffer area only
Woodside H26 B.R.	Natural Features Reserve	VIC	In buffer area only
Woodside H27 B.R	Natural Features Reserve	VIC	In feature area
Woodside H28 B.R	Natural Features Reserve	VIC	In feature area

Regional Forest Agreements
[Resource Information]

Note that all areas with completed RFAs have been included. Please see the associated resource information for specific caveats and use limitations associated with RFA boundary information.

RFA Name	State	Buffer Status
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RFA Name	State	Buffer Status
Gippsland RFA	Victoria	In feature area

Nationally Important Wetlands		[Resource Information]
Wetland Name	State	Buffer Status
Corner Inlet	VIC	In feature area
Jack Smith Lake State Game Reserve	VIC	In feature area

EPBC Act Referrals					[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status	
Aurora Green Offshore Wind Farm Preliminary Surveys	2024/09968		Completed	In feature area	
Blue Mackerel North Offshore Wind Farm Marine Surveys	2024/09934		Completed	In feature area	
Blue Marlin Offshore Wind Energy Project	2023/09532		Completed	In feature area	
Gippsland Dawn Offshore Wind Project Geophysical and Geotechnical Investigations	2024/10030		Referral Decision	In buffer area only	
Gippsland Offshore Wind Farm Marine Survey Investigations	2023/09682		Completed	In feature area	
Gippsland Offshore Wind Transmission 2GW Project	2024/09980		Assessment	In feature area	
Gippsland Renewable Energy Zone Project	2022/09346		Assessment	In feature area	
Gippsland Skies Offshore Wind Project marine surveys (investigations)	2024/09991		Referral Decision	In feature area	
Greater Gippsland Offshore Wind Project	2022/09379		Assessment	In feature area	
Greater Gippsland Offshore Wind Project Initial Marine Field Investigations	2022/09374		Completed	In feature area	
Navigator North Offshore Wind Farm ? Early Marine Survey Investigations	2024/10093		Referral Decision	In feature area	
Preliminary Site Investigations for Great Eastern Offshore Wind Project	2024/09890		Referral Decision	In buffer area only	
Seadragon Offshore Wind, Early Marine Surveys	2023/09670		Completed	In feature area	

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Seadragon Offshore Wind Farm	2022/9163		Completed	In feature area
Controlled action				
Star of the South Offshore Wind Farm Project	2020/8650	Controlled Action	Guidelines Issued	In feature area
Thomson River Mercury Recovery Project	2010/5734	Controlled Action	Completed	In buffer area only
Not controlled action				
Development of Turrum Oil Field and associated infrastructure	2003/1204	Not Controlled Action	Completed	In feature area
Gippsland Basin Seismic Programme	2004/1866	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
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed	In feature area
Not controlled action (particular manner)				
Golden Beach gas field development	2003/1031	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	In feature area
Southern Flanks 2D Marine Seismic Survey	2010/5288	Not Controlled Action (Particular Manner)	Post-Approval	In buffer area only
Biologically Important Areas				
		[Resource Information]		
Scientific Name		Behaviour	Presence	Buffer Status
Seabirds				
Ardenna tenuirostris				
Short-tailed Shearwater [82652]		Foraging	Known to occur	In feature area
Diomedea exulans (sensu lato)				
Wandering Albatross [1073]		Foraging	Known to occur	In buffer area only
Pelecanoides urinatrix				
Common Diving-petrel [1018]		Foraging	Known to occur	In feature area

Scientific Name	Behaviour	Presence	Buffer Status
Thalassarche bulleri Bullers Albatross [64460]	Foraging	Known to occur	In buffer area only
Thalassarche cauta cauta Shy Albatross [82345]	Foraging likely	Likely to occur	In feature area
Thalassarche chlororhynchos bassi Indian Yellow-nosed Albatross [85249]	Foraging	Known to occur	In buffer area only
Thalassarche melanophris Black-browed Albatross [66472]	Foraging	Known to occur	In buffer area only
Thalassarche melanophris impavida Campbell Albatross [82449]	Foraging	Known to occur	In buffer area only

Sharks			
Carcharodon carcharias White Shark [64470]	Breeding (nursery area)	Known to occur	In feature area

Whales			
Balaenoptera musculus brevicauda Pygmy Blue Whale [81317]	Foraging	Likely to be present	In feature area

Bioregional Assessments			[Resource Information]
SubRegion	BioRegion	Website	Buffer Status
Gippsland	Gippsland Basin	BA website	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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APPENDIX B LIKELIHOOD OF OCCURRENCE: FLORA

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Acacia howittii</i>	Sticky Wattle	-	Vulnerable	Sticky Wattle is a graceful large shrub or small tree of dense, weeping habit reaching a height of 5-8 m. Confined to eastern Victoria from the upper Macalister River area near Mt Howitt south to near Yarram and east to near Tabberabbera. Grows in moist forest. Widely cultivated and naturalising in some areas.	VBA	6	27/06/2023	Nearby records north-west of the Referral Area in habitat similar to and contiguous with that within. Likely to occur
<i>Athenia marina</i>	Sea Water-mat	-	Critically Endangered	Rare dioecious seagrass occurring in brackish to saline intertidal areas to a depth of c. 1 m on muddy substrates. Often occurs interspersed with Eelgrass (<i>Zostera muelleri</i>) and Widgeon Grass (<i>Ruppia tuberosa</i>), particularly in Port Phillip Bay.	VBA	2	30/11/1990	Nearby records and habitat likely in the Referral Area. Potential to occur
<i>Amphidromous fluitans</i>	River Swamp Wallaby-grass	Vulnerable	-	Grows mostly in permanent swamps. Requires wetlands which are moderately fertile and have some bare ground with seasonally fluctuating water levels. Largely confined to permanent swamps, principally along the Murray River between Wodonga and Echuca, uncommon to rare in the south (e.g. Casterton, Moe, Yarram), probably due to historic drainage of wetlands. Flowers November–March.	PMST, VBA	2	18/11/2004	Two records within the locality just north of the Referral Area. Observed in roadside and cleared agricultural habitats and drainage channels similar to those throughout the Referral Area. Likely to occur
<i>Astrotricha parvifolia subsp. 1</i>	Small-leaf Star-hair	-	Critically Endangered	Restricted to the Gippsland Lakes hinterland (Providence Ponds, Dutson, Robinson, and south of Longford). Prior to the rediscovery of this subspecies in 2005, it was previously last collected in 1969. Known populations occur in Pinus radiata plantations on sandy soils, south of Longford. Capable of regenerating after fire from soil-stored seed. Flowers September to October.	VBA	9	05/11/2009	Recorded from Pine plantations in the Locality, with similar habitat in the Referral Area. Potential to occur
<i>Austrostipa rudis subsp. australis</i>	Veined Spear-grass	-	Endangered	Uncommon, mostly in cool areas of southern Victoria. Usually at moderate altitude, in open-forest on sandy or sandstone-derived soils. Flowers mostly November–January.	VBA	3	20/09/2000	Records just outside the Referral Area and habitat within may be suitable. Potential to occur
<i>Avicennia marina subsp. australasica</i>	Grey Mangrove	-	Endangered	Locally common on tidal mudflats (bays, estuaries and creek-mouths) from the western half of Port Phillip Bay to Corner Inlet.	VBA	4	4/09/1993	Records within the locality but habitat may not be in the Referral Area. Potential to occur
<i>Billardiera scandens s.s.</i>	Velvet Apple-berry	-	Endangered	Apparently uncommon in Victoria, occurring chiefly in dry open-forests and woodlands in the north-east (Beechworth, Whitfield etc.), with isolated occurrences near Mt Macedon, Eltham-Hurstbridge area, Eildon and Orbost.	VBA	1	14/12/1990	Referral Area is outside the known distribution of this species. Local records are likely a misidentification of <i>Billardiera mutabilis</i> which is more widespread. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Bossiaea heterophylla</i>	Variable Bossiaea	-	Endangered	Uncommon in Victoria and now confined to Gippsland east of Rosedale. Favours sandy soils in a variety of habitats including heath and open woodland. Flowers April–June	VBA	1	09/12/1983	Only one historical record in the Locality but numerous beyond and in similar habitat to that present in conservation reserves within the Referral Area. Potential to occur
<i>Caladenia aurantiaca</i>	Orange-tip Finger-orchid	-	Endangered	Orange-tip Finger-Orchid is a small perennial orchid that sprouts annually from an underground tuber. Orange-tip Finger-Orchid rows in damp coastal to near-coastal heaths or heathy woodlands east of Melbourne (e.g. Cranbourne, Yarram, Cape Conran, Mallacoota) on well-drained sandy well-drained peaty sand and sandy loams in heathland, heathy forest and coastal scrub at elevations below 80 m.	VBA	10	26/08/2003	Nearby records in forest of north-west of the Referral Area in habitat similar to and contiguous with that within, though most records are not recent. Potential to Occur
<i>Caladenia orientalis</i>	Eastern Spider Orchid	Endangered	Endangered	Eastern spider-orchid is found in coastal heathland and heath-woodland, generally on deep sands, in the South East Coastal Plain Interim Biogeographic Regionalisation for Australia Bioregion. Flowers September–October.	PMST	0	N/A	There is a record just outside the locality in habitat that is present within the Referral Area, some of which is contiguous. Potential to occur
<i>Caladenia tessellata</i>	Thick-lipped Spider-orchid	Vulnerable	-	Thick-lipped Spider-orchid is known to favour low, dry sclerophyll woodland (for example open Kunzea woodland) with a heathy or sometimes grassy understorey on clay loams or sandy soils. More specifically, the population at Braidwood occurs in dry, low Brittle Gum (<i>Eucalyptus mannifera</i>), Inland Scribbly Gum (<i>E. rossii</i>) and <i>Allocasuarina</i> spp. woodland with a sparse understorey and stony soil. In Victoria, the orchid grows in heathland, heathy or grassy woodland, and grassy or sedgy open forests in well drained sand and clay loams. Flowers September–October.	PMST	0	N/A	No records in the locality and Referral Area, however suitable habitat is present within the Referral Area. Potential to occur
<i>Calochilus imberbis</i>	Naked Beard-orchid	-	Critically Endangered	Naked Beard-orchid is a perennial orchid that sprouts annually from an underground tuber. It has 1-4 green and purple flowers and grows to 45cm tall. It is coextensive with <i>C. robertsonii</i> but is much rarer. Grows in dry open woodland, forests, and heaths.	VBA	2	1/11/2000	Records in the Locality and habitat within the Referral Area. Potential to occur
<i>Commersonia prostrata</i>	Dwarf Kerrawang	Endangered	Endangered	Dwarf Kerrawang grows on swampy, sometimes ephemeral, wetlands and lake margins, often dominated by <i>Lepidosperma</i> spp. Other associated native species include Blady Grass (<i>Imperata cylindrica</i>) and <i>Empodisma minus</i> growing on peaty soils. Flowers October–November.	PMST, VBA	23	17/12/2011	The species does not have any records within the Referral Area, however, there are multiple records within the Locality which is on the edge of its known distribution. Habitat may be present along wetland and creekline margins. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Coronidium gunnianum</i>	Pale Swamp Everlasting	-	Critically Endangered	Widespread throughout the state except for the north-west and the alpine and adjacent mountainous areas, and usually at low elevations (under c. 100 m) where mostly in grasslands and riverine River Red-gum (<i>Eucalyptus camaldulensis</i>) woodland on soils that are prone to inundation.	VBA	1	9/12/1983	Only one historical record previously recorded from the Referral Area. River Red-gum (<i>Eucalyptus camaldulensis</i>) associated riverine habitat not present, being outside that species' distribution, however, analogous habitat is present in woodland associated with other records of <i>Coronidium gunnianum</i> in the Gippsland region. Such habitat is present in the Referral Area. Known to occur
<i>Corybas aconitiflorus</i>	Spurred Helmet-orchid	-	Endangered	Localized and uncommon in southern parts of eastern Victoria with isolated westerly occurrences near Portland and Edenhope. Colonies grow in sheltered positions, often on damp sand under ferns or shrubs. Flowers May–Jul.	VBA	2	25/10/1983	Historical nearby records to the west of the Referral Area, but habitat unlikely to be suitable. Unlikely to occur
<i>Corybas fimbriatus</i>	Fringed Helmet-orchid	-	Endangered	Usually forming colonies on moist, shaded sandy soil near the coast and generally east of Western Port, but with isolated occurrences near Melbourne at Gembrook, Warrandyte and Greensborough. Flowers May–September.	VBA	1	27/06/2023	The species does have one recent record within the buffer and the Referral Area is on the periphery of its known range. Appropriate habitat is likely to be present. Potential to occur
<i>Dianella amoena</i>	Matted Flax-lily	Endangered	Critically Endangered	Matted Flax-lily occurs most commonly in lowland grasslands, grassy woodlands, valley grassy forest and creeklines of herb-rich woodland. Typically, the species occurs on well drained to seasonally wet fertile sandy loams to heavy cracking clays derived from Silurian or Tertiary sediments, or from volcanic geology. Sites are dominated by a grassy understorey with Kangaroo Grass (<i>Themeda triandra</i>) and Blackwood (<i>Acacia melanoxylon</i>) as a common understorey tree. Other grass species present include Wallaby Grass (<i>Austrodanthonia racemosa</i> var. <i>racemosa</i>), Common Wheat Grass (<i>Elymus scaber</i> var. <i>scaber</i>), Weeping Grass (<i>Microlaena stipoides</i> var. <i>stipoides</i>), Common Tussock-grass (<i>Poa labillardierei</i>) and Grey Tussock-grass (<i>Poa sieberiana</i>). Flowers November–January.	PMST, VBA	1	30/06/2006	The species is present on site with a recent record within the Referral Area. Both records are present along the roadside West of the Jack Smith Lake Wildlife Reserve. Known to occur
<i>Dianella longifolia</i> var. <i>grandis</i> s.l.	Glaucous Flax-lily	-	Critically Endangered	Raspy leaved lily with pale green tufting leaves in loose clump to 60 cm high. Leaves are upright and flat with a strong central rib. Occurs in lowland plains grassland and grassy woodlands.	VBA	4	20/09/2000	Recorded from remnant roadside vegetation in the Referral Area. Highly likely to be present elsewhere within. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Diuris punctata</i> var. <i>punctata</i>	Purple Diuris	-	Endangered	Purple Diuris is endemic to south-eastern continental Australia. It has two grass-like leaves and up to ten purple or mauve flowers, often with darker, sometimes yellow marks. Formerly widespread and common in Victoria, occurring in the open forests, woodlands and grasslands of the fertile lowlands, now much reduced through clearing for agriculture and restricted to relatively few, isolated sites, but sometimes locally abundant.	VBA	2	1/09/2003	Recorded just outside the Referral Area in remnant roadside vegetation to the north. Habitat likely extends within. Potential to occur
<i>Dodonea procumbens</i>	Trailing Hop-bush	Vulnerable	-	Largely confined in Victoria to the south-west (Penola-Dergholm area, Grampians, Lake Fyans) with outlying occurrences near Castlemaine, Avoca, Skipton, Camperdown and extraordinary disjunctions near Sale where very rare and in perhaps also in the upper Murray River area (represented by a single, 1883 specimen of uncertain provenance). Grows in low-lying, often winter-wet areas in woodland, low open forest and grasslands on sands and clays. Flowers summer.	PMST, VBA	2	30/06/2011	The species has two records within the buffer area within woodland heath. These records are part of a disjunct eastern population isolated from the more common occurrence west of Melbourne. Habitat present in the Referral Area. Potential to occur
<i>Eucalyptus arenicola</i>	Gippsland Lakes Peppermint	-	Endangered	Occurs in coastal and near-coastal areas in the Gippsland Lakes region in sandy soils..	VBA		26/11/2024	Locally common in surrounds with numerous records in the Locality, however, habitat in Referral Area likely restricted to reserves. Potential to occur
<i>Eucalyptus bosistoana</i>	Coast Grey-box	-	Endangered	Occurs mostly on loamy soils east from Woodside, around the Gippsland Lakes and near the coast, extending inland further east along the Cann and Genoa River valleys. Flowers January-July.	VBA	30	27/07/2023	The species is present on site with multiple recent records within the Referral Area and the buffer area. Most of the records are present within the Mullungdung Flora and Fauna Reserve in Riparian Scrub vegetation. Multiple records within the Referral Area along the Estuarine Wetland margin. Habitat is present elsewhere within the Referral Area. Known to occur
<i>Eucalyptus brookeriana</i>	Brooker's Gum	-	Endangered	It occurs in two areas, on the northern foothills of the Otway Ranges, and north of the Great Dividing Range in the Bells Reef-Trentham area.	VBA	1	25/10/1983	The one nearby record in the Mullungdung Flora and Fauna Reserve is far removed from the two known regions this species occurs in Victoria, and may represent a misidentification, likely referring to Swamp Gum (<i>E. ovata</i>). Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Eucalyptus fulgens</i>	Green Scentbark	-	Endangered	A small to medium-sized tree of restricted distribution on heavy soils over sandstone east of Melbourne, Victoria, from east of Healesville and Woori Yallock to the Latrobe Valley near Driffield. Green Scentbark has deeply furrowed rough bark like an ironbark and glossy green adult leaves.	VBA	2	10/04/2003	Although there is one record within the locality, the Referral Area is outside the known distribution of this species and suitable habitat is unlikely to be present. Unlikely to occur
<i>Eucalyptus ignorabilis</i> s.s.	Grey Scentbark	-	Vulnerable	In Victoria occurring sporadically, east from Erica, mainly on sandy, well-watered soils. Flowering time unknown.	VBA	2	26/08/2022	Referral Area is outside the known distribution of this species and suitable habitat is unlikely to be present. Unlikely to occur
<i>Eucalyptus kitsoniana</i>	Bog Gum	-	Critically Endangered	Occurring on coastal lowlands from Yarram west to Cape Otway, and Mt Richmond near Portland. It also occurs on top of Mt Oberon (Wilsons Promontory) and on nearby Snake Is. An inland collection from near Woohlpooer (west of the Grampians). Flowers August-March.	VBA	1	24/02/2012	One record occurs within the Woodside H28 Bushland Reserve. Habitat is likely present elsewhere within the Referral Area. Known to occur
<i>Eucalyptus strzeleckii</i>	Strzelecki Gum	Vulnerable	Critically Endangered	Largely restricted to the western section of the Strzelecki Range, from Neerim South in the north, south to Foster, and with a few isolated records from the Otway ranges. Favours ridges, slopes and streambanks and deep fertile soils.	VBA	1	29/10/1983	One historical record in the locality west of the Referral Area, which is on the periphery of the species known range. Habitat is unlikely to be present in the Referral Area. Unlikely to occur
<i>Eucalyptus yarraensis</i>	Yarra Gum	-	Critically Endangered	Extending west from Glengarry (near Traralgon) to Melbourne and north-west to Daylesford and Ararat. Collections of small-budded and -fruited swamp gums from east of Cavendish may be this taxon. Very small-fruited forms of the species occur in remnant stands in outer southeastern to northeastern Melbourne suburbs (e.g. Scoresby, Wantirna, Yan Yean). A poorly known species whose distribution appears to have been much fragmented by the clearing of the natural habitat. It is distinguished from Swamp Gum (<i>E. ovata</i>) by the completely rough bark and smaller leaves, buds and fruits. Fresh leaves steeped in hot water emit a bitter-almond (cyanic) odour – a reaction not observed in Swamp Gum.	VBA	1	30/09/1975	One historical record in the locality in forest to the west of the Referral Area, which appears to be an outlier from the main distribution of this species. Habitat unlikely to occur in the Referral Area. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Glycine latrobeana</i>	Clover Glycine	Vulnerable	Vulnerable	Clover Glycine is found across south-eastern Australia in native grasslands, dry sclerophyll forests, woodlands and low open woodlands with a grassy ground layer. Soils generally have a sandy component being either sand or loamy sand but Clover Glycine has also been found on clay soils. Overall, populations occur in lowland grasslands, grassy woodlands and sometimes in grassy heath. The grasslands are dominated by <i>Themeda triandra</i> as well as <i>Poa</i> species with the grassy woodland characterized by <i>Eucalyptus leucoxylon</i> , <i>E. viminalis</i> , <i>E. camaldulensis</i> , <i>E. rubida</i> or <i>E. macrorhyncha</i> and sometimes by <i>E. oblique</i> - <i>E. baxteri</i> . This last grassy woodland also has a dense understory with <i>Olearia axillaris</i> , <i>Pteridium esculentum</i> and <i>Themeda triandra</i> . Flowers September–December.	PMST	0	N/A	No records in the locality and Referral Area is outside known distribution. Unlikely to occur
<i>Grevillea chrysophaea</i>	Golden Grevillea	-	Vulnerable	Usually growing in eucalypt woodland or heath in silty sand to sandy loam in the Brisbane Ranges (Anakie-Steiglitz area), and Gippsland in the area roughly enclosed by Traralgon, Woodside and Sperm Whale Head-Licola. Flowers mostly June–November.	VBA	5	1/11/2000	Multiple records within the Locality. The records are within the intact woodlands to the west of the Referral Area with similar, contiguous habitat within. Likely to occur
<i>Juncus revolutus</i>	Creeping Rush	-	Endangered	Restricted to damp saline or subsaline communities near the coast, with a small number of outlying populations around saline lakes on the Volcanic Plain. Flowers October–January, seeds shed mainly December–April.	VBA	1	8/12/1978	One historical record in the Locality. General habitat is present in coastal vegetation. Potential to occur
<i>Lachnagrostis robusta</i>	Salt Blown-grass	-	Endangered	Occurs around margins of salt lakes and saline depressions mostly across the Volcanic Plain, with eastern outliers near Tooradin and Seaspray and west of the Grampians.	VBA	1	17/12/1998	One outlier record from Jack Smith Lake just outside the Referral Area. Habitat likely to be present within. Potential to occur
<i>Lachnagrostis semibarbata</i> var. <i>filifolia</i>	Purple Blown-grass	-	Endangered	Virtually co-extensive with the nominate variety, but known further east near the Gippsland Lakes east of Sale. Mostly associated with slightly to markedly saline sites. Flowers October–January.	VBA	2	1/03/1991	Recorded within the Locality from Lake Reeve to the north. Similar habitat is present in the Referral Area, and records for subsp. <i>semibarbata</i> and at the species level are known from the Referral Area. Therefore, it should be assumed as a precaution that species records are referrable to subsp. <i>filifolia</i> . Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Lachnagrostis semibarbata</i> var. <i>semibarbata</i>	Purple Blown-grass	-	Endangered	Scattered from near Melbourne to the South Australian border, mainly in grassland, occasionally woodland communities in somewhat saline depressions of the volcanic plain, but also known from seasonal, slightly brackish swampy sites east of Melbourne (e.g. Cranbourne, Safety Beach, Giffard, Sale areas). Flowers October–February. +	VBA	18/	18/10/2024	Recorded within Jack Smith Lake region in Referral Area and Locality. Co-occurring with subsp. <i>filifolia</i> . Known to occur
<i>Lepidium hyssopifolium</i>	Basalt Pepper-cress	Endangered	Endangered	Generally, Basalt Pepper-cress is known to establish on open, bare ground with limited competition from other plants. The Basalt Pepper-cress was previously recorded from Eucalypt woodland with a grassy ground cover, low open Casuarina woodland with a grassy ground cover and tussock grassland. Recently recorded localities have predominantly been in weed-infested areas of heavy modification, high degradation and high soil disturbance such as road and rail verges, on the fringes of developed agricultural land or within small reserves in agricultural land. Many populations are now generally found amongst exotic pasture grasses and beneath exotic trees such as the Radiata Pine (<i>Pinus radiata</i>) and Monterey Cypress (<i>Cupressus macrocarpus</i>), often associated with other species of <i>Lepidium</i> . The lack of competition from other shade-tolerant species allows Basalt Pepper-cress to persist. Flowers Summer–Autumn.	PMST	0	N/A	No records in the locality and Referral Area is outside known distribution. Unlikely to occur
<i>Lawrencia spicata</i>	Salt Lawrencia	-	Endangered	An occasional component of saltmarsh communities along the coast, rare in saline depressions and around salt lakes of south-western Victoria (VicFlora).	VBA	2	14/06/1986	Recorded from the Referral Area. Known to occur
<i>Leptorhynchus elongatus</i>	Lanky Buttons	-	Endangered	Lanky Button is a perennial herb in the daisy family. Largely confined in Victoria to eastern uplands (Benambra, Omeo, Wulgulmerang, Corryong areas) where occasional in grassy Eucalyptus pauciflora woodlands. Grows in woodland and grassland.	VBA	1	26/11/1994	One record to the north of the Referral Area, which supports similar habitat likely to be suitable. Potential to occur
<i>Melaleuca armillaris</i> subsp. <i>armillaris</i>	Giant Honey-myrtle	-	Endangered	Mainly confined to near-coastal sandy heaths, scrubs slightly raised above saltmarsh, riparian scrubs, rocky coastlines and foothill outcrops eastwards from about Marlo. Occurrences to the west are naturalized from cultivated stock. Flowers in summer.	VBA	1	20/09/2010	Recorded from Merriman Creek in the Locality north of the Referral Area, however, this is likely to be planted or self-established from nearby plantings. The natural distribution of the species is from far East Gippsland over 200 km away. Unlikely to Occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Oxalis rubens</i>	Dune Wood-sorrel	-	Endangered	Dune Wood-sorrel is a small perennial herb, with prostrate or ascending to scrambling stems. Confined to coastal dunes and scrub, growing on stabilised sand-dunes, in Coast Banksia (<i>Banksia integrifolia</i>) woodland, and beaches among Hairy Spinifex (<i>Spinifex sericeus</i>). Flowers throughout the year.	VBA	2	16/04/2003	Recorded from dune scrub in the Referral Area just north of Jack Smith Lake. Similar habitat elsewhere along the coast in the Referral Area. Known to occur
<i>Platysace ericoides</i>	Heath Platysace	-	Endangered	Confined to the coastal plain and foothills mostly between Moe and Orbost, usually occurring in dryish forest, often with shallow, rocky soils. Flowers August–December (VicFlora).	VBA	1	14/05/1977	One historical record in the Locality, while the Referral Area is south of the species' known distribution. Unlikely to occur
<i>Poa billardiarei</i>	Coast Fescue	-	Endangered	Of scattered occurrence on coastal sand dunes from near Nelson in the far south-west to the NSW border but infrequently collected in recent times and possibly being displaced by the superficially similar, introduced Marram-grass (<i>Calamagrostis arenaria</i>). Flowers mainly September–October.	VBA	1	19/09/1979	Only historical records nearby with the Referral Area outside the current accepted range of the species. Unlikely to occur
<i>Pomaderris apetala</i> subsp. <i>maritima</i>	Tasman Pomaderris	-	Endangered	Occurs on low dunes and sea-cliffs at Wilsons Promontory (e.g. Lighthouse area), islands of Corner Inlet, and the western limit of the Ninety Mile Beach. Flowers October–November.	VBA	4	6/10/1988	Recorded from dune scrub just south of the Referral Area, in vegetation contiguous with that within. Apparently at the northernmost limit of the species' distribution. Potential to occur
<i>Pomaderris discolor</i>	Eastern Pomaderris	-	Endangered	A shrub to potentially 5 metres, spreading to several metres wide with stems possessing dense white stellate hairs. It grows in open dry sclerophyll woodlands and forests often on sandy soils or rocky soils to enriched loams on rainforest edges. Confined in Victoria to moist lowland forests and rainforest margins from near Sale eastwards, but uncommon to rare. Flowers September–October.	VBA	1	1/11/2000	One outlier record of this species recorded from forest adjacent to the Referral Area, but suitable habitat is unlikely to be present within. Unlikely to occur
<i>Pomaderris pilifera</i> subsp. <i>pilifera</i>	Striped Pomaderris	-	Endangered		VBA	1	1/11/2000	One record from the Locality in Mullundung State Park, far south of the specie's known distribution. Habitat unlikely to be present in the Referral Area. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Posidonia australis</i>	Fibre-ball Weed	-	Endangered	In Victoria, only recorded from Barwon Heads, Jack Smith Lake and Corner Inlet. It grows in shallow water up to c. 15 m deep, in sandy soil with rhizomes just below the substrate surface.	VBA	2	18/07/1960	Only historical records in Victoria, with none in the last 50 years. Recorded from Jack Smith Lake, but habitat requirements particular and unlikely to be present in the Referral Area. Unlikely to occur
<i>Prasophyllum frenchii</i>	Maroon Leek-orchid	Endangered	Endangered	The Maroon Leek-orchid grows mainly in open sedge swampland or in wet grassland and wet heathland generally bordering swampy regions. Sites are generally low altitude, flat and moist. Soils are generally moderately rich damp sandy or black clay loams. Climate is mild, with an annual rainfall of 600–1100 mm, occurring predominantly in winter and spring. The Maroon Leek-orchid often grows associated with the following grass and sedge genera: Kangaroo Grass (<i>Themeda triandra</i>), wallaby grass (<i>Rytidosperma</i> spp.), twig-rush (<i>Baumea</i> spp.) and sword-sedge (<i>Lepidosperma</i> spp.) and sometimes with saw-sedge (<i>Gahnia</i> spp.), tussock grass (<i>Poa</i> spp.) and spear grass (<i>Austrostipa</i> spp.). Associated taller stratum species include Woolly Teatree (<i>Leptospermum lanigerum</i>), Swamp Paperbark (<i>Melaleuca ericifolia</i>) and Scented Paperbark (<i>Melaleuca squarrosa</i>). Orchid species that are known to grow or have grown sympatrically include Thick-lipped Spider-orchid (<i>Caladenia tessellata</i>), Purple Diuris (<i>Diuris punctata</i>), Small Wax-lip Orchid (<i>Glossodia minor</i>), Slender Onion-orchid (<i>Microtis parviflora</i>), Sale Plains Leek-orchid (<i>Prasophyllum chasmogamum</i>), Sweet Leek-orchid (<i>Prasophyllum odoratum</i> s.l.), Gorae Leek-orchid (<i>Prasophyllum diversiflorum</i>), Metallic Sun-orchid (<i>Thelymitra epipactoides</i>), Blue Star Sun-orchid (<i>Thelymitra holmesii</i>) and Shy Sun-orchid (<i>Thelymitra planicola</i>). Flowers October–November.	PMST	0	N/A	No records in the locality but Referral Area is within known distribution with records to the north and south in coastal habitat likely to be similar to that in within. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Prasophyllum spicatum</i>	Dense Leek-orchid	Vulnerable	Critically Endangered	The dense leek-orchid occurs in coastal and near-coastal heathland and heathy woodland commonly containing <i>Eucalyptus viminalis</i> subsp. <i>pryoriana</i> (Coast Manna-gum), <i>Eucalyptus radiata</i> (Narrow-leaved Peppermint), <i>Eucalyptus baxteri</i> (Brown Stringybark), <i>Leptospermum myrsinoides</i> (Heath Tea-tree), <i>Allocasuarina paludosa</i> (Scrub Sheoak), <i>Hibbertia procumbens</i> (Spreading Guinea-flower), <i>Bursaria spinosa</i> (Sweet Bursaria), <i>Pimelea humilis</i> (Common Rice-flower), <i>Burchardia umbellata</i> (Milkmaids), <i>Thysanotus tuberosus</i> (Common Fringe-lily), <i>Chamaescilla corymbosa</i> (Blue Stars), <i>Platylobium obtusangulum</i> (Common Flat-pea), <i>Stylidium graminifolium</i> (Grass Trigger-plant) and <i>Pteridium esculentum</i> (Austral Bracken), as well as grasses (<i>Rytidosperma</i> spp. (wallaby grasses), <i>Austrostipa</i> spp. (spear grasses) and <i>Poa</i> spp. (tussock grasses)), <i>Lepidosperma</i> spp. (saw sedges) and a variety of other heathland flora. Soils are generally sandy, with some sites seasonally waterlogged (Duncan 2010). Little is known of specific habitat requirements, and some sites have been disturbed by periodic fire or mowing. Flowers October-December.	PMST	0	N/A	No records in the locality but Referral Area is within known distribution of the species and suitable habitat is likely to be present. Potential to occur
<i>Prostanthera galbraithiae</i>	Wellington Mint-bush	Vulnerable	Endangered	Populations of Wellington Mint-bush occur in heathy open forest, heathland and heathy woodland, usually on gravelly sand overlaying clay. Flowers Spring.	PMST	0	N/A	The Referral Area may support suitable habitat but is outside the species range, being endemic to the north. Unlikely to occur
<i>Pseudanthus ovalifolius</i>	Oval-leaf Pseudanthus	-	Vulnerable	Oval-leaf Pseudanthus is a shrub to 0.60 m high, usually hairless. The leaves are usually alternating up the stems, occasionally almost opposite each other. Of disjunct occurrence in Victoria, usually found on dry sandy, or shallow, shaley soils. Occurs in dry forests and heaths.	VBA	3	1/11/2000	Records within the locality. The study area is within the species' known distribution. General habitat is present on site. Potential to occur
<i>Pterostylis chlorogramma</i>	Green-striped Greenhood	Vulnerable	Endangered	Apparently localized in Victoria, but exact range uncertain due to confusion with closely allied species. Grows in moist areas of heathy and shrubby forest, on well-drained soils. Flowers July–September.	PMST, VBA	91	28/07/2023	The species has multiple records within the Locality in west of the Referral Area in Mullungdung Flora and Fauna Bush Reserve in plains grassy forest and riparian scrub vegetation. Habitat present in the Referral Area is contiguous with this. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Pterostylis fischiorum</i>	Fisch's Greenhood	-	Endangered	Restricted and uncommon in eastern Victoria, from near-coastal open forests and woodlands to montane woodlands, often among grass and bracken, on well-drained soils. Flowers February–May.	VBA	3	15/05/1977	Historical records in the Locality and more recently just beyond in adjacent Won Wron State Park. Habitat likely to present in Referral Are. Potential to occur
<i>Pterostylis grandiflora</i>	Cobra Greenhood	-	Endangered	Generally restricted and uncommon in near-coastal eastern Victoria, growing on moist, shady slopes in open-forest, on well-drained soil. Flowers May-August.	VBA	206	9/08/2023	The species has multiple records within the buffer area in the West of the Referral Area in Mullungdung Flora and Fauna Bush Reserve in plains grassy forest and riparian scrub vegetation. Habitat present in the Referral Area. Potential to occur
<i>Pterostylis lustra</i>	Small Sickie Greenhood	-	Endangered	Widespread and sometimes locally common, growing in swampy areas under thickets of <i>Leptospermum lanigerum</i> (Woolly Tea-tree), on permanently wet, black alkaline mud. Flowers November–February.	VBA	1	29/10/1983	One isolated historical record to the west of the Referral Area. Suitable habitat unlikely to be present. Unlikely to occur
<i>Senecio diaschides</i>	Shingle Fireweed	-	Endangered	In Victoria apparently confined to river valleys in the east, with records from along the Avon, Macalister, Murrindal, Buchan and Snowy Rivers, commonly occurring in sand or amongst rocks near the watercourse (VicFlora).	VBA	1	30/09/1989	Historical records from the Corner Inlet region, with one in the Locality, however, the Referral Area is well outside the distribution of known extant populations to the north. Limited habitat may be present. Unlikely to occur
<i>Senecio psilocarpus</i>	Swamp Fireweed	Vulnerable		This species occurs on high-quality herb-rich wetlands on plains. During winter such sites can be inundated with up to 60 cm or more of water, but are almost dry in summer. A tree canopy is absent from most sites, or rarely, River Red-gum (<i>Eucalyptus camaldulensis</i>) is the overstorey species in a woodland formation. The understorey is rich in grasses and sedges and miscellaneous aquatics. The more easterly populations grow in grey to black silty clay soils whereas the westerly populations grow on peatier soils. Flowers November-May.	PMST	0	N/A	The Referral Area is unlikely to support habitat and is outside the species' distribution. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Thelymitra circumsepta</i>	Naked Sun-orchid	-	Endangered	Found in open forest, woodlands or tall wet forest, usually in moist positions such as swamp margins, stream banks or sphagnum bogs in peaty sand, clay loams or rich mountain loams. Found from near sea-level to subalpine areas. Flowers appear November–February and open tardily on hot, humid days and are almost obligately self-pollinating.	VBA	1	14/12/1978	Pone historical record just within the Locality in habitat not likely to be present in the Referral Area which is outside the known distribution of the species. Unlikely to occur
<i>Thelymitra epipactoides</i>	Metallic Sun-orchid	Endangered	Endangered	Grows mostly in coastal heathland, grassland and woodland, but extending further inland into similar habitats in the western part of its range. Substrates may be moist or dry sandy soils. Flowers September–November, with flowers opening freely on warm days.	PMST	0		Referral Area is south of the known population in the east of Victoria in the Lake Reeve area, however, suitable habitat is likely present along coastal fringes. Potential to occur
<i>Thelymitra matthewsii</i>	Spiral Sun-orchid	Endangered	Endangered	<i>Thelymitra matthewsii</i> favours open forests and woodlands in well-drained sand and clay loams. It is a post-disturbance coloniser that is usually found in open areas around old quarries and gravel pits, on road verges, disused tracks and animal trails. It has been recorded as growing on gravelly soils in disturbed areas of low coastal forest, in swampy soils, on lateritic podsol on gently sloping plateaus or from sand overlying limestone on undulating plain. Flowers August–September.	PMST, VBA	2	30/09/1979	Historical record from within the Locality confined to the Mullungdung Nature Conservation Reserve. The Referral Area is unlikely to support similar habitat. Unlikely to occur
<i>Thesium australe</i>	Austral Toadflax	Vulnerable	Endangered	Austral Toadflax is semi-parasitic on roots of a range of grass species, notably Kangaroo Grass (<i>Themeda triandra</i>). It occurs in subtropical, temperate and subalpine climates over a wide range of altitudes. It occurs on soils derived from sedimentary, igneous and metamorphic geology on a range of soils including black clay loams to yellow podzolics and peaty loam. It occurs in shrubland, grassland or woodland, often on damp sites. Vegetation types include open grassy heath dominated by Swamp Myrtle (<i>Leptospermum myrtifolium</i>), Small-fruit Hakea (<i>Hakea microcarpa</i>), Alpine Bottlebrush (<i>Callistemon sieberi</i>), Woolly Grevillea (<i>Grevillea lanigera</i>), Coral Heath (<i>Epacris microphylla</i>) and <i>Poa</i> spp.; Kangaroo Grass grassland surrounded by <i>Eucalyptus</i> woodland; and grassland dominated by Barbed-wire Grass (<i>Cymbopogon refractus</i>). Flowers mostly Spring and Summer.	PMST	0	N/A	There are no nearby records and the Referral Area is unlikely to support favourable habitat. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Xanthosia leiophylla</i>	Parsley Xanthosia	-	Endangered	Uncommon in Victoria, where known from sandy heathland and heathy woodland, mostly in the south-west, but also historically recorded from Wilsons Promontory. Flowers spring and summer.	VBA	1	18/12/1978	No recent records east of Melbourne. The Referral Area does contain general vegetation features of suitable habitat but is likely too wet. Unlikely to occur
<i>Xerochrysum palustre</i>	Swamp Everlasting	Vulnerable	Critically Endangered	Swamp Everlasting grows in wetlands including sedge-swamps and shallow freshwater marshes, often on heavy black clay soils. Commonly associated genera include Swamp Wallaby-grasses (<i>Amphibromus</i> spp.), Twig-sedges (<i>Machaerina</i> spp.), Sedges (<i>Carex</i> spp.), <i>Chorizandra</i> , Billy-buttons (<i>Craspedia</i> spp.), Spike-sedges (<i>Eleocharis</i> spp.), Club-sedges (<i>Isolepis</i> spp.), Blowngrasses (<i>Lachnagrostis</i> spp.), Sword-sedges (<i>Lepidosperma</i> spp.), Water-milfoils (<i>Myriophyllum</i> spp.), Common Reed (<i>Phragmites australis</i>), Kangaroo Grass (<i>Themeda triandra</i>) and <i>Villarsia</i> . Flowers November-March.	PMST	0	N/A	No nearby records and the Referral Area is unlikely to support suitable habitat. Unlikely to occur
<i>Zieria veronicea</i> subsp. <i>veronicea</i>	Pink Zieria	-	Endangered	Pink Zieria is a shrub to 60 cm high. Widespread in sandy mallee and mallee-heath communities of western Victoria with a southerly outlier near Casterton, and disjunct populations in sandy lowland heaths around the Gippsland Lakes. Flowers August–December.	VBA	4	15/10/2012	Records to the north of the Referral Area but within the Locality are part of a disjunct population apparently at the southern limit. in the Locality to the north. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
Threatened Ecological Communities								
N//A	Natural Damp Grassland of the Victorian Coastal Plains	Critically Endangered	N/A	The ecological community is a type of grassland ranging to open grassy woodland with scattered trees and shrubs that occurs in the South East Coastal Plain IBRA bioregion of Victoria. It is generally found on heavy grey silty-loamy soils, which are poorly drained and therefore often damp and sometimes waterlogged. The heavy soils may be derived from floodplain or swamp deposits, and they may be influenced by moisture from local rainfall, surface flows from local creeks or runoff from surrounding land, and occasionally groundwater. The grassland has a variable floristic composition but generally is dominated by tussock grasses, notably <i>Themeda triandra</i> (Kangaroo Grass) on the drier sites or <i>Poa labillardierei</i> (Common Tussock-grass), on wetter sites. A range of other graminoids and forbs occur, including forbs associated with damp sites, with species composition depending on season and moisture availability at a site. Where trees are present, they are typically a sparse cover of eucalypt species associated with damp sites, such as <i>Eucalyptus viminalis</i> (Manna Gum) or <i>E. ovata</i> (Swamp Gum), but characteristically exclude <i>E. tereticornis</i> subsp. <i>mediana</i> (Gippsland Red-gum) which occurs on the drier parts of the Gippsland Plain subregion. Non-eucalypt trees may include <i>Allocasuarina verticillata</i> (drooping she-oak), <i>Acacia melanoxylon</i> (Blackwood) and <i>A. mearnsii</i> (Black Wattle). Historically the tree form of <i>Banksia marginata</i> (silver banksia or honeysuckle) could also be prominent.	PMST	N/A	N/A	It is likely that the of this TEC being present in the Referral Area, with associated vegetation of patches of EVC 687 – Swamp Scrub/ Plains Grassland Mosaic (58.33 ha) and closely associated with EVC 3 – Damp Sands Herb-rich Woodland (335.39 ha) present within the Referral Area. Likely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
N/A	<i>Subtropical and Temperate Coastal Saltmarsh</i>	Vulnerable	N/A	The physical environment for the ecological community is coastal areas under regular or intermittent tidal influence. In southern latitudes saltmarsh is often the main vegetation-type in the intertidal zone and commonly occurs in association with estuaries. It is typically restricted to the upper intertidal environment, occurring in areas within the astronomical tidal limit, often between the elevation of the mean high tide and the mean spring tide. However, exceptions may occur that retain a regular or intermittent tidal connection and these are still considered to be the ecological community. The Coastal Saltmarsh ecological community may also include areas that have groundwater connectivity to tidal water bodies. For example, groundwater hydrology may play a role in the occurrence of species such as the nationally vulnerable <i>Tecticornia flabelliformis</i> (Bead Samphire) which has a preference for water logging. Also, some sabka-related saltmarshes may be reliant on groundwater tidal flows. The Coastal Saltmarsh ecological community is mainly associated with the soft substrate shores of estuaries and embayments (sandy and/or muddy) and on some open, low wave energy coasts. The Coastal Saltmarsh ecological community consists mainly of salt-tolerant vegetation (halophytes) including: grasses, herbs, sedges, rushes and shrubs. Succulent herbs, shrubs and grasses generally dominate and vegetation is generally of less than 0.5 m height (with the exception of some reeds and sedges). Many species of non-vascular plants are also found in saltmarsh, including epiphytic algae, diatoms and cyanobacterial mats.	PMST	N/A	N/A	There is a high likelihood of this TEC to occur within the Referral Area, with associated EVCs 9 – Coastal Saltmarsh (408.92 ha), and EVC Estuarine Wetland (1788.23 ha) present within the Referral Area. EVC 9 can occur as an aggregate community that comprises a variety of shrubby to herbaceous to grassy/sedge vegetation. Likely to occur

Notes: Species considered to have at least the potential to occur in the Referral Area are highlighted. EPBC Act = listing status under the EPBC Act. FFG Act = listing status under the FFG Act. Source = records exist in the VBA and/or habitat has been modelled to occur in the PMST.



APPENDIX C LIKELIHOOD OF OCCURRENCE: FAUNA

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
Birds								
<i>Accipiter novaehollandiae</i>	Grey Goshawk		Endangered	The Grey Goshawk is found in coastal areas in northern and eastern Australia. The species is found in most forest types, especially tall closed forests, including rainforests (Birds in Backyards). The Grey Goshawk feeds on birds, small mammals. Reptiles and insects.	VBA	3	9/1/1980	Only historical records in the Referral Area and locality. The Referral Area lacks large expanses of woodland habitat to support the species. Referral Area within species distribution. Potential to occur
<i>Actitis hypoleucos</i>	Common Sandpiper	Migratory	Vulnerable	The species utilises a wide range of coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats. Common Sandpiper has been recorded in estuaries and deltas of streams, as well as on banks farther upstream; around lakes, pools, billabongs, reservoirs, dams and claypans, and occasionally piers and jetties. The muddy margins utilised by the species are often narrow and may be steep. The species is often associated with mangroves, and sometimes found in areas of mud littered with rocks or snags.	VBA	4	25/01/2019	Numerous records of the species have been documented within the locality. The Referral Area has preferred habitat in the form of coastal wetland and other watercourses that the species may utilise. Likely to occur
<i>Anseranas semipalmata</i>	Magpie Goose		Vulnerable	Magpie Goose is a large water bird that is considered relatively common in northern Australia however has largely disappeared from southern Australia (NSW Government Office of Environment and Heritage, 2018). Suitable habitat is largely shallow wetlands, less than 1m deep, with dense growth of rushes or sedges. The species is also known to forage on flooded grasslands and floodplains (NSW Government Office of Environment and Heritage, 2018).	VBA	1	7/1/1999	One historical record exists within the Locality. The Referral Area is within the species distribution. Preferred habitat is present within the Referral Area, in the form of shallow wetlands and water courses, however no records are within the Referral Area or Locality. Potential to occur
<i>Anthochaera phrygia</i>	Regent Honeyeater	Critically Endangered	Critically Endangered	The Regent Honeyeater mainly inhabits temperate woodlands and open forests, particularly Box – Ironbark woodland and riparian forests of River She-oak. The species inhabits woodlands that support a significantly high abundance and species richness of birds. These types of woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes. The species can also be found in drier coastal woodlands and forests in some years. Non-breeding flocks of the species can be seen foraging in flowering coastal Swamp Mahogany and Spotted Gum forests. Although the species is a generalist forager, it feeds mainly on the nectar from a small number of eucalypts that produce high volumes of nectar (e.g. Mugga Ironbark, Yellow Box, White Box and Swamp Mahogany).	PMST	0	N/A	The closest record of the species is 39 km north of the Referral Area (near the township of Sale). The Referral Area is within the species known distribution, however, the Referral Area lacks large intact woodland environments typically of the species. Small woodland patches are present that potentially could support the species. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Ardea alba modesta</i>	Eastern Great Egret		Vulnerable	Great Egret occurs throughout much of Australia, excluding most arid areas. The species prefers shallow waters environments, particularly with flowering waters. It additionally prefers any damp or watered area.	VBA	18	5/07/2019	The Locality has numerous records of the species occurring. The Referral Area additionally has preferred habitat typical of the species in the form of wetland habitat and shallow waterlogged areas. Likely to occur
<i>Ardea intermedia plumifera</i>	Plumed Egret		Critically Endangered	Habitats include ponds and billabongs, fresh-water marshes, swamp forests, water courses such as rivers and streams, fresh and alkaline lake margins, reservoirs, sewage ponds, rice fields, wet meadows, wet fields, and flooded and dry pasture (HeronConservation).	VBA	3	12/31/1980	Only historical records of the species exist in the Referral Area. The Referral Area contains preferred habitat types, including shallow water environments, wetlands, and intertidal zones that the species may utilise. Potential to occur
<i>Ardena grisea</i>	Sooty Shearwater	Vulnerable, Migratory		The sooty shearwater forages in cold water zones with upwellings, especially around the subtropical, subantarctic and polar fronts. The species moves to the southern hemisphere during the breeding season. Its breeding range extends over 20 degrees of latitude from warm temperate to cold subantarctic islands. The species often nests in very dense colonies in a diverse range of habitats, from forested coastal islands to open tussock grasslands and fellfield on subantarctic islands.	PMST	0	N/A	No records within the Locality, all on the eastern side of the project in or in proximity to the ocean. The species tends to nest in burrows lined with plant material to avoid predation. The Referral Area does offer some general habitat features on the coastline that the species may utilise. Potential to occur
<i>Arenaria interpres</i>	Ruddy Turnstone	Vulnerable, Migratory	Endangered	During the austral summer non-breeding season, the ruddy turnstone is widespread within Australia. The species is found in most coastal regions, with occasional records of inland populations. It strongly prefers rocky shores or beaches where there are large deposits of rotting seaweed. Foraging: In general, feeding takes place over the whole tidal range, however, most populations will likely spend disproportionate amounts of time foraging on the upper tidal flats. Roosting: Ruddy turnstones typically roost along platforms and shelves of rock, shingle, or gravel beaches, often with shallow tidal pools nearby. They can also be found roosting along sand, coral, or shell beaches, and along shoals, cays, and dry ridges of sand or coral beaches. Ruddy turnstones have occasionally been sighted roosting in estuaries, harbours, bays, and coastal lagoons among low saltmarsh, or on exposed beds of seagrass, around sewage ponds and on mudflats. Breeding: The species breeds near the coast or up to several kilometres inland in the high Arctic. Nesting typically occurs on coastal plains, marshes, and tundra. The species shows a preference for mosaics of bare rock, clay or shingle, and vegetation near water or in areas that remain damp until late summer.	PMST, VBA	16	17/09/2017	Multiple records exist within the locality of Jack Smith Lake Wildlife Reserve, as well as historical records within the Referral Area. The Referral Area contains preferred habitats, including coastal dunes and wetlands. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Biziura lobata</i>	Musk Duck		Vulnerable	Musk Duck is predominately found in water, and tends to avoid land as they are clumsy walkers. Preferred habitat includes deep freshwater lagoons with dense reed beds.	VBA	31	15/02/2017	There are multiple records within the Locality, which includes preferred habitat in the Jack Smith Lake Wildlife Reserve. While general habitat is present within the Referral Area, the species is more likely to occur in proximity to it. Likely to occur
<i>Botaurus poiciloptilus</i>	Australasian Bittern	Endangered	Critically Endangered	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., <i>Phragmites</i> , <i>Cyperus</i> , <i>Eleocharis</i> , <i>Juncus</i> , <i>Typha</i> , <i>Machaerina</i> , <i>Bolboschoenus</i>) or cutting grass (<i>Gahnia</i>) growing over a muddy or peaty substrate.	VBA, PMST	2	6/19/1979	Two historical records of the species exist within the Referral Area, which is within its known distribution range and contains preferred habitat features. However, no recent records have been documented in either the Locality or the Referral Area. Known to occur
<i>Calamanthus pyrrhopygius</i>	Chestnut-rumped Heathwren		Vulnerable	A small woodland bird found in dense heathland and shrubland.	VBA	15	6/04/2007	Multiple records exist within the Locality, while none are recorded within the Referral Area. Although the Referral Area contains general habitat features suitable for the species, such as coastal heath, it lacks extensive areas of intact woodland, however species may still utilise habitat. Potential to occur
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Vulnerable, Migratory		They forage at the edge of the water of wetlands or intertidal mudflats, either on bare wet mud or sand, or in shallow water, also among inundated vegetation of saltmarsh, grass or sedges, in sewage ponds, and often in hypersaline environments. After rain, they may forage in paddocks of short grass, well away from water.	PMST, VBA	29	16/03/2021	Multiple records within the Locality, mainly within the wetlands, alike the Jack Smith Lake Wildlife reserve and Lake Reeve. The Referral Area does contain some general habitat (wetland habitats), however most preferred habitat is within the locality. Known to occur
<i>Calidris canutus</i>	Red Knot	Vulnerable, Migratory	Endangered	The species mainly occurs on intertidal mudflats in sheltered coastal areas such as estuaries, bays, inlets and lagoons. Also, around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. Occasionally they have been found to inhabit areas inland around ephemeral and permanent lakes, dams, waterholes and bore drains, usually with bare edges of mud or sand, occurring in both fresh and brackish waters.	PMST, VBA	14	12/31/2018	There are multiple records of the species within the Locality. The species is mainly confined to coastal estuaries and muddy tidal flats. The Referral Area has some general habitat present that may support the species. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Calidris ferruginea</i>	Curlew Sandpiper	Critically Endangered	Critically Endangered	Mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, 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.	PMST, VBA	1	12/12/2020	Multiple historical records within the Referral Area and recent records within the Locality and surrounding. Muddy tidal flats and estuaries. The species has some general habitat present within the Referral Area. Known to occur
<i>Calidris tenuirostris</i>	Great Knot	Vulnerable, Migratory	Critically Endangered	In Australasia, the species typically prefers sheltered coastal habitats, with large intertidal mudflats or sandflats. This includes inlets, bays, harbours, estuaries and lagoons. They are occasionally found on exposed reefs or rock platforms, shorelines with mangrove vegetation, ponds in saltworks, at swamps near the coast, saltlakes and non-tidal lagoons. The Great Knot rarely occurs on inland lakes and swamps. Typically, the Great Knot roosts in large groups in open areas, often at the waters 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.	PMST, VBA	3	04/11/1998	Historical records of the species exist within the Locality. The species is known to prefer intertidal flats as habitat. While the Referral Area does not contain extensive intertidal zones, it does provide some general habitat in the form of shallow wetlands that may support the species. Potential to occur
<i>Callocephalon fimbriatum</i>	Gang-gang Cockatoo	Endangered	Endangered	Gang-gangs prefer forests and woodlands in the mountains, with dense shrub understories. They migrate short distances during winter into more open habitats, but must migrate back to denser forests to breed, because they need tall trees to build nests.	PMST, VBA	37	27/06/2023	The species has numerous records within the Locality, adjacent State forest and environmental flora and fauna reserves. The Referral Area does contain some small areas of eucalypt woodland; however, they are small and heavily fragmented. Known to occur
<i>Calyptorhynchus lathami lathami</i>	South-eastern Glossy Black-Cockatoo	Vulnerable	Vulnerable	Glossy Black-Cockatoo is uncommon but widespread. The species can be found from Mitchell, Queensland, through eastern New South Wales to East Gippsland, Victoria. Its distribution is continuous through the forested parts of the Great Dividing Range but becomes more scattered inland. It has been suggested that they are seasonal migrants in south-east Queensland, likely as a response to changing of resource availability or breeding requirements. Glossy Black-Cockatoo rely on nine species of She-oaks (<i>Allocasuarina</i> spp. and <i>Casuarina</i> spp.) for feeding, with species used varying depending on the region. Birds often only feed on one or two species in one region. In south-east Queensland and north-east New South Wales, the species shows preference for Black She-oak (<i>A. littoralis</i>) and Forest She-oak (<i>A. torulosa</i>), although there are also records of them feeding on Coastal She-oak (<i>C. equisetifolia</i>), and to a lesser extent River She-oak (<i>C. cunninghamiana</i>) and Swamp She-oak (<i>C. glauca</i>) during limited times of the year. Potential nest hollows for the species have the following traits; 1. >8m above ground, 2. Located in branches >30cm in diameter, 3. Branch or stem no more than 45 degrees from vertical; and 4. Minimum entrance diameter of >15cm.	PMST	0	N/A	There are no records of the species within the Referral Area, the closest being an isolated, historical occurrence just outside the Locality to the west. Records are scarce throughout the broader landscape until regular occurrence of a population at Lakes entrance and further east along the coast. Food sources, if present, are likely to be scarce within the Referral Area. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Charadrius bicinctus</i>	Double-banded Plover	Migratory		Double-banded Plover can be found in both coastal and inland areas. During the non-breeding season, it is common in eastern and southern Australia, mainly between the Tropic of Capricorn and western Eyre Peninsula. Seven Victorian sites are recognised as having Australian importance, and six of which are internationally significant. It occurs on muddy, sandy, shingled or sometimes rocky beaches, bays and inlets, harbours, and margins of fresh or saline terrestrial wetlands such as lakes, lagoons and swamps, shallow estuaries and rivers. The species is sometimes associated with coastal lagoons, inland salt lakes and saltwork.	PMST, VBA	25	14/02/2020	Records in the Locality are concentrated within Jack Smith Lake environ with scattered observances throughout the Referral Area. Known to occur
<i>Charadrius leschenaultii</i>	Greater Sand Plover	Vulnerable, Migratory	Vulnerable	In the non-breeding grounds in Australasia, the species is almost entirely coastal, inhabiting littoral and estuarine habitats. They mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons, and inshore reefs, rock platforms, small rocky islands or sand cays on coral. They are occasionally recorded on near-coastal saltworks and saltlakes, including marginal saltmarsh, and on brackish swamps. They seldom occur at shallow freshwater wetland. Greater Sand Plovers usually feed from the surface of wet sand or mud on open intertidal flats of sheltered embayments, lagoons or estuaries. They usually roost on sand-spits and banks on beaches or in tidal lagoons, and occasionally on rocky points, or in adjacent areas of saltmarsh or claypans. They tend to roost further up the beach than other waders, sometimes well above high-tide mark. The species does not breed in Australia.	PMST, VBA	1	08/02/1992	One historical record is documented within the Locality. The Referral Area contains some general habitat features and is within the known distribution range of the species. Potential to occur
<i>Charadrius mongolus</i>	Lesser Sand Plover	Endangered, Migratory	Endangered	In non-breeding grounds in Australia, this species usually occurs in coastal littoral and estuarine environments. It inhabits large intertidal sandflats or mudflats in sheltered bays, harbours and estuaries, and occasionally sandy ocean beaches, coral reefs, wave-cut rock platforms and rocky outcrops. It also sometime occurs in short saltmarsh or among mangroves. The species also inhabits saltworks and near-coastal saltpans, brackish swamps and sandy or silt islands in river beds. The species feeds mostly on extensive, freshly-exposed areas of intertidal sandflats and mudflats in estuaries or beaches, or in shallow ponds in saltworks. They roost near foraging areas, on beaches, banks, spits and banks of sand or shells, and occasionally on rocky spits, islets or reefs.	PMST, VBA	2	1/12/1980	Two historical records of the species exist within the Referral Area. General habitat suitable for the species is present, including small patches of wetland and mudflat environments that may support species. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Egretta garzetta</i>	Little Egret		Endangered	Little Egret is a small white egret found in coastal and inland areas across northern, eastern and south-eastern Australia. Habitat includes tidal mudflats, saltwater and freshwater wetlands, with nests built over water.	VBA	19	5/07/2019	Multiple records are documented within the Locality, along with historical records in the Referral Area. The Referral Area provides some general habitat for the species, including wetlands and shallow water mudflats, and lies within the species' known distribution range. Likely to occur
<i>Falco hypoleucos</i>	Grey Falcon	Vulnerable	Vulnerable	Grey Falcon is distributed sparsely over Australia's arid and semi-arid zones. It prefers arid and semi-arid Australia and frequents timbered lowland plains, particularly Acacia shrublands that are crossed by tree-lined watercourses. This species has also been observed in treeless areas, frequenting tussock grassland and open woodland for foraging. Also occurs near wetlands where surface water attracts prey. Nests chosen are usually in the tallest trees along watercourses, particularly River Red Gum (<i>Eucalyptus camaldulensis</i>) and Coolibah (<i>E. coolabah</i>). Grey Falcon is noted as absent from south of the Great Dividing Range in Victoria.	PMST	0	N/A	There are no recorded occurrences of the species within the Referral Area or Locality. Additionally, no suitable habitat occurs within the Referral Area, however it is within the known distribution of the species. Unlikely to occur
<i>Fregetta grallaria grallaria</i>	White-bellied Storm-Petrel (Tasman Sea)	Vulnerable		The White-bellied Storm-Petrel occurs across sub-tropical and tropical waters in the Tasman Sea, Coral Sea and, possibly, the central Pacific Ocean. In the non-breeding season, it reaches and forages over near-shore waters along the continental shelf of mainland Australia. It breeds, in Australian territory, on offshore islets and rocks in the Lord Howe Island group. It nests in crevices between large volcanic rocks, and in burrows excavated in banks. Breeding colonies are often situated along dykes.	PMST	0	N/A	There are no recorded occurrences of the species within the Referral Area or Locality. Additionally, no suitable habitat occurs within the Referral Area, however it is within the known distribution of the species. Unlikely to occur
<i>Gallinago hardwickii</i>	Latham's Snipe	Vulnerable, Migratory		Latham's Snipe occurs in permanent and ephemeral wetlands up to 2000 m above sea-level. Inhabit open, freshwater wetlands with low, dense vegetation (e.g. swamps, flooded grasslands or heathlands, around bogs and other water bodies).	PMST, VBA	13	13/09/2007	There are multiple records within the Referral Area which contains small amounts of preferred habitat on the eastern boundary that could support the species. Known to occur
<i>Gelochelidon macrotarsa</i>	Australian Gull-billed Tern		Endangered	Found both coastally and inland in a variety of wetland habitats, including beaches, mudflats, freshwater marshes, brackish and salt lakes, floodwaters, sewage farms, irrigated croplands, grasslands and even wet fields.	VBA	9	26/05/2007	Multiple records of the species have been documented within the Locality and Referral Area. The site contains general habitat features, including shallow wetlands and waterlogged areas, which may provide suitable conditions to support the species. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Grantiella picta</i>	Painted Honeyeater	Vulnerable	Vulnerable	The species inhabits mistletoes in eucalypt forests/woodlands, riparian woodlands of Black Box (<i>Eucalyptus largiflorens</i>) and River Red-gum (<i>E. camaldulensis</i>), box-ironbark-yellow gum woodlands, <i>Acacia</i> -dominated woodlands, paperbarks, casuarinas, <i>Callitris</i> , and trees on farmland or in gardens. The species prefers woodlands which contain a higher number of mature trees, as these host more mistletoes.	PMST	0	N/A	There are no recorded occurrences of the species within the Locality or the Referral Area, with the nearest record located approximately 70 km to the north. The Referral Area contains some fragmented patches of eucalypt woodland, and field verification will be required to confirm the presence of mistletoe. The Referral Area is likely outside this species' range and habitat values are generally poor. Unlikely to occur
<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle		Endangered	White-bellied Sea-eagle is a large raptor with a widespread coastal and inland Australian distribution. Preferred habitat is associated with wetlands and waterways, and large trees are typically required for nesting.	VBA	54	17/05/2019	Multiple records within the Referral Area and Locality. The Referral Area has preferred habitat along the entire eastern section that may support the species. Known to occur
<i>Halobaena caerulea</i>	Blue Petrel	Vulnerable		The Blue Petrel previously bred on Macquarie Island itself, but breeding is now restricted to offshore stacks near Macquarie Island. The blue petrel breeds on numerous other subantarctic islands in Indian and Atlantic Oceans including Crozet, Kerguelen, Marion, Prince Edward Island and South Georgia. Blue petrels nest in colonies, laying a single egg in rock crevices or burrows dug among rocks or tussock grasses. The blue petrel forages in Antarctic and subantarctic waters for pelagic crustaceans, fish, cephalopods and insects.	PMST	0	N/A	There are no known records of the species within the Locality or the Referral Area, and none have been documented within a 100 km radius. Unlikely to occur
<i>Hieraaetus morphnoides</i>	Little Eagle		Vulnerable	Occupies open eucalypt forest, woodland or open woodland. Sheoak or <i>Acacia</i> woodlands and riparian woodlands are also used. Nests in tall living trees within a remnant patch, where pairs build a large stick nest in winter.	VBA	12	23/06/2005	There are multiple records of the species within the Locality and Referral Area. The Referral Area does contain areas of preferred habitat, including croplands, woodland habitat, and open forests which the species may utilise. Likely to occur
<i>Hirundapus caudacutus</i>	White-throated Needletail	Vulnerable, Migratory	Vulnerable	In Australia, the White-throated Needletail is almost exclusively aerial, from heights of less than 1 m up to more than 1000 m above the ground. Although they occur over most types of habitat they are probably recorded most often above wooded areas, including open forest and rainforest, and may also fly between trees or in clearings, below the canopy, but they are less commonly recorded flying above woodland.	PMST, VBA	21	9/02/2019	Records of the species have been observed within the Locality and the Referral Area. Although the species is typically aerial, it is occasionally known to stop over in woodland habitats. The Referral Area contains some woodland patches that could potentially be utilised by the species. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Hydroprogne caspia</i>	Caspian Tern	Migratory	Vulnerable	The largest tern in Australia, Caspian Tern has long, slender backswept wings and a slightly forked tail. The heavy bill is red with a dusky tip. Caspian Tern has a white body, with a black and white streaked crown from bill to nape and a short shaggy crest. Preferred habitat includes sheltered coastal embayments and nearby terrestrial waterways and waterbodies.	VBA	75	25/04/2021	There are multiple records of the species within the Referral Area and along 90 mile beach. General habitat for the species is present along with coastal stretches of the Referral Area. Known to occur
<i>Ixobrychus dubius</i>	Australian Little Bittern		Endangered	Occurs in diverse freshwater habitats, mainly where tall rushes, reeds, Typha (cumbungi), shrub thickets or other dense cover is inundated by at least 30cm of water. It can be found in vast swamps, often inhabits small patches of dense wetland vegetation such as Typha along drains or in small urban lakes (Birdlife Australia).	VBA	1	04/05/1996	One historical record within Locality. No recent records within the Locality or the Referral Area, with the closest record located approximately 40 km north of the Referral Area. The Referral Area does contain sections of preferred and general habitat, in the form of wetland and shallow water habitats. Potential to occur
<i>Lathamus discolor</i>	Swift Parrot	Critically Endangered	Critically Endangered	On the mainland they occur in areas where eucalypts are flowering profusely or where there are abundant lerp (from sap-sucking bugs) infestations. Favoured feed trees include winter flowering species such as Swamp Mahogany (<i>Eucalyptus robusta</i>), Spotted Gum (<i>Corymbia maculata</i>), Red Bloodwood (<i>C. gummifera</i>), Forest Red-gum (<i>E. tereticornis</i>), Mugga Ironbark (<i>E. sideroxylon</i>), and White Box (<i>E. albens</i>).	PMST, VBA	2	16/04/2017	Multiple records within the Locality. The species does have some preferred habitat within the Referral Area such as plantations, patches of eucalypt woodland that the species may utilise. Likely to occur
<i>Lewinia pectoralis</i>	Lewin's Rail		Vulnerable	Lewin's Rail mostly inhabits wetland areas with dense vegetation, including wetlands, farm dams, swamps, saline lakes and river flats where they usually forage around the water's edge in shallow water and close to cover for a variety of aquatic plants and invertebrates.	VBA	2	24/10/2010	There are two records of the species within the Locality. The species has sections of preferred habitat in the form of wetland environments within the Referral Area. Likely to occur
<i>Limosa lapponica</i>	Bar-tailed Godwit	Endangered, Migratory	Vulnerable	Bar-tailed Godwit (western Alaskan) occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats. Foraging habitat: Bar-tailed Godwit (western Alaskan) 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. Breeding habitat: The migratory bar-tailed godwit (western Alaskan) does not breed in Australia.	VBA	22	6/02/2010	Multiple records of the species have been documented within the Locality, particularly in estuarine environments. The Referral Area contains sections of general habitat that may support the species. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Limosa lapponica baueri</i>	Nunivak Bar-tailed Godwit, Western Alaskan Bar-tailed Godwit			In Australia, Alaskan bar-tailed godwit mainly occurs along the north and east coasts. Bar-tailed godwits usually forage near the edge of water or in shallow water within tidal estuaries and harbours. Most feeding takes place on exposed sandy or soft mud substrates on intertidal flats and beaches. Roosting tends to occur on large intertidal sandflats, spits, and banks. Less frequently, roosting occurs within mudflats, estuaries, coastal lagoons and bays.	PMST	0	N/A	There are no known records of the species within the Locality or the Referral Area, nor in proximity. However, the Referral Area is within the species' known distribution range and contains general habitat that may support the species. Potential to occur
<i>Limosa limosa</i>	Black-tailed Godwit	Endangered, Migratory	Critically Endangered	Foraging: Like most shorebird species, black-tailed godwits exhibit substantial site-specific differences in their foraging behaviour. Feeding habitat includes areas of mud or soft, wet sand within sandflats, intertidal mudflats, saltmarshes, and the beaches of oceanic coastlines, bays, and estuaries. In general, feeding takes place over the whole tidal range; however, most populations will likely spend disproportionately large amounts of time foraging on the upper tidal flats. Breeding: Black-tailed godwits nest in the northern hemisphere summer. Breeding takes place in areas of lowland wet meadow, or grassy marshes and damp pastures. Breeding may also take place within areas of moorland bog. Roosting: Black-tailed godwits are primarily a coastal species. They are usually found in sheltered bays, estuaries, and lagoons with large intertidal mudflats and/or sandflats. Further inland, the species can also be found around muddy lakes and within wetlands with water less than 10 cm deep. The species has also been recorded in wet fields and sewerage treatment works.	PMST, VBA	5	11/02/1989	The species has multiple historical records within the Locality and Referral Area. General habitat for the species is present within the Referral Area. Potential to occur
<i>Melanodryas cucullata cucullata</i>	South-eastern Hooded Robin	Endangered		Prefers lightly wooded country, usually open eucalypt woodland, <i>Acacia</i> scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.	PMST	0	N/A	The species has not been recorded within the Locality or within a 100 km radius of the Referral Area and has not been observed in southern Victoria region for many years. Unlikely to occur
<i>Neophema chrysogaster</i>	Orange-bellied Parrot	Critically Endangered	Critically Endangered	On the mainland, the Orange-bellied Parrot spends winter mostly within 3 km of the coast in sheltered coastal habitats including bays, lagoons, estuaries, coastal dunes and saltmarshes. The species also inhabits small islands and peninsulas and occasionally saltworks and golf courses. Birds forage in low samphire herbland or taller coastal shrubland. They breed in forests on the west coast of Tasmania dominated by Smithton Peppermints, <i>Eucalyptus nitida</i> , but tend to avoid extensive tracts of temperate rainforest.	PMST, VBA	17	11/07/2020	Multiple historical records present within the Referral Area and Locality. Record occurs within estuarine wetland and coastal marsh habitat. Suitable habitat is present within the Referral Area. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Neophema chrysostoma</i>	Blue-winged Parrot	Vulnerable		Inhabits a range of habitats from coastal, sub-coastal and inland areas, through to semi-arid zones. They tend to favour grasslands and grassy woodlands and are often found near wetlands both near the coast and in semi-arid zones.	PMST, VBA	24	23/04/2019	Multiple records of the species have been documented within the Locality, including several historical records within the Referral Area. The Referral Area supports general habitat characteristics typical of the species. Being semi-migratory, it is likely this species could revisit the Referral Area in the future. Known to occur
<i>Ninox connivens</i>	Barking Owl		Critically Endangered	Barking Owl typically occurs in open woodland and open forests ecosystems and with an abundance of large hollows suitable for nesting (Office of Environment and Heritage, 2024). It is an ambush predator that typically forages at canopy height.	VBA	2	10/10/1992	Only historical records within the Locality. The nearest record is approximately 40 km north-west of the Referral Area. The Referral Area does foster some general habitat in the form of fragmented patches of woodland. Potential to occur
<i>Ninox strenua</i>	Powerful Owl		Vulnerable	A large owl with an eastern Australian distribution. Powerful Owl is found in open forests and woodlands, as well as along sheltered gullies in wet forests with dense understoreys, especially along watercourses. Will sometimes be found in open areas near forests such as farmland and requires large old growth trees to nest.	VBA	14	29/04/2008	Multiple records within the Locality, as well as in the adjacent state forest and reserve. The species does have some general habitat within the Referral Area and has potential to fly within the Referral Area, although the habitat is low quality. Likely to occur
<i>Numenius madagascariensis</i>	Eastern Curlew	Critically Endangered, Migratory	Critically Endangered	"Generally, occupies coastal lakes, inlets, bays and estuarine habitats, and in intertidal mudflats and sometimes saltmarsh of sheltered coasts. Occasionally, the species occurs on ocean beaches (often near estuaries), and coral reefs, rock platforms, or rocky islets. Breeding habitat: this species does not breed in Australia. Foraging habitat: in or at the edge of shallow water, occasionally on exposed algal mats or waterweed, or on banks of beach-cast seagrass or seaweed. Roosting habitat: on sandy spits and islets, especially on dry beach sand near the high-water mark, and among coastal vegetation including low saltmarsh or mangroves. May also roost on wooden oyster leases or other similar structures."	PMST, VBA	33	25/01/2019	Multiple records are present within the Referral Area. Records occur within estuarine wetland and coastal marsh habitat. Suitable habitat is present within the Referral Area. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Numenius phaeopus</i>	Whimbrel	Migratory	Endangered	The Whimbrel is often found on the intertidal mudflats of sheltered coasts. It is also found in harbours, lagoons, estuaries and river deltas, often those with mangroves, but also open, unvegetated mudflats. It is occasionally found on sandy or rocky beaches, on coral or rocky islets, or on intertidal reefs and platforms. It has been infrequently recorded using saline or brackish lakes near coastal areas. It also used saltflats with saltmarsh, or saline grasslands with standing water left after high spring-tides, and in similar habitats in sewage farms and saltfields. There are a small number of inland records from saline lakes and canegrass swamps. It has also been recorded in coastal dunes and on a football field.	PMST	6	31/12/2018	Several records within the Locality, specifically in the southern estuarine environments. The Referral Area does contain general habitat the species may utilise. Likely to occur
<i>Oxyura australis</i>	Blue-billed Duck		Vulnerable	Blue-billed Duck is almost wholly aquatic and is seldom seen on land. Non-breeding flocks, often with several hundred individuals, congregate on large, deep open freshwater dams and lakes in autumn. The daylight hours are spent alone in small, concealed bays within vegetation or communally in large, exposed rafts far from the shore.	VBA	8	08/03/1989	Historical records of the species have been documented within the Referral Area and its Locality. Suitable habitat is present within the Referral Area, which is within the species' known distribution range. Potential to occur
<i>Pezoporus wallicus</i>	Ground Parrot		Endangered	The Ground Parrot is found in scattered populations along the east coast of Australia. The species lives mainly in heathland, sedgeland or on button-grass plains.	VBA	2	01/06/1980	Historical records of the species have been documented within both the Locality and the Referral Area. The Referral Area lies within the species' known distribution range. Some general habitat is present along the eastern boundary of the site, which the species may be able to utilise. Potential to occur
<i>Pluvialis fulva</i>	Pacific Golden Plover		Vulnerable	In non-breeding grounds in Australia this species usually inhabits coastal habitats, though it occasionally occurs around inland wetlands. Pacific Golden Plover usually occurs on beaches, mudflats and sandflats (sometimes in vegetation such as mangroves, low saltmarsh such as Sarcocornia, or beds of seagrass) in sheltered areas including harbours, estuaries and lagoons, and also in evaporation ponds in saltworks. It is less often recorded in terrestrial habitats, usually wetlands such as fresh, brackish or saline lakes, billabongs, pools, swamps and wet claypans, especially those with muddy margins and often with submerged vegetation or short emergent grass. Other terrestrial habitats inhabited include short (or, occasionally, long) grass in paddocks, crops or airstrips, or ploughed or recently burnt areas, and they are very occasionally recorded well away from water.	VBA	17	31/12/2018	The species has been recorded multiple times within the Locality. The Referral Area contains small patches of preferred habitat, as well as areas of general habitat that the species may utilise. It is also commonly observed in the nearby Jack Smith Lake. Likely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Pluvialis squatarola</i>	Grey Plover	Vulnerable, Migratory	Vulnerable	In Australia during the non-breeding season, Grey Plover has been recorded in all states, where it is found along the coasts, and it especially abundant on the western and southern coastlines. Grey Plover occurs almost entirely in coastal areas, where they usually inhabit sheltered embayments, estuaries and lagoons. The species usually roosts in sandy areas, such as on unvegetated sandbanks or sand-spits on sheltered beaches or other sheltered environments. It is also often seen in small numbers on mangrove mudflats. Grey Plover feeds by stop-start running, pecking, and probing, mostly in mud or soft, wet sand of sandflats, intertidal mudflats, saltmarshes, and the beaches of oceanic coastlines, bays, and estuaries	VBA	5	17/11/2007	Only historical records of the species have been documented within the Referral Area and the Locality, with more recent records occurring just south of outside the Referral Area. The species prefers estuarine environments, which are present within the Referral Area. Known to occur
<i>Pycnoptilus floccosus</i>	Pilotbird	Vulnerable	Vulnerable	Pilotbirds live on the ground in dense forests with heavy undergrowth where they forage for insects and occasionally eat seeds and fruits. They appear to be largely sedentary, occupying small territories all year round. They build a domed nest on or near the ground in which they usually lay two eggs. <i>P. floccosus</i> occur at 800–1,500 m in alpine regions.	PMST, VBA	1	01/08/1975	No recent records exist within the Referral Area or Locality, and the area lies south of the species' known distribution. Unlikely to occur
<i>Rostratula australis</i>	Australian Painted Snipe	Endangered	Critically Endangered	Occurs in shallow freshwater (occasionally brackish) wetlands, both ephemeral and permanent, such as lakes, swamps, claypans, inundated or waterlogged grassland/saltmarsh, dams, rice crops, sewage farms and bore drains, generally with a good cover of grasses, rushes and reeds, low scrub, Lignum (<i>Muehlenbeckia</i> spp.), open timber, or samphire. Uncommon summer migrant to Victoria.	PMST, VBA	1	06/05/1979	Only one historical record within the Referral Area. The Referral Area is within the species distribution range and supports general habitat the species may utilise. Known to occur
<i>Spatula rhynchotis</i>	Australasian Shoveler		Vulnerable	Australasian Shoveler is a dabbling duck with a wide beak. They have a southwestern and southeastern Australian distribution. Preferred habitat includes heavily vegetated swamps and large inland wetlands.	VBA	61	19/09/2020	Multiple records occur within the Referral Area. Suitable habitats are present within the Referral Area, including coastal marshes and estuarine wetlands Known to occur
<i>Stagonopleura guttata</i>	Diamond Firetail	Vulnerable	Vulnerable	Diamond Firetail occurs in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees.	PMST	0	N/A	There are no recorded occurrences of the species within the Referral Area or Locality. No suitable habitat is present within the Referral Area. Referral Area is within the known distribution of the species. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Sternula albifrons</i>	Little Tern	Migratory	Critically Endangered	In Australia, Little Terns inhabit sheltered coastal environments, including lagoons, estuaries, river mouths and deltas, lakes, bays, harbours and inlets, especially those with exposed sandbanks or sand-spits, and also on exposed ocean beaches. Little Terns nest on sand-spits, banks, ridges or islets in sheltered coastal environments, such as coastal lakes, estuaries and inlets, and also on wide and flat or gently sloping sandy ocean beaches, and also, occasionally, in sand-dunes. Little Terns forage in shallow waters of estuaries, coastal lagoons and lakes, frequently over channels next to spits and banks or entrances, and often close to breeding colonies. They also forage along open coasts, especially around bars off the entrances to rivers and lagoons, less often at sea, and usually within 50 m of shore.	VBA	21	27/01/2019	Multiple records of the species occur within the locality. Preferred habitats, such as coastal marshes and estuarine wetlands, are present within the Referral Area and may be utilised by the species. Likely to occur
<i>Sternula nereis nereis</i>	Fairy Tern	Vulnerable	Critically Endangered	The Fairy Tern (Australian) nests on sheltered sandy beaches, spits and banks above the high tide line and below vegetation. The subspecies has been found in embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline. The bird roosts on beaches at night.	PMST, VBA	20	23/12/2021	Multiple records of the species occur within the locality, in very close proximity to the Referral Area. Preferred habitats, such as coastal marshes and estuarine wetlands, are present within the Referral Area and may be utilised by the species. Known to occur
<i>Stictonetta naevosa</i>	Freckled Duck		Endangered	The Freckled Duck prefers permanent freshwater swamps and creeks with heavy growth of Cumbungi (bullrushes), lignum or tea-tree. During drier times, Freckled Duck moves from ephemeral (not permanent) breeding swamps to more permanent waters such as lakes, reservoirs, farm dams and sewerage ponds. They generally rest in dense cover.	VBA	4	07/07/2017	Two records of the species exist within the Referral Area. While the species typically prefers inland wetlands, it may occasionally inhabit near-coastal areas. Some inundated areas within the Referral Area provide general habitat, including suitable coastal marshes and estuarine wetlands. Known to occur
<i>Synoicus chinensis</i>	King Quail		Endangered	King Quail are found in tropical and temperate shrublands and grasslands, towards coastal areas. They occur in very dense ground vegetation, such as grass, shrubs, ferns, herbs, at damp or swampy sites.	VBA	1	01/08/1975	Only one historic record within Locality. General habitats present within the Referral Area, however Referral Area is outside the known distribution. Unlikely to occur
<i>Thinornis cucullatus</i>	Hooded Plover	Vulnerable	Vulnerable	In south-eastern Australia, the Hooded Plover prefers broad, flat, open sandy beaches with plenty of seaweed and backed by low sand dunes. In eastern Australia, the Hooded Plover inhabits sandy ocean beaches that are exposed to the constant might of the swell. Densities are lowest on narrow, steep beaches, where there are few or no dunes, and where human activities are most intensive. In the south-west, they also occur on inland salt lakes.	PMST, VBA	45	24/11/2021	Multiple records within the Referral Area and Locality are present. Referral Area has some general habitat the species may utilise. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Tringa brevipes</i>	Grey-tailed Tattler	Migratory	Critically Endangered	The Grey-tailed Tattler is often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats. It can also be found at intertidal rocky, coral or stony reefs as well as platforms and islets that are exposed at low tide. It has been found around shores of rock, shingle, gravel or shells and also on intertidal mudflats in embayments, estuaries and coastal lagoons, especially fringed with mangroves. It is less often on open flat sandy beaches or sandbanks, especially around accumulated seaweed or isolated clumps of dead coral. It is occasionally found around near-coastal wetlands, such as lagoons and lakes and ponds in sewage farms and saltworks. Inland records for the species are rare with sightings on river banks and the edges of rock pools.	VBA	4	23/09/2017	Numerous records of the species are present within the Locality, in particularly the southern section. Records are situated in suitable habitat such as estuarine wetland, riparian scrub, and swamp scrub habitat which are also present in the Referral Area Likely to occur
<i>Tringa nebularia</i>	Common Greenshank	Endangered, Migratory	Endangered	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. Habitats include embayments, harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats and rock platforms. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans and salt flats. It will also use artificial wetlands, including sewage farms and saltworks dams, inundated rice crops and bores. The edges of the wetlands used are generally of mud or clay, occasionally of sand, and may be bare or with emergent or fringing vegetation, including short sedges and saltmarsh, mangroves, thickets of rushes, and dead or live trees.	PMST, VBA	30	5/07/2019	Numerous records of the species are present within the Locality, with historical records documented in the Referral Area. These records are associated with suitable habitats such as estuarine wetlands, riparian scrub, and swamp scrub, all of which are present within the Referral Area. Known to occur
<i>Tringa stagnatilis</i>	Marsh Sandpiper	Migratory	Endangered	The Marsh Sandpiper lives in permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats and also regularly at sewage farms and saltworks. They are recorded less often at reservoirs, waterholes, soaks, bore-drain swamps and flooded inland lakes. The Marsh Sandpiper usually forages in shallow water at the edge of wetlands. They probe wet mud of mudflats or feed among marshy vegetation. The Marsh Sandpiper has been recorded roosting or loafing on tidal mudflats, near low saltmarsh, and around inland swamps.	VBA	8	24/03/2019	Recent records of the species exist within the Locality, with historical records documented in the Referral Area. General habitat suitable for the species is present within the Referral Area. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Xenus cinereus</i>	Terek Sandpiper	Vulnerable, Migratory	Endangered	Terek Sandpiper is a migratory shorebird, visiting coastal Australia in the non-breeding season. Terek Sandpiper mostly forages in the open, on soft wet intertidal mudflats or in sheltered estuaries, embayments, harbours or lagoons. The species has also been recorded on islets, mudbanks, sandbanks and spits, and near mangroves and occasionally in samphire (<i>Halosarcia</i> spp.). Birds are seldom near the edge of water, however, birds may wade into the water. The species often occur in small numbers on the mudflats among much larger flocks of other migratory shorebirds, especially Red-necked Stint and Curlew Sandpiper. For roosting, Terek Sandpiper often inhabit sheltered coastal mudflats, including muddy sections of mangrove swamps. The species generally roosts communally amongst mangroves or dead trees, often with related shorebird species.	PMST, VBA	2	29/11/1977	Historical records exist for the species within the Referral Area and Locality. General habitat is present within the Referral Area. Known to occur
Mammals								
<i>Antechinus minimus maritimus</i>	Swamp Antechinus (mainland)	Vulnerable		Swamp Antechinus (mainland) is a terrestrial insectivorous marsupial. It mainly occurs in damp areas, particularly at sites with dense vegetation at about 1–2 m above ground level. Its habitat includes dense wet heathlands, tussock grasslands, sedgeland, damp gullies, swamps and some shrubby woodlands, often in landscape settings with little exposure to the sun. In the south-east of South Australia, the subspecies is heavily reliant on silky tea-tree (<i>Leptospermum lanigerum</i>) dominated wetlands. It appears to be more of a habitat specialist than the more common species it is frequently found to co-occupy habitat with (e.g. Bush Rats (<i>Rattus fuscipes</i>), Swamp Rats (<i>R. lutreolus</i>) and introduced House Mouse (<i>Mus musculus</i>). Its diet includes a wide range of invertebrates, particularly moth larvae and beetles, and some small vertebrates and seeds.	PMST	0	N/A	The nearest recorded occurrence of the species is approximately 60 km south of the Referral Area, within Wilsons Promontory National Park. While the species is known to inhabit coastal damp environments, it has not been documented near the Referral Area. Unlikely to occur
<i>Dasyurus maculatus maculatus</i> (SE mainland population)	Tiger Quoll (southeastern mainland population)	Endangered		Spotted-tailed Quoll is a mainly forest dependent species but occurs in a variety of habitats including closed forests (including temperate and sub-tropical rainforest), tall eucalypt forests, open woodlands, open forests, drier rainshadow woodlands and coastal heathlands. During the day the species shelters in fallen logs, boulder piles, burrows, tree hollows and occasionally under dwellings.	PMST	0	N/A	No records exist within the Referral Area or Locality. The closest record is 50 km north of the Study Area (from 2012). The species commonly in habitats intact woodland and tall eucalypt forest environments. The Referral Area does have limited fragmented patches of eucalypt woodland, however, majority of the Referral Area is agricultural lands. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Isoodon obesulus obesulus</i>	Southern Brown Bandicoot (south-eastern)	Endangered		Southern Brown Bandicoot (eastern) is known to inhabit a variety of habitats including heathland, shrubland, sedgeland, heathy open forest and woodland and are usually associated with infertile, sandy and well drained soils, but can be found in a range of soil types. Within these vegetation communities they typically inhabit areas of dense ground cover. Species experts define suitable habitat for Southern Brown Bandicoot (eastern) to be any patches of native or exotic vegetation, within their distribution, which contains understorey vegetation structure with 50–80% average foliage density in the 0.2–1 m height range. In areas where native habitats have been degraded or diminished, exotic vegetation, such as Blackberry (<i>Rubus</i> spp.), can and often does, provide important habitat. Southern Brown Bandicoot (eastern) uses dense, low vegetation for nest and shelter sites, construct leaf/grass nests in depressions within this vegetation and possibly also dig burrows. In south-eastern South Australia and near Sydney, Grass Tree (<i>Xanthorrhoea</i> spp.) was found to be particularly important for Southern Brown Bandicoot (eastern), with animals establishing their nests within the `skirts' of dead foliage that reach the ground. Coarse woody debris is also important, as logs may offer shelter and nesting sites. In northern Sydney, Southern Brown Bandicoot (eastern) has also demonstrated opportunistic use of spaces under rocks and burrows created by other animals. The subspecies may dig its own burrows to avoid extreme weather conditions and fire.	PMST	0	N/A	There are no known records of the species within the Locality or the Referral Area, with the closest occurrence located approximately 50 km to the south. While the species typically inhabits heathland, scrub, and woodland environments, only limited general habitat of this type is present within the Referral Area. Unlikely to occur
<i>Mastacomys fuscus mordicus</i>	Broad-toothed Rat	Endangered		Broad-toothed Rat (mainland) is now predominantly found on sites that have a cooler climate, significant annual rainfall (> 1000 mm), a plentiful food supply and adequate vegetative cover. Currently most such sites are at higher elevations (> 1500m), although the subspecies is also found in some coastal and foothill areas. The subspecies occupies a variety of areas across its range, but typically is highly selective in any region. Preferred habitat includes alpine and subalpine heathlands, grassland adjacent to boulder outcrops, swamps, sedgelands, coastal grassy or shrubby dunes, and sometimes forests with grassy understories. Habitat suitability is largely determined by the availability of cover and grasses. Proximity to drainage lines is also important, with a decreasing likelihood of detecting the subspecies with increasing distance from a drainage line. Drainage lines are likely to support a higher density and complexity of vegetation, and a higher abundance of grasses. In mainland alpine areas its preferred habitat has rocks, grasses and shrubs (including <i>Poa</i> , <i>Phebalium</i> and <i>Prostanthera</i> species).	PMST	0	N/A	There are no records of the species within the Locality or the Referral Area, with the closest known occurrence approximately 70 km to the north. Although the Referral Area is within the species' known distribution range, it only contains low-quality habitat that may offer limited suitability. Unlikely to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Petauroides volans</i>	Southern Greater Glider	Endangered	Endangered	"Habitat attributes (but not necessarily all attributes), such as live and dead hollow-bearing trees for denning, feed trees, large trees, habitat connectivity across the landscape. Associated trees include; <i>Corymbia citriodora</i>, <i>Eucalyptus moluccana</i>, <i>E. tereticornis</i>, <i>E. crebra</i>, <i>C. intermedia</i> and <i>E. portuensis</i>. Size of trees is also important for greater gliders, with trees > 30 cm Diameter at Standard Height (DSH) preferentially selected for foraging and > 50 cm DSH for denning. Trees > 50 cm DSH are more likely to contain suitable hollows for sheltering by greater gliders. Hollow-bearing trees are an essential component of greater glider habitat, and their presence or absence may be used to indicate habitat suitability for greater gliders."	PMST, VBA	64	17/08/2022	Multiple records within the Locality and adjacent state forest and environmental reserve. Limited suitable habitat such as plains grassy woodland and lowland woodlands occurs within the Referral Area, however it occurs in scattered patches. Referral Area is within the known distribution of the species. Likely to occur
<i>Petaurus australis australis</i>	Yellow-bellied Glider (south-eastern)	Vulnerable	Vulnerable	Yellow-bellied Glider is a large, active, sociable and vocal glider, found along the eastern coast to the western slopes of the Great Dividing Range, from southern Queensland to Victoria. Occur in tall mature eucalypt forest generally in areas with high rainfall and nutrient rich soils. Forest type preferences vary with latitude and elevation; mixed coastal forests to dry escarpment forests in the north; moist coastal gullies and creek flats to tall montane forests in the south. Typically prefers mature old growth forest that provides suitable trees for foraging and shelter.	PMST, VBA	2	11/04/2006	Records of the species exist within the Locality, including areas of State Forest. The species typically inhabits open sclerophyll forests, and while the Referral Area contains only small, fragmented patches of woodland, these may still provide suitable habitat. Likely to occur
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale		Vulnerable	The Brush-tailed Phascogale inhabits open dry sclerophyll forests and woodlands with little ground cover, typically associated with box, ironbark and stringybark eucalyptus. In Victoria, the Brush-tailed Phascogale now has a fragmented distribution, to the east and north-east of Melbourne, central Victoria around Ballarat, Heathcote and Bendigo; north-eastern Victoria from Broadford to Wodonga; the Brisbane Ranges north-east of Geelong; and far western Victoria from Mt Eccles to Apsley.	VBA	1	30/04/1962	There are no recent records of the species within the Referral Area or Locality. Some fragmented woodland habitat is present in the Referral Area, however, is heavily fragmented. Referral Area is outside the species distribution. Unlikely to occur
<i>Potorous tridactylus trisulcatus</i>	Long-nosed Potoroo	Vulnerable	Vulnerable	The long-nosed potoroo occurs in a range of vegetation types from coastal scrub and heathy woodland to wet sclerophyll forest and rainforest. The optimum habitat has a dense understorey layer to provide cover, but with sufficient open space beneath the sub-canopy to allow foraging.	PMST	0	N/A	The species has no recorded occurrences within the Referral Area or Locality. Heathy woodland and coastal scrub habitats are present, and the area is within the species' known distribution. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Pseudomys novaehollandiae</i>	New Holland Mouse	Vulnerable	Endangered	Across the species' range New Holland Mouse is known to inhabit open heathlands, open woodlands with a heathland understorey, and vegetated sand dunes.	PMST, VBA	7	01/02/1978	Only historic records exist within the Referral Area or Locality, however, the area is within the species' known distribution and contains general habitat types such as coastal heath, woodlands, and grasslands that may be suitable. Potential to occur
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	Vulnerable	Vulnerable	Grey-headed Flying-fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, <i>Melaleuca</i> swamps and <i>Banksia</i> woodlands. Roost sites are typically located near water, such as lakes, rivers or the coast.	PMST, VBA	1	01/02/2017	Recorded from both eastern and western sides of the Referral Area. Preferred woodland habitat occurs within. Flying-fox camp previously recorded within Woodside (within the buffer area) in 2017 containing approximately 2500 to 9999 individuals as per the DCCEEW flying-fox database. However, no camp was observed since 2018. Likely to occur
Fish								
<i>Galaxiella pusilla</i>	Dwarf Galaxias	Endangered	Endangered	Eastern Dwarf Galaxias has broad habitat requirements and occurs in slow flowing and still, shallow, permanent and temporary freshwater habitats such as swamps, drains and the backwaters of streams and creeks, often (but not always) containing dense aquatic macrophytes and emergent plants. In larger pools, the species is usually found amongst marginal vegetation. Some wetlands where it occurs may partially or completely dry up during summer (Humphries 1986) and such wetlands rely on seasonal flooding plus linkages to other sites where the species occurs, for recolonisation. Wetlands connected to a more permanent waterbody (such as river or creek) may also be vital to their long-term survival (particularly during extended dry conditions) and must therefore be considered as part of the habitat requirement critical to survival.	VBA	1	8/17/1979	One historical record of the species exists within the Locality, with no recent records documented in either the Locality or the Referral Area. The Referral Area contains multiple creeks and drainage lines, which may be considered general habitat for the species. Additionally, the Referral Area lies within the species' known distribution range. Potential to occur
<i>Macquaria australasica</i>	Macquarie Perch	Endangered	Endangered	Macquarie Perch is a riverine, schooling species. It prefers clear water and deep, rocky holes with lots of cover. As well as aquatic vegetation, additional cover may comprise of large boulders, debris and overhanging banks. Spawning occurs just above riffles (shallow running water). Populations may survive in impoundments if able to access suitable spawning sites.	VBA	1	11/1/1926	One historical record of the species within the Locality. Additionally, the Referral Area is outside the species known distribution range. Unlikely to occur
<i>Nannoperca sp. 1</i>	Flinders Pygmy Perch		Vulnerable	Flinders Pygmy Perch is a small, laterally compressed fish which grows to a maximum size of 85 mm. Inhabits slow or still waters with abundant aquatic vegetation, including lakes, ponds and slow-flowing rivers and creeks. along with pools in moderately flowing streams.	VBA	13	1/5/2023	Records of the species exist within the Locality. The closest record of the species is within Latrobe River near the township of Sale. The Referral Area contains some watercourses that could be used as general habitat, however, the water may incur to much salinity. Potential to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Prototroctes maraena</i>	Australian Grayling	Vulnerable	Endangered	Dark green to dark grey fish with silvery sides and a dark mid-lateral stripe. Adults live and breed in freshwater rivers, and the larvae are swept downstream into coastal waters. Juveniles then remain in marine waters for about six months before returning to the freshwater adult habitat.	VBA, PMST	2	23/02/1976	Only historical records have been documented within the Locality. Watercourses in the Referral Area may have high salinity levels, and field verification is required to assess stream water quality. Unlikely to occur
Amphibians								
<i>Heleioporus australiacus flavopunctatus</i>	Southern Giant Burrowing Frog	Endangered		The southern giant burrowing frog is found in New South Wales (NSW) and Victoria, distributed from the coast to the adjacent ranges 100 km inland at elevations up to 1000 metres. The species has been recorded in a wide range of forest communities on a variety of soils (except clay-based soils), including dry open sclerophyll forest, dense wet sclerophyll forest, tall open montane forest, tall open coastal slope forest, and montane woodland and heathland. The southern giant burrowing frog has rarely been recorded from cleared land.	PMST	0	N/A	There are no records of the species within the Locality or the Referral Area, with the nearest known occurrence located approximately 80 km to the north. Additionally, the Referral Area is outside the species' known distribution range. While some patches of woodland habitat are present on site, they are heavily fragmented and unlikely to provide high-quality habitat. Unlikely to occur
<i>Litoria aurea</i>	Green and Golden Bell Frog	Vulnerable		In Victoria, Green and Golden Bell Frog has been recorded in a range of lentic (still water) and terrestrial habitats in the coastal plains and low foothills of the hinterland including lowland forest, Banksia woodland, wet heath land, riparian scrub complex, riparian forest, damp forest, shrubby dry forest, limestone box woodland and cleared pastoral areas. Breeding habitat for Green and Golden Bell Frog in Victoria includes dams in both forested and cleared areas, swamps in farmlands, gravel pits, billabongs, marshes, coastal lagoon wetlands, wet swale herb lands and isolated streamside pools.	PMST	0	N/A	There are no records of the species within the Locality or Referral Area, the closest record is 17 km north of the Referral Area. The Referral Area does contain general habitat in the form of several riparian areas and wetland habitat. The Referral Area is within the species known distribution range. Potential to occur
<i>Litoria raniformis</i>	Growling Grass Frog	Vulnerable	Vulnerable	Growling Grass Frog is a habitat generalist, occupying a wide variety of still or slow-moving waterbodies across its distribution, including floodplain wetlands, forested wetlands, ephemeral swamps, oxbow lagoons, pools within streams, farm dams, irrigation canals, and disused quarries. Population viability is greatest where there is a high proportion of emerged, submerged, and floating aquatic vegetation, including Cumbungi (<i>Typha</i> spp.), Common Reed (<i>Phragmites australis</i>) and Spike Sedges (<i>Eleocharis</i> spp.). The southern bell frog prefers open terrestrial habitats around waterbodies, which facilitate foraging and movement. Frogs from the northern lineage occupy large wetland complexes in semi-arid areas, some many thousands of hectares in size, with breeding occurring in ephemeral waterbodies adjacent to permanent waterbodies. These wetlands are dominated by River Red-gum (<i>Eucalyptus camaldulensis</i>), Black Box (<i>E. largiflorens</i>), Nitre Goosefoot (<i>Chenopodium nitrariaceum</i>), and Lignum (<i>Muehlenbeckia</i> spp.) and <i>Typha</i> species.	PMST, VBA	11	03/10/1977	There are historical records of the species within the Referral Area, with more recent ones in proximity. The Referral Area supports various wetland habitats that may provide habitat for this species. Known to occur

Scientific Name	Common Name	EPBC Act	FFG Act	Notes	Source	No. Records	Last Record	Likelihood of Occurrence
<i>Pseudophryne semimarmorata</i>	Southern Toadlet		Endangered	Southern Toadlet is generally found at lower elevations in damp areas usually under leaf litter, logs or rocks. It is recorded from forests, woodlands, heaths and grasslands but not necessarily near permanent water.	VBA	68	20/03/2022	Numerous records are present within the Referral Area and Locality. Records are situated in suitable habitat such as estuarine wetland, heathy woodland, riparian scrub, and swamp scrub habitat damp sand herb-rich woodland, sedge wetland, and swamp scrub/plains grassland mosaic which are present within the Referral Area. Known to occur
<i>Uperoleia martini</i>	Martin's Toadlet	Endangered	Critically Endangered	Martin's Toadlet primarily occurs in moderately sized permanent or semipermanent swamps and ponds surrounded by woodland or coastal scrub but has also been found around dams and flooded grassland.	PMST, VBA	2	23/09/1998	Multiple records of the species are present within the Locality, particularly in plains grassy woodlands and cleared agricultural dam habitats, which also occur across the Referral Area. Likely to occur
Reptiles								
<i>Lissolepis coventryi</i>	Swamp Skink	Endangered	Endangered	Swamp Skink occupies densely vegetated freshwater and saltwater wetlands in south-eastern Australia which have natural hydrological regimes and contain shelter sites. Habitat typically has little to no overstorey. Swamp Skink is generally found in areas of poorly drained, peaty soils, except for in coastal saltmarsh sites which often have sandy substrates.	VBA, PMST	3	12/9/1997	No records exist within the Locality, the closest record is 27 km north-east of the Referral Area. The Referral Area does contain small sections of general habitat in the form of wetland and damp swamp environments. The Referral Area is also within the species known distribution range. Potential to occur
<i>Pseudemoia rawlinsoni</i>	Glossy Grass Skink		Endangered	Occupies humid and densely vegetated swampy areas such as marshland and the margins of creeks, swamps and lakes (Museums Victoria Collections).	VBA	9	6/10/2004	Records have been documented within the Locality. General habitat is present on site within riparian zones along small creeks that the species may utilise. Potential to occur
<i>Varanus varius</i>	Lace Monitor		Endangered	Lace Monitor is the second-largest monitor in Australia, native to eastern Australia. They are active lizards that forage over large areas. Their diet is varied, including insects, reptiles, small mammals, birds, eggs and carrion. They are a semi-arboreal species, mainly moving about in trees and sheltering in tree hollows. Preferred habitat includes dry sclerophyll forests and woodlands.	VBA	24	29/09/2023	Numerous records are present within the Referral Area and Locality. Records are situated in suitable habitat such as estuarine wetland, heathy woodland, riparian scrub, and swamp scrub habitat damp sand herb-rich woodland, sedge wetland, and swamp scrub/plains grassland mosaic which are present within the Referral Area. Known to occur

Notes: Species considered to have at least the potential to occur in the Referral Area are highlighted. EPBC Status = listing status under the EPBC Act. FFG Status = listing status under the FFG Act. Source = records exist in the VBA and/or habitat has been modelled to occur in the PMST.



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