EPBC referral self assessment

Corop Solar Farm

For

BNRG Leeson P/L

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Rev	Purpose	Author	Reviewer	Issue Date
A	Draft report for client review	E. Eaton	C. Alderton	1 October 2025
B	Draft report with updated maps for client review	J. Sharma	C. Alderton	22 October 2025

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TABLES

APPENDICES

1.0 Introduction

Green Edge Environmental Pty Ltd has been engaged by BNRG Leeson Pty Ltd, to undertake an Environment Protection and Biodiversity Conservation (EPBC) referral self-assessment of the potential impacts of a proposed 440 MW (DC) solar farm near Rushworth, Victoria. The land proposed for the solar farm comprises approximately 1,000 hectares, and is made up of the following (Appendix A):

Lot and Plan Numbers Stage 1 (south)

- 35\PP3162
- 70\PP3162
- 70A\PP3162
- 70C\PP3162
- 70E\PP3162
- 70D\PP3162
- 70B\PP3162

Lot and Plan Numbers Stage 2 (north)

- 6B\PP3162
- 32\PP3162
- 70F\PP3162
- 70G\PP3162
- 70H\PP3162
- 70K\PP3162

The site is bounded by Old Corop Road to the south, private land to the east, Geodetic Road North to the west, and Carag Road to the north. The study area falls within the Campaspe Shire Council Local Government Area (LGA) and the Goulburn Broken Catchment Management Authority (GB CMA).

The proposed solar farm area has been highly modified and disrupted through past and ongoing agricultural activities, including cropping, grazing, and the construction of water management infrastructure. Minor disruption to potential habitat may occur during construction, particularly around farm dams that are occasionally used by common species. However, these impacts are considered negligible given the abundance of similar water resources in the surrounding landscape. Small remnants of native vegetation and areas of natural regeneration are present and have been fenced to prevent further disturbance.

Despite these remnant features, the site provides limited ecological value due to ongoing farm management practices and the absence of substantial woodland habitat. Key habitat requirements for threatened species such as dense ground cover, understory vegetation, fallen logs, and hollow-bearing trees are largely absent. Some scattered native trees occur on site, but impacts have been avoided through project design.

1.1 Methodology

This EPBC referral self assessment was undertaken primarily as a desktop review of the results concluded in the flora and fauna assessment in 2019. This site assessment was

completed to identify any new triggers under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The EPBC Protected Matters Search Tool (PMST) (12 September 2025) was used to assess the project impacts against the Matters of National Environmental Significance (MNES) that could be impacted by the proposed activity (Appendix B). Including matters previously assessed as part of the 2019 (revised 2022) flora and fauna assessment and matters newly listed under the EPBC Act.

2.0 Environmental Protection and Biodiversity Conservation Act

The EPBC Act is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance.

The objectives of the EPBC Act are to:

- provide for the protection of the environment, especially matters of national environmental significance
- conserve Australian biodiversity
- provide a streamlined national environmental assessment and approvals process
- enhance the protection and management of important natural and cultural places
- control the international movement of plants and animals (wildlife), wildlife specimens and products made or derived from wildlife
- promote ecologically sustainable development through the conservation and ecologically sustainable use of natural resources
- recognise the role of Indigenous people in the conservation and ecologically sustainable use of Australia's biodiversity
- promote the use of Indigenous peoples' knowledge of biodiversity with the involvement of, and in cooperation with, the owners of the knowledge.

2.1 Matters of National Environmental Significance

Under the EPBC Act, actions that have, or are likely to have a significant impact on a matter of national environmental significance (MNES) require approval from the Australian Government Minister for the Environment (the Minister). The Minister will decide whether assessment and approval is required under the EPBC Act. The nine MNES protected under the EPBC Act are:

- world heritage properties
- national heritage places
- wetlands of international importance (listed under the Ramsar Convention)
- listed threatened species and ecological communities
- migratory species protected under international agreements
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mines)
- a water resource, in relation to coal seam gas development and large coal mining development.

If significant impacts are considered likely, and the action is deemed to be a controlled action, then the referral will proceed to the next stage of the process - environmental assessment and approval.

Generally, a significant impact is an action that has an important, notable consequence. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value and quality of the environment that is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts. All of these factors

should be considered when determining whether an action is likely to have a significant impact on the National Heritage values of a place.

Table 1: Summary of MNES

Matters of NES	Direct impact	Indirect impact
Any impact on a Work Heritage property?		
There are no World Heritage properties within the PMST search area (site and a 10km buffer). No impacts will occur	Nil	Nil
Any impact on a National Heritage Place?		
There are no National Heritage Places within the PMST search area. No impacts will occur.	Nil	Nil
Any impact on a wetland of international importance?		
The PMST search identified the site is within the catchment of six wetlands of international importance. • Riverland - 400 - 500km upstream • Hattah-Kulkyne Lakes – 200 – 300km upstream • Gunbower Forest – 50 – 100km upstream • The Coorong and Lakes Alexandrina and Albert Wetland – 400 – 500km upstream • Banrock Station Wetland Complex – 400 – 500km upstream • NSW Central Murray State Forests – 40 – 50km upstream Due to the long distance between the work site to the wetlands of International importance, no negative impacts are expected.	Nil	Nil
Any impact on a listed threatened species or community?		
The PMST identified within the search area, with the following threatened species that could occur, including: • 19 bird species • 1 crustacean species • 3 fish species • 2 frog species • 1 insect species	No direct impacts to either, as these TEC's are not recorded within the works area (Tables 3	No indirect impacts to either, as these TEC's are not recorded within the works area (Tables 3

• 3 mammals • 2 Reptiles • 14 plant species The following threatened ecological communities (TEC) were identified as potentially occurring within the PMST search area: • Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions • Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains • White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland • Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia • Natural Grasslands of the Murray Valley Plains The works will not result in any negative impacts on vegetation or habitat for threatened species; therefore, the proposal is not likely to have a significant impact on the Commonwealth listed threatened species or communities.	and 4).	and 4).
Any impact on listed migratory species?		
The PMST identified 10 migratory species within the search area	No direct impacts to migratory species as the habitat requirements are not within the works area.	No indirect impacts to migratory species as the habitat requirements are not within the works area.
Any impact on a Commonwealth marine area?		
The proposal will not impact on a Commonwealth marine area.	Nil	Nil
Great Barrier Reef Marine Park		
The proposal will not impact of the Great Marrier Reef Maring Park	Nil	Nil
Does the Proposal include a nuclear action (including uranium mining?)		
The proposal does not involve nuclear action.	Nil	Nil
Does the proposal involve development of coal seam gas and/or large coal mine that has the potential to impact on water resources?		

The proposal does not involve the development of coal seam gas and/or large coal mine.	Nil	Nil
Additionally, and impact (direct or indirect on Commonwealth Land?		
The proposal will not impact directly or indirectly on Commonwealth Land.	Nil	Nil

2.2 Significant impact guidelines

The Significant Impact Guidelines state that an action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

- one or more of the National Heritage values to be lost
- one or more of the National Heritage values to be degraded or damaged
- one or more of the National Heritage values to be notably altered, modified, obscured or diminished.

The potential MNES that could be impacted upon by the proposed Corop solar farm project includes:

- wetlands of international importance (listed under the Ramsar Convention)
- listed threatened species
- listed ecological communities
- migratory species protected under international agreements

Table 2 outlines the MNES that could be applicable to the proposed project, provides a description of relevance, identification of the impact guidelines, and provides an impact assessment.

Table 2: Assessment of the proposed Corop Solar Farm project against the identified MNES.

MNES	Description	Significant impact guidelines	Direct impact assessment	Indirect impact assessment
Wetlands of international importance (listed under the Ramsar Convention)	Six listed Wetlands of international importance • Riverland - 400 - 500km upstream • Hattah-Kulkyne Lakes – 200 – 300km upstream • Gunbower Forest – 50 – 100km upstream • The Coorong and Lakes Alexandrina and Albert Wetland – 400 – 500km upstream • Banrock Station Wetland Complex – 400 – 500km upstream • NSW Central Murray State Forests – 40 – 50km upstream	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 • a substantial and measurable change in the hydrological regime of the wetlands, for example, a substantial change to the volume, timing, duration and frequency of ground and surface water flows to and within the wetland • the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the wetland being seriously affected • 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, or • 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.	No direct impacts from the proposed development are envisaged as there are no wetlands of international importance at the site that will be destroyed in the hydrological regime.	Wetlands are located 50-500km upstream. No indirect impacts from the proposed development are envisaged as the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the wetland being seriously affected.
Listed threatened species	The protected matters search tool (PMST)	An action is likely to have a significant impact on a critically endangered or endangered	Tables 3 and 4 identified that the	The proposed project is unlikely

	identified within a 5km buffer 45 listed threatened species	species if there is a real chance or possibility that it will: • lead to a long-term decrease in the size of a population • reduce the area of occupancy of the species • fragment an existing population into two or more populations • adversely affect habitat critical to the survival of a species • disrupt the breeding cycle of a population • modify, destroy, remove, isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline • result in invasive species that are harmful to a critically endangered or endangered species becoming established in the endangered or critically endangered species' habitat • introduce disease that may cause the species to decline, or • interfere with the recovery of the species. An action is likely to have a significant impact on a vulnerable species if there is a real chance or possibility that it will: • lead to a long-term decrease in the size of an important population of a species • reduce the area of occupancy of an important population • fragment an existing important population into two or more populations • adversely affect habitat critical to the survival of a species	proposed project is unlikely to have a direct impact on the EPBC listed flora and fauna in the area, due to previous modification and the lack of habitat for most of the species. In line with the Significant Impact Guidelines 1.1, the project does not trigger any of the criteria that would constitute a significant impact on a threatened species.	to have an indirect impact on the EPBC listed flora and fauna in the area. Where there are potential habitats for threatened species, the impacts will not be significant due to similar habitat surrounding the proposed development site.

		• disrupt the breeding cycle of an important population • modify, destroy, remove or isolate or decrease the availability or quality of habitat to the extent that the species is likely to decline • result in invasive species that are harmful to a vulnerable species becoming established in the vulnerable species' habitat • introduce disease that may cause the species to decline, or • interfere substantially with the recovery of the species. An action will require approval if the action has, will have, or is likely to have a significant impact on a species listed in any of the following categories: • extinct in the wild • critically endangered • endangered, or • vulnerable. An action will also require approval if the action has, will have, or is likely to have a significant impact on an ecological community listed in any of the following categories: • critically endangered, or • endangered.		
Listed threatened ecological communities	Five listed threatened ecological communities: • Buloke Woodlands of the Riverina and Murray-Darling Depression	An action is likely to have a significant impact on a critically endangered or endangered ecological community if there is a real chance or possibility that it will: • reduce the extent of an ecological community • fragment or increase fragmentation of	None of the listed ecological communities were observed in the proposed development area.	None of the listed ecological communities were observed in the proposed development area.

	Bioregions • Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains • White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland • Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia • Natural Grasslands of the Murray Valley Plains	an ecological community, for example by clearing vegetation for roads or transmission lines • adversely affect habitat critical to the survival of an ecological community • 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 • cause a substantial change in the species composition of an occurrence of an ecological community, including causing a decline or loss of functionally important species, for example through regular burning or flora or fauna harvesting • 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, or • interfere with the recovery of an ecological community.		
Migratory species	The PMST identified 10	An action is likely to have a significant impact	As identified in	As identified in

protected under international agreements	listed migratory species within a 5km buffer	on a migratory species if there is a real chance or possibility that it will: • substantially modify (including by fragmenting, altering fire regimes, altering nutrient cycles or altering hydrological cycles), destroy or isolate an area of important habitat for a migratory species • result in an invasive species that is harmful to the migratory species becoming established in an area of important habitat for the migratory species, or • seriously disrupt the lifecycle (breeding, feeding, migration or resting behaviour) of an ecologically significant proportion of the population of a migratory species.	Table 4, it was concluded that the proposed project is highly unlikely to have a direct impact on migratory species. This is due to the extensive modification of the site and the absence of suitable habitat that would otherwise support their presence or use of the area.	Table 4, it was concluded that the proposed project is highly unlikely to result in indirect impacts on migratory species. Given the lack of suitable habitat and the already disturbed condition of the site, the project is not expected to alter ecological processes, degrade adjacent habitats, or otherwise affect migratory species in the surrounding landscape.

3.0 Ecology

The site occurs within the Riverina Interim Biogeographic Regionalisation for Australia (IBRA) bioregion which is characterised with extensive riverine floodplains with low relief associated with the Murray, Murrumbidgee and Lachlan Rivers. Chenopod shrublands and associated grasslands are predominating, with other vegetation types including Box woodlands, Mallee woodlands, native grasslands and wetlands.

The site lies in the Victorian Riverina Bioregion, situated north of the Great Dividing Range. This area is defined by flat to gently undulating landforms developed on recent unconsolidated sediments, including evidence of former stream channels and wide floodplain areas associated with major river systems and prior streams. Alluvial deposits from the Cainozoic period have formed the dominant red-brown earths and texture contrast soils (Chromosols and Sodosols) characteristic of the Riverine Plain.

3.1 Federally listed species listed since approval

A review of MNES protected under the EPBC Act was completed using the PMST obtained on 12 September 2025. Once a species is listed under the EPBC Act its recovery is promoted using conservation advice, recovery plans, and the EPBC Act's assessment and approval provisions. This information was used to develop the impact assessments (Tables 3 and 4) for the threatened species and communities that were identified by the PMST.

A person must not take an action that has, will have, or is likely to have, a significant impact on a listed threatened species or ecological community, without approval from the Minister.

The below impact assessment is a preliminary indication on the impact that the proposed activity will have on a protected threatened species or community and determine the need for further assessment and subsequent approval.

4.0 Mitigation Measures

This section identifies the mitigation measures of the proposed solar farm on ecological values.

- The tree retention zone (12x Diameter at Breast Height) of trees within and adjacent to the works footprint shall be appropriately fenced where it is practically possible to identify 'exclusion zones'
- Implement a vehicle hygiene procedure to limit the spread of weeds
    - Prepared specifically to minimise the introduction and spread of weeds, including their seeds and other reproductive material
    - Correct and thorough clean down of vehicles and machinery to reduce the risk of spreading state and regional priority weeds, soil borne pests and diseases

5.0 Conclusion

Through the EPBC self-assessment of the proposed Corop Solar Farm, we can conclude the following:

- The development is not expected to result in significant impacts to threatened species, migratory species, or listed ecological communities, given the highly modified condition of the site and absence of substantial habitat values
- The likelihood of both direct and indirect impacts on MNES is assessed as unlikely, as the site provides little functional habitat and has been extensively disturbed by previous land uses

Negligible impact is expected to native species and mitigation measures, summarised below, should be adhered to further minimise impacts on the surrounding environment.

- The tree retention zone (12x Diameter at Breast Height) of trees within and adjacent to the works footprint shall be appropriately fenced where it is practically possible to identify 'exclusion zones'
- Implement a vehicle hygiene procedure to limit the spread of weeds
    - Prepared specifically to minimise the introduction and spread of weeds, including their seeds and other reproductive material
    - Correct and thorough clean down of vehicles and machinery to reduce the risk of spreading state and regional priority weeds, soil borne pests and diseases

6.0 References

Department of Climate Change, Energy, the Environment and Water (2025). Protected Matters Search Tool, [Online, accessed 12 September 2025],

https://www.dcceew.gov.au/environment/epbc/protected-matters-search-tool

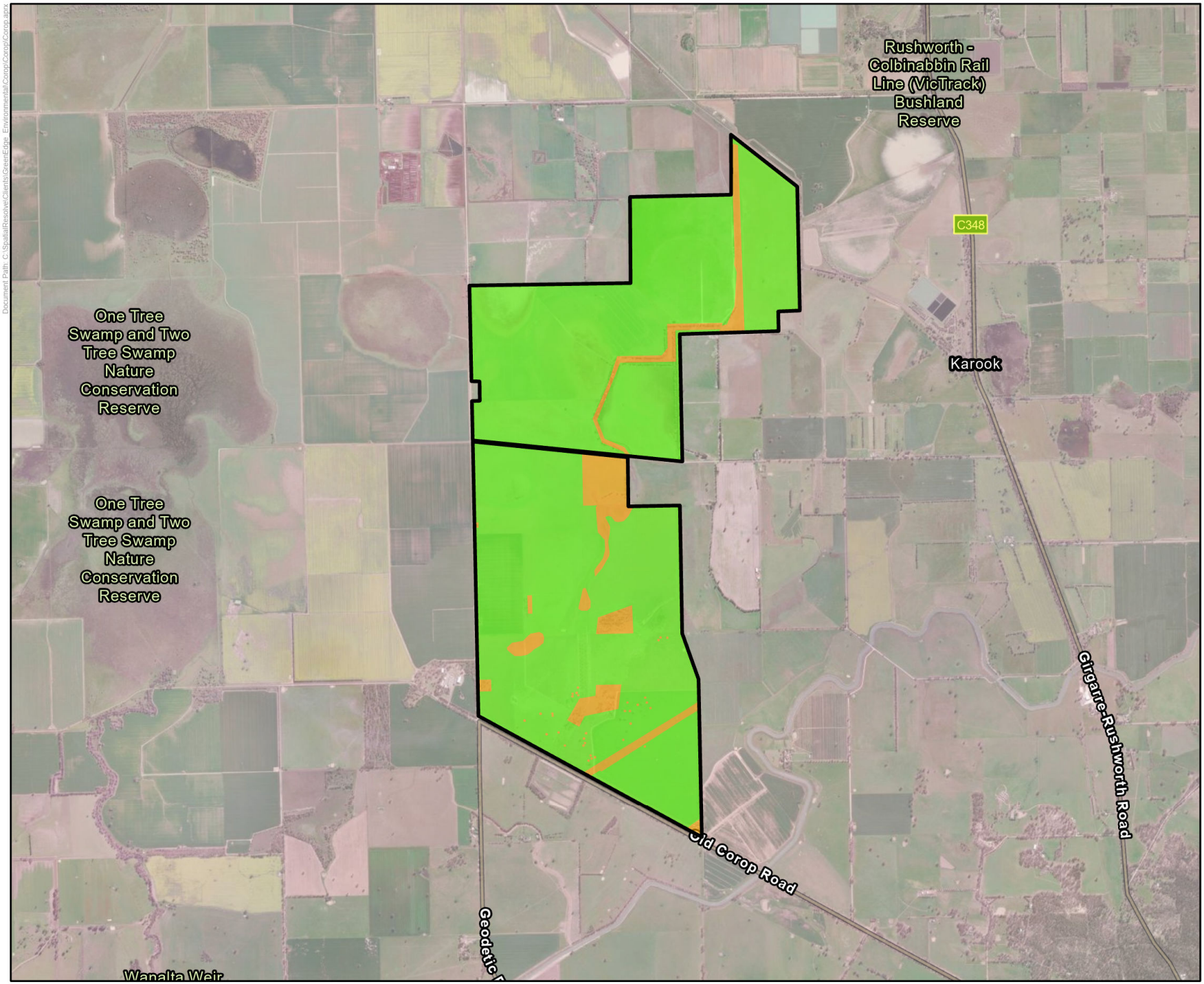
Department of Environment, Land, Water and Planning (2025). Victorian Biodiversity Atlas, [Online, accessed 27 September 2025],

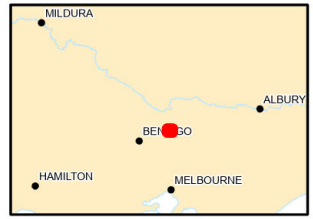
Victorian Biodiversity Atlas

Department of the Environment (2013). Matters of National Environmental Significance Significant impact guidelines 1.1 Environment Protection and Biodiversity Conservation Act 1999, [Online, accessed 27 September 2025],

Matters of National Environmental Significance: Significant Impact Guidelines 1.1

Appendix A: Site layout





LEGEND

- Disturbance Footprint
- Avoidance Area
- Project Area

N

0 200 400 600 800 m

Scale 1:50,000 @ A4

Coordinate System: GDA 1994 MGA Zone 55

greenedge environmental

Corop Solar Farm Layout

Appendix B: Protected Matters Seach Tool results

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: 12-Sep-2025

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	6
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	45
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	19
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

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

State and Territory Reserves:	10
Regional Forest Agreements:	None
Nationally Important Wetlands:	1
EPBC Act Referrals:	6
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
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
Banrock station wetland complex	400 - 500km upstream from Ramsar site	In feature area
Gunbower forest	50 - 100km upstream from Ramsar site	In feature area
Hattah-kulkyne lakes	200 - 300km upstream from Ramsar site	In feature area
Nsw central murray state forests	40 - 50km upstream from Ramsar site	In feature area
Riverland	400 - 500km upstream from Ramsar site	In feature area
The coorong, and lakes alexandrina and albert wetland	400 - 500km upstream from Ramsar site	In feature area

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
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	Endangered	Community known to occur within area	In feature area
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Community likely to occur within area	In feature area
Natural Grasslands of the Murray Valley Plains	Critically Endangered	Community may occur within area	In feature area
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	Critically Endangered	Community likely to occur within area	In feature area

Community Name	Threatened Category	Presence Text	Buffer Status
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community likely to occur within area	In feature area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text	Buffer Status
BIRD			
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour likely to occur within area	In feature area
Aphelocephala leucopsis Southern Whiteface [529]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat known to occur within area	In feature area
Calidris acuminata Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Callocephalon fimbriatum Gang-gang Cockatoo [768]	Endangered	Species or species habitat may occur within area	In buffer area only
Climacteris picumnus victoriae Brown Treecreeper (south-eastern) [67062]	Vulnerable	Species or species habitat known 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
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]	Vulnerable	Species or species habitat known to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area	In feature area
Lathamus discolor Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area	In feature area
Melanodryas cucullata cucullata South-eastern Hooded Robin, Hooded Robin (south-eastern) [67093]	Endangered	Species or species habitat likely to occur within area	In feature area
Neophema chrysostoma Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Polytelis swainsonii Superb Parrot [738]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area	In feature area
Stagonopleura guttata Diamond Firetail [59398]	Vulnerable	Species or species habitat known to occur within area	In feature area
Tringa nebularia Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area	In feature area
CRUSTACEAN			
Euastacus armatus Murray Crayfish [81537]	Vulnerable	Species or species habitat known to occur within area	In feature area
FISH			

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Galaxias rostratus](#) Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
[Maccullochella peelii](#) Murray Cod [66633]	Vulnerable	Species or species habitat may occur within area	In buffer area only
[Macquaria australasica](#) Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	In feature area
FROG			
[Crinia sloanei](#) Sloane's Froglet [59151]	Endangered	Species or species habitat may 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 may occur within area	In feature area
INSECT			
[Synemon plana](#) Golden Sun Moth [25234]	Vulnerable	Species or species habitat may occur within area	In feature area
MAMMAL			
[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 buffer area only
[Nyctophilus corbeni](#) Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may 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 likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Caladenia concolor Crimson Spider-orchid, Maroon Spider-orchid [5505]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Calochilus richiae Bald-tip Beard-orchid [64865]	Endangered	Species or species habitat may occur within area	In buffer area only
Dodonaea procumbens Trailing Hop-bush [12149]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Glycine latrobeana Clover Glycine, Purple Clover [13910]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Lepidium monoplocoides Winged Pepper-cress [9190]	Endangered	Species or species habitat may occur within area	In feature area
Myriophyllum porcatum Ridged Water-milfoil [19919]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Pimelea spinescens subsp. spinescens Plains Rice-flower, Spiny Rice-flower, Prickly Pimelea [21980]	Critically Endangered	Species or species habitat likely to occur within area	In feature area
Prasophyllum validum Sturdy Leek-orchid, Mount Remarkable Leek-orchid [10268]	Vulnerable	Species or species habitat may occur within area	In buffer area only
Sclerolaena napiformis Turnip Copperburr [11742]	Endangered	Species or species habitat likely to occur within area	In feature area
Senecio behrianus Stiff Groundsel, Behr's Groundsel [14030]	Endangered	Species or species habitat known to occur within area	In feature area
Senecio macrocarpus Large-fruit Fireweed, Large-fruit Groundsel [16333]	Vulnerable	Species or species habitat may occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Swainsona murrayana](#)			
Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat known to occur within area	In feature area
[Swainsona plagiotropis](#)			
Red Darling-pea, Red Swainson-pea [10804]	Vulnerable	Species or species habitat likely to occur within area	In buffer area only
REPTILE			
[Aprasia parapulchella](#)			
Pink-tailed Worm-lizard, Pink-tailed Legless Lizard [1665]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Delma impar](#)			
Striped Legless Lizard, Striped Snake-lizard [1649]	Vulnerable	Species or species habitat may occur within area	In buffer area only

Listed Migratory Species			[Resource Information]
Scientific Name	Threatened Category	Presence Text	Buffer Status
Migratory Marine Birds			
[Apus pacificus](#)			
Fork-tailed Swift [678]		Species or species habitat likely to occur within area	In feature area
Migratory 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			
[Actitis hypoleucos](#)			
Common Sandpiper [59309]		Species or species habitat likely to occur within area	In feature area
[Calidris acuminata](#)			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
[Calidris ferruginea](#)			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
Calidris melanotos			
Pectoral Sandpiper [858]		Species or species habitat may 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
Pandion haliaetus			
Osprey [952]		Species or species habitat may occur within area	In feature area
Tringa nebularia			
Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may 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]		Species or species habitat likely 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
Bubulcus ibis as Ardea ibis			
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area	In feature area
Calidris acuminata			
Sharp-tailed Sandpiper [874]	Vulnerable	Species or species habitat likely to occur within area	In feature area
Calidris ferruginea			
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat likely to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area	In feature area
[Chalcites osculans as Chrysococcyx osculans](#) Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine 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
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area	In feature area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat known to occur within area overfly marine area	In feature area
[Lathamus discolor](#) Swift Parrot [744]	Critically Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
[Merops ornatus](#) Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area	In feature area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area	In feature area
[Myiagra cyanoleuca](#) Satin Flycatcher [612]		Species or species habitat known to occur within area overfly marine area	In feature area

Scientific Name	Threatened Category	Presence Text	Buffer Status
[Neophema chrysostoma](#) Blue-winged Parrot [726]	Vulnerable	Species or species habitat likely to occur within area overfly marine area	In feature area
[Pandion haliaetus](#) Osprey [952]		Species or species habitat may occur within area	In feature area
[Rhipidura rufifrons](#) Rufous Fantail [592]		Species or species habitat known to occur within area overfly marine area	In buffer area only
[Rostratula australis as Rostratula benghalensis (sensu lato)](#) Australian Painted Snipe [77037]	Endangered	Species or species habitat known to occur within area overfly marine area	In feature area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]	Endangered	Species or species habitat may occur within area overfly marine area	In feature area

Extra Information

State and Territory Reserves			[Resource Information]
Protected Area Name	Reserve Type	State	Buffer Status
Mansfield Swamp W.R	Natural Features Reserve	VIC	In buffer area only
One Tree Swamp and Two Tree Swamp N.C.R.	Natural Features Reserve	VIC	In buffer area only
Rushworth B.R.	Natural Features Reserve	VIC	In buffer area only
Rushworth - Colbinabbin rail line B.R.	Natural Features Reserve	VIC	In buffer area only
Wallenjoe Swamp W.R	Natural Features Reserve	VIC	In buffer area only
Wanalta B.R.	Natural Features Reserve	VIC	In buffer area only
Waranga I173 B.R.	Natural Features Reserve	VIC	In buffer area only
Waranga I174 B.R.	Natural Features Reserve	VIC	In buffer area only

Protected Area Name	Reserve Type	State	Buffer Status
Waranga I175 B.R.	Natural Features Reserve	VIC	In buffer area only
Whroo N.C.R.	Natural Features Reserve	VIC	In buffer area only

Nationally Important Wetlands

[Resource Information]

Wetland Name	State	Buffer Status
Wallenjoe Wetlands	VIC	In buffer area only

EPBC Act Referrals

[Resource Information]

Title of referral	Reference	Referral Outcome	Assessment Status	Buffer Status
Controlled action				
The Modified Operation of the Goulburn Murray Irrigation District	2009/5123	Controlled Action	Post-Approval	In feature area
Not controlled action				
Deakin Drain 16 Extension, Primary Surface Water Management System Stages 1 & 2	2006/2554	Not Controlled Action	Completed	In feature area
Girgarre Solar Farm, Girgarre, Vic	2018/8266	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)				
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval	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 C: Impact Assessment

Scientific Name	Common name	EPBC Status (Commonwealth)	Habitat requirements	Likelihood of occurrence within Project Area
Pimelea spinescens	Plains Rice-flower, Spiny Rice-flower, Prickly Pimelea	Critically Endangered	Spiny rice-flower is predominantly associated with two threatened ecological communities: 'Natural Temperate Grassland of the Victorian Volcanic Plain and 'Natural Grasslands of the Murray Valley Plains'. The species occurs in grassland or open shrubland, usually developed on clay soils. Plants from more northerly populations occur on red clay complexes, while plants from southern populations occur on heavy grey-black clay loams derived from basalt. Topography is generally flat, but populations may occur on slight rises or in slight depressions prone to temporary inundation. Vegetation is often dominated by Themeda triandra (kangaroo grass), with Austrostipa spp. (speargrass) or Rytidosperma spp. (wallaby grass) commonly associated.	Unlikely to occur due to historic and future management activity. Not likely to occur.
Lepidium monoplocoides	Winged Pepper-cress	Endangered	Occurs on seasonally moist to waterlogged sites, on heavy fertile soils, with a mean annual rainfall of around 300-500 mm. Predominant vegetation is usually an open woodland dominated by Allocasuarina	Unlikely to occur due to historic and future management activity. Not likely to occur.

			luehmannii (Bulloak) and/or eucalypts, particularly Eucalyptus largiflorens (Black Box) or Eucalyptus populnea (Poplar Box). The field layer of the surrounding woodland is dominated by tussock grasses.	
Calochilus richiae	Bald-tip Beard-orchid	Endangered	The Bald-tip Beard orchid grows in Heathy Dry Forest dominated by Eucalyptus macrorhyncha (Red Stringybark), E. polyanthemos (Red Box) and E. tricarpa (Red Ironbark), with a low shrubby understorey including Acacia pycnantha (Golden Wattle), A. paradoxa (Hedge Wattle), Leucopogon virgatus (Common Beard-heath), Daviesia ulicifolia (Gorse Bitter-pea), Dianella revoluta (Black-anther Flax-lily), Grevillea alpina (Cat's Claws), Brachyloma daphnoides (Daphne Heath), Cassinia arcuata (Drooping Cassinia) and Xanthorrhoea australis (Austral Grass-tree), and a sparse grassy ground layer of predominately Joycea pallida (Wallaby Grass), on shallow, stony clay loam soil over Devonian sediments (sandstone and interbedded siltstone)	Unlikely to occur due to historic and future management activity. Not likely to occur.
Sclerolaena napiformis	Turnip Copperburr	Endangered	Confined to remnant grassland habitats on clay-loam soils. Grows on level plains in tussock	Unlikely to occur due to historic and future management activity. Not likely to occur.

			grassland of *Austrostipa nodosa* and *Chloris truncata*, in grey cracking clay to red-brown loamy clay.	
Senecio behrianus	Stiff Groundsel, Behr's Groundsel	Endangered	Information with herbarium records indicates plants were growing in 'swampy soil' and 'sandy clay' in seasonally inundated areas on flats or banks close to rivers. Remaining populations grow on poorly-drained sedimentary grey clays or sandy clays on or close to floodplains, and on basalt-derived grey cracking clays in periodically flooded depressions. A common feature seems to be that habitats are seasonally inundated, and hydrological regime is probably an important aspect of habitat, although the optimal timing and extent of flooding are unknown.	Unlikely to occur due to historic and future management activity. Not likely to occur.
Senecio macrocarpus	Large-fruit Fireweed, Large-fruit Groundsel	Vulnerable	The Large-fruit Groundsel occurs in a variety of habitats, including grasslands, sedgelands, shrublands and woodlands, generally on sparsely vegetated sites on sandy loam to heavy clay soils, often in depressions that are waterlogged in winter. At many sites in western Victoria, the Large-fruit Groundsel occurs with many other herb species in grassland dominated by Kangaroo Grass *Themeda triandra* on heavy	Unlikely to occur due to historic and future management activity. Not likely to occur.

			basalt clay soils. There are also several records from Yellow Gum *Eucalyptus leucoxylon* woodland, generally in low, flat areas where there are few other understorey species. At Yan Yean, *S. macrocarpus* occurs on heavy soil on a broad flat along the upper edge of the water level. The population at Dobie occurs in Yellow Box *Eucalyptus melliodora* woodland with a herbaceous and grassy understorey on sedimentary soils.	
Amphibromus fluitans	River Swamp Wallaby-grass, Floating Swamp Wallaby-grass	Vulnerable	*Amphibromus fluitans* grows mostly in permanent swamps. The species needs wetlands which are at least moderately fertile, and which have some bare ground, conditions which are produced by seasonally fluctuating water levels.	Unlikely to occur due to historic and future management activity. Not likely to occur.
Myriophyllum porcatum	Ridged Water-milfoil	Vulnerable	*Myriophyllum porcatum* is an aquatic species that occurs in shallow, ephemeral wetlands including lakes, swamps, rock pools in granite outcrops, waterholes in claypans, and highly modified habitats including farm dams and drainage lines on private land. Some wetlands, such as Lake Lascelles, are dry for extended periods and only fill intermittently. Recovery actions include survey and mapping of	Unlikely to occur due to historic and future management activity. Not likely to occur.

			habitat that will lead to the identification of habitat critical to the survival of the species.	
Glycine latrobeana	Clover Glycine, Purple Clover	Vulnerable	The Clover Glycine occurs mainly in grassland and grassy woodland habitats, less often in dry forests, and only rarely in heathland. Populations occur from sea level to c. 1,200 m altitude 6 (900 m in Tasmania). In Victoria, plants grow in a range of soil types including alluvial soils, and those derived from sandstones, mudstones, granite and basalt. Soils are usually clay, but may also have high loam content.	Unlikely to occur due to historic and future management activity. Not likely to occur.
Prasophyllum validum	Sturdy Leek-orchid, Mount Remarkable Leek-orchid	Vulnerable	he Sturdy Leek-orchid tends to grow in drier woodland habitats, generally with a low sparse understorey. In Victoria, it occurs in box and box-ironbark woodland with overstorey trees including *Eucalyptus polyanthemos, Eucalyptus albens, Eucalyptus macrorhyncha, Eucalyptus viminalis and Callitris glaucophylla*, and an open grassy to sparsely shrubby understorey including *Themeda triandra, Joycea pallida, Arthropodium strictum, Acacia verniciflua, Bursaria spinosa, Grevillea alpina and Grevillea dryophylla*. Soils vary from heavy clays to sandy loams.	Unlikely to occur due to historic and future management activity. Not likely to occur.

Caladenia concolor	Crimson Spider-orchid, Maroon Spider-orchid	Vulnerable	Habitat is regrowth woodland on granite ridge country that has retained a high diversity of plant species, including other orchids. The dominant trees are Blakely's Red Gum (*Eucalyptus blakelyi*), Red Stringybark (*E. macrorhyncha*), Red Box (*E. polyanthemos*) and White Box (*E. albens*); the diverse understorey includes Silver Wattle (*Acacia dealbata*), Hop Bitter-pea (*Daviesia latifolia*), Common Beard-heath (*Leucopogon virgatus*), Spreading Flax-lily (*Dianella revoluta*) and Poa Tussock (*Poa sieberiana*).	Unlikely to occur due to historic and future management activity. Not likely to occur.
Swainsona plagiotropis	Red Darling-pea, Red Swainson-pea	Vulnerable	Grows on flat grassland and in heavy red soil, often on roadsides and especially in table drains. Soils are derived from quaternary sediments and are usually red-brown clay-loams. The species is absent from black low-lying soils.	Unlikely to occur due to historic and future management activity. Not likely to occur.
Dodonaea procumbens	Trailing Hop-bush	Vulnerable	Grows in Natural Temperate Grassland or fringing eucalypt woodland of Snow Gum (*Eucalyptus pauciflora*). Grows in open bare patches where there is little competition from other species. Found on sandy-clay soils, usually on or near vertically-tilted shale outcrops.	Unlikely to occur due to historic and future management activity. Not likely to occur.

Swainsona murrayana	Slender Darling-pea, Slender Swainson, Murray Swainson-pea	Vulnerable	The species has been collected from clay-based soils, ranging from grey, red and brown cracking clays to red-brown earths and loams. Grows in a variety of vegetation types including bladder saltbush, black box and grassland communities on level plains, floodplains and depressions and is often found with *Maireana* species. Plants have been found in remnant native grasslands or grassy woodlands that have been intermittently grazed or cultivated.	Unlikely to occur due to historic and future management activity. Not likely to occur.
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions		Endangered	The Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions occur substantially within the Riverina and Murray-Darling Depression Bioregions. The woodlands are distributed widely across the bioregions, occurring in tracts or as patches within open forests or woodlands dominated by other species. A feature common to many areas where the woodlands occur is the presence of clayey and/or alkaline sub-soils. In many of the South Australian areas, massive calcrete underlies the sub-soil at depths of less than one metre. The nominated	Not observed on site. Unlikely to occur due to historic and future management activity. Not likely to occur.

		woodland's component communities are generally characterised as woodland or open woodland with a well-developed ground stratum that is usually grassy but also includes many subshrubs and herbs; some component communities have understoreys that are predominantly shrubby or herbaceous.	
Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains	Critically Endangered	The Seasonal Herbaceous Wetlands (Freshwater) of the Temperate Lowland Plains (hereafter referred to as Seasonal Herbaceous Wetlands) occur on the lowland plains of Victoria, south eastern South Australia (SA), and southern New South Wales (NSW). In some places the plains may be broken by local areas of higher relief, (e.g. stony rises on the Victorian Volcanic Plain), or grade into hills, (e.g. where plains grade into the Victorian Midlands bioregion). In some cases, the terrain is characterised with wetlands forming in the gilgai depressions. The ecological community is limited to plains and lower slopes or stony rises at elevations below 500 metres above sea level (asl).	Not observed on site. Unlikely to occur due to historic and future management activity. Not likely to occur.
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	White Box – Yellow Box – Blakely's Red Gum Grassy	Not observed on site. Unlikely to occur due to historic and future

		Woodland and Derived Native Grassland in the NSW North Coast, New England Tableland, Nandewar, Brigalow Belt South, Sydney Basin, South Eastern Highlands, NSW South Western Slopes, South East Corner and Riverina Bioregions (commonly referred to as Box-Gum Woodland) was listed as a Critically Endangered Ecological Community (CEEC) on July 17, 2020. It is an open woodland community (sometimes occurring as a forest formation), in which the most obvious species are one or more of the following: White Box *Eucalyptus albens*, Yellow Box *E. melliodora* and Blakely's Red Gum *E. blakelyi*. Intact sites contain a high diversity of plant species, including the main tree species, additional tree species, some shrub species, several climbing plant species, many grasses and a very high diversity of herbs. The community also includes a range of mammal, bird, reptile, frog and invertebrate fauna species. Intact stands that contain diverse upper and mid-storeys and groundlayers are rare.	management activity. Not likely to occur.

Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia	Endangered	Temperate eucalypt woodlands with a grassy understorey were formerly widespread on the lower slopes and plains of mainland eastern Australia, inland of the Great Dividing Range from southern Queensland through to eastern South Australia. The belt of temperate grassy woodlands covered several floristic associations, many of which intergraded with each other and with other vegetation types. The Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia predominantly occur on the drier edge of the temperate grassy eucalypt woodland belt and ranges from central New South Wales through northern and central Victoria into South Australia.	Not observed on site. Unlikely to occur due to historic and future management activity. Not likely to occur.
Natural Grasslands of the Murray Valley Plains	Critically Endangered	The Natural Grasslands of the Murray Valley Plains is a type of naturally treeless grassland occurring on the plains of western and northern Victoria (including the Victorian Riverina), extending into the southern parts of the Riverina in New South Wales. Although occurring near the Murray River and other major tributaries, it is a dryland	Not observed on site. Unlikely to occur due to historic and future management activity. Not likely to occur.

		ecological community occurring above the floodplains.	

Class	Scientific Name	Common name	EPBC Status (Commonwealth)	Habitat requirements	Likelihood of occurrence within Project Area
Bird	*Pedionomus torquatus*	Plains-wanderer	Critically Endangered	Plains-wanderers live in semi-arid, lowland native grasslands that typically occur on hard red-brown soils. These grasslands support a high diversity of plant species, including a number of state and nationally threatened species. Habitat structure appears to play a more important role than plant species composition. Preferred habitat of the Plains-wanderer typically comprises 50% bare ground, 10% fallen litter, and 40% herbs, forbs and grasses.	Potential to occur due to habitat requirements occurring on site. No nests were observed during impact assessment. It will not be significantly impacted by the proposed solar farm due to the site being highly disturbed and modified.
Bird	*Calidris ferruginea*	Curlew Sandpiper	Critically Endangered/Migratory	Inland lakes and waterbodies with bare edges of mud or sand.	Unlikely, works are based in a highly disturbed and modified landscape which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Lathamus discolor*	Swift Parrot	Critically Endangered	Breeds in Tasmania but overwinters on mainland flowing woodlands and forests, with preferential feeding in inland box-ironbark and grassy woodlands, and *Eucalyptus robusta* and *Corymbia maculate* woodland.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly

					impacted by the proposed activity.
Bird	*Anthochaera phrygia*	Regent Honeyeater	Critically Endangered	Box-ironbark eucalypt woodland, dry sclerophyll forest or open casuarina, acacia or eucalypt woodlands.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Rostratula australis*	Australian Painted Snipe	Endangered	Shallow terrestrial freshwater wetlands, including inundated or waterlogged grassland. Requires bare wet mud with nearby upper and canopy cover for nesting.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Callocephalon fimbriatum*	Gang-gang Cockatoo	Endangered	In spring and summer, generally found in tall mountain forests and woodlands, particularly in heavily timbered and mature wet sclerophyll forests. In autumn and winter, the species often moves to lower altitudes in drier more open eucalypt forests and woodlands, particularly box-gum and box-ironbark assemblages, or in dry forest in coastal areas and often found in urban areas.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Melanodryas cucullata cucullata*	South-eastern Hooded Robin, Hooded Robin (south-eastern)	Endangered	Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas. Requires structurally diverse habitats featuring mature eucalypts, saplings, some	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements

				small shrubs and a ground layer of moderately tall native grasses.	for the species. It will not be significantly impacted by the proposed activity.
Bird	*Tringa nebularia*	Common Greenshank, Greenshank	Endangered/Migratory	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 saltflats. 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. It was once recorded with Black-winged Stilts (*Himantopus himantopus*) in pasture, but are generally not found in dry grassland.	Unlikely, the required habitat requirement does not occur at this site. It will not be significantly impacted by the proposed activity.
Bird	*Botaurus poiciloptilus*	Australasian Bittern	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	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will

				platforms or mats of vegetation over deep water.	not be significantly impacted by the proposed activity.
Bird	*Stagonopleura guttata*	Diamond Firetail	Vulnerable	Diamond firetails occur in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees. They prefer areas with relatively low tree density, few large logs, and little litter cover but high grass cover.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Gallinago hardwickii*	Latham's Snipe, Japanese Snipe	Vulnerable/Migratory	Open, freshwater wetlands with low, dense vegetation.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Climacteris picumnus victoriae*	Brown Treecreeper (south-eastern)	Vulnerable	Brown treecreepers (south-eastern) occupy dry open eucalypt forests and woodlands. The subspecies mainly inhabits woodlands dominated by stringybarks or other rough-barked eucalypts, usually with an open grassy understorey, sometimes with one or more shrub species. They also occur in mallee, forests and woodlands subject to periodic inundation.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Calidris acuminata*	Sharp-tailed Sandpiper	Vulnerable/Migratory	The species utilises fresh and hypersaline environments, feeding along the edge of water on mudflats, coastal and inland wetlands, and sewage ponds. After rainfall	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements

				events, the species may also feed on areas of agricultural pasture.	for the species. It will not be significantly impacted by the proposed activity.
Bird	*Grantiella picta*	Painted Honeyeater	Vulnerable	Mistletoes on eucalypt forest or woodlands, riparian woodlands of black box and river red gum, box-ironbark-yellow gum woodlands, acacia dominated woodlands, paperbark, casuarinas, Callitris, and trees on farmland or gardens.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Falco hypoleucos*	Grey Falcon	Vulnerable	The species frequents timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined water courses. The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter.	Potential hunting habitat. Project will not impact the species, due to nearby surrounding habitat.
Bird	*Polytelis swainsonii*	Superb Parrot	Vulnerable	Inhabit Box-Gum, Box-Cypress-pine and Boree woodlands and River Red Gum forest. In the Riverina superb parrots nest in the hollows of large trees (dead or alive) mainly in tall riparian River Red Gum forest or woodland. On the South West Slopes and Southern Tablelands nest trees can be in open Box-Gum woodland or isolated living or dead paddock trees. Species known to be used are Blakely's Red Gum, Yellow Box, Apple Box and Red Box.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Aphelocephala leucopsis*	Southern Whiteface	Vulnerable	Southern whitefaces live in a wide range of open woodlands and shrublands where there is an understorey of grasses or shrubs, or	Unlikely, works are based in a highly disturbed and modified

				both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains.	habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Hirundapus caudacutus*	White-throated Needletail	Vulnerable/Migratory	In Australia, the White-throated Needletail is mostly 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 recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings. When flying above farmland, they are more often recorded above partly cleared pasture, plantations or remnant vegetation at the edge of paddocks.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Bird	*Neophema chrysostoma*	Blue-winged Parrot	Vulnerable	Foraging and staging habitats found from coastal, sub-coastal and inland areas, right through to semi-arid zones including: grasslands, grassy woodlands and semi-arid chenopod shrubland with native and introduced grasses, herbs and shrubs. Wetlands both near the coast and in semi-arid zones used for foraging and staging. Eucalypt forests and woodlands within the breeding range in Tasmania, coastal south eastern South Australia and southern Victoria.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Mammal	*Dasyurus maculatus maculatus* (SE mainland population)	Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll (southeastern	Endangered	Mature wet forest habitat, with suitable den site (e.g. hollow logs, tree hollows, rock outcrops, caves) and abundance of food (e.g. birds and small mammals).	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements

		mainland population)			for the species. It will not be significantly impacted by the proposed activity.
Mammal	*Pteropus poliocephalus*	Grey-headed Flying-fox	Vulnerable	Woodlands with Eucalyptus blossoms and/or rainforest fruits, located within 5km of a known camp or along migratory pathways.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Mammal	*Nyctophilus corbeni*	Corben's Long-eared Bat, South-eastern Long-eared Bat	Vulnerable	Inhabits a variety of vegetation types, including mallee, bulloke *Allocasuarina leuhmanni* and box eucalypt dominated communities, but it is distinctly more common in box/ironbark/cypress-pine vegetation that occurs in a north-south belt along the western slopes and plains of NSW and southern Queensland.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Reptile	*Aprasia parapulchella*	Pink-tailed Worm-lizard, Pink-tailed Legless Lizard	Vulnerable	Inhabits sloping, open woodland areas with predominantly native grassy groundlayers, particularly those dominated by Kangaroo Grass (*Themeda australis*).	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Reptile	*Delma impar*	Striped Legless Lizard, Striped Snake-lizard	Vulnerable	Found mainly in Natural Temperate Grassland but has also been captured in grasslands that have a high exotic component. Also found in secondary	Unlikely, works are based in a highly disturbed and modified habitat which doesn't

				grassland near Natural Temperate Grassland and occasionally in open Box-Gum Woodland. Habitat is where grassland is dominated by perennial, tussock-forming grasses such as Kangaroo Grass *Themeda australis*, spear-grasses *Austrostipa* spp. and poa tussocks *Poa* spp., and occasionally wallaby grasses *Austrodanthonia* spp.	meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Fish	*Galaxias rostratus*	Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow	Critically Endangered	Flathead Galaxias is a freshwater fish. It is generally found mid-water in still and gently moving waters of small streams, lakes, lagoons, billabongs and backwaters. Its habitat consists of coarse sand or mud substrate and aquatic vegetation.	Unlikely, no habitat at site.
Fish	*Macquaria australasica*	Macquarie Perch	Endangered	Macquarie Perch are found in both river and lake habitats; especially the upper reaches of rivers and their tributaries.	Unlikely, no habitat at site.
Fish	*Maccullochella peelii*	Murray Cod	Vulnerable	The Murray Cod occurs naturally in the waterways of the Murray-Darling Basin (ACT, SA, NSW and Vic) and is known to live in a wide range of warm water habitats that range from clear, rocky streams to slow flowing turbid rivers and billabongs.	Unlikely, no habitat at site.
Frog	*Crinia sloanei*	Sloane's Froglet	Endangered	It is typically associated with periodically inundated areas in grassland, woodland and disturbed habitats.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Frog	*Litoria raniformis*	Southern Bell Frog, Growling	Vulnerable	Habitat critical to the survival of the Southern Bell Frog differs throughout its	Unlikely, works are based in a highly

		Grass Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog		range. In the more mesic areas including Tasmania, most of Victoria and the south-east of South Australia, the species is usually found among vegetation within or at the edges of permanent water such as slow-flowing streams, swamps, lagoons and lakes.	disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Crustacean	*Euastacus armatus*	Murray Crayfish	Vulnerable	The Murray Crayfish is endemic to the Southern tributaries of the Murray-Darling Basin. It can be found in the Murray River upstream of Mildura, in the Murrumbidgee River and in some dams. The species prefers cool, flowing water that is well oxygenated.	Unlikely, no habitat at site.
Insect	*Synemon plana*	Golden Sun Moth	Vulnerable	Occurs in Natural Temperate Grasslands and grassy Box-Gum Woodlands in which groundlayer is dominated by wallaby grasses *Austrodanthonia* spp. Grasslands dominated by wallaby grasses are typically low and open - the bare ground between the tussocks is thought to be an important microhabitat feature for the Golden Sun Moth, as it is typically these areas on which the females are observed displaying to attract males.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Gallinago hardwickii		Latham's Snipe, Japanese Snipe	Vulnerable/Migratory	Open, freshwater wetlands with low, dense vegetation.	Unlikely, no habitat at site
Apus pacificus		Fork-tailed Swift	Migratory	Occurs over riparian woodland, tea-tree swamps, low scrub, heathland, saltmarsh, treeless grassland, sandplains covered with spinifex, open farmland, and inland and coastal sand dunes.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly

				impacted by the proposed activity.
Tringa nebularia	Common Greenshank, Greenshank	Endangered/Migratory	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 saltflats. 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. It was once recorded with Black-winged Stilts (*Himantopus himantopus*) in pasture, but are generally not found in dry grassland.	Unlikely, works are based in a highly disturbed and modified habitat which doesn't meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Calidris melanotos	Pectoral Sandpiper	Migratory	Fresh to saline wetlands, including inundated grasslands and lakes, with open fringing mudflats and low, emergent, or fringing vegetation such as grass or samphire.	Unlikely, no habitat at site
Hirundapus caudacutus	White-throated Needletail	Vulnerable/Migratory	In Australia, the White-throated Needletail is mostly aerial, from heights of less than 1 m up to more than 1000 m above the ground. Although they occur over most types of	Unlikely, works are based in a highly disturbed and modified habitat which doesn't

			habitat, they are recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings. When flying above farmland, they are more often recorded above partly cleared pasture, plantations or remnant vegetation at the edge of paddocks.	meet the requirements for the species. It will not be significantly impacted by the proposed activity.
Calidris acuminata	Sharp-tailed Sandpiper	Vulnerable/Migratory	The species utilises fresh and hypersaline environments, feeding along the edge of water on mudflats, coastal and inland wetlands, and sewage ponds. After rainfall events, the species may also feed on areas of agricultural pasture.	Unlikely, no habitat at site
Pandion haliaetus	Osprey	Migratory	Eastern Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands. They are mostly found in coastal areas but occasionally travel inland along major rivers, particularly in northern Australia	Unlikely, no habitat at site
Actitis hypoleucos	Common Sandpiper	Migratory	Muddy margins of inland wetlands.	Unlikely, no habitat at site
Calidris ferruginea	Curlew Sandpiper	Critically Endangered/Migratory	Inland lakes and waterbodies with bare edges of mud or sand.	Unlikely, no habitat at site
Motacilla flava	Yellow Wagtail	Migratory	Well-watered open grasslands and fringes of wetlands.	Unlikely, no habitat at site