

# Darlington Point, Coleambally, and Jerilderie Murrumbidgee Council - LEP planning

# Murrumbidgee LGA, NSW

# **Biodiversity Constraints Analysis**

June 2021



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## Murrumbidgee LGA, NSW

**Biodiversity Constraints Analysis** 

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Enquiries would be addressed to AREA Environmental & Heritage Consultants Pty Ltd.				

## 1 Introduction

### 1.1 Purpose

Murrumbidgee Council is revising its Local Environmental Plan (LEP) which includes rezoning of several parcels of land (hereafter sites) within and around Darlington Point, Coleambally, and Jerilderie in the Murrumbidgee Local Government Area (LGA).

AREA Environmental & Heritage Consultants (AREA) was commissioned by Murrumbidgee Council (the client) to complete a desktop analysis of potential biodiversity constraints and opportunities for specific land use changes proposed.

The analysis draws on biodiversity and ecological spatial data, locally identified biodiversity programs and the operation of the current NSW Government systems for biodiversity assessment.

The data presented in this report will provide a level of confidence around proposed changes to the Murrumbidgee Council Local Environmental Plan.

Recommendations in section 7 of this report summarise any suggested changes to the existing proposed land zones, and points to consider during future implementation of developments or conservation work associated with the sites.

### 1.2 Location of sites

This biodiversity constraints analysis targets sites around the three townships of Darlington Point, Coleambally and Jerilderie in the Murrumbidgee LGA (Figure 1-1).

Sites at each town are numbered, and these numbers are used to reference sites throughout this report. The sites at each town are presented in Figure 1-2, Figure 1-3 and Figure 1-4; and the proposed zone changes for each site are provided in Table 1-1, Table 1-2 and Table 1-3.

Figures and text in this report will refer to these sites at LEP sites.









Figure 1-2: Darlington Point Candidate Rezoning sites



Site number	Current land use zone	Proposed land use zone	
1	RE1 Public Recreation	RU5 Village	
2	RU1 Primary Production	R5 Large Lot Residential	
3	RU1 Primary Production	RU5 Village	
4	RU1 Primary Production	R5 Large Lot Residential	
5	RU5 Village RU1 Primary Production	IN1 General Industrial	
6	RU1 Primary Production RE1 Public Recreation and/or RE Recreation		
7	E1 National Park	SP2 Special Use	
8	RU1 Primary Production	SP2 Special Use	
9	RU1 Primary Production	SP2 Special Use	
10	RU1 Primary Production RU5 Village	E1 National Park and/or E3 Environmental Management	
11	RU1 Primary Production	RU5 Village	
12	RU1 Primary Production	R5 Large Lot Residential	
13	RU1 Primary Production	IN1 General Industrial (future)	
14	RU5 Village RU1 Primary Production	B6 Business Park	
15	RU5 Village	IN1 General Industrial	
16	RU1 Primary Production	RE1 Public Recreation and/or RE2 Private Recreation (future)	
17	RU1 Primary Production	RU5 Village (future)	

#### Table 1-1: Darlington Point sites – proposed rezoning changes

#### Table 1-2: Coleambally sites – proposed rezoning changes

Site number	Current land use zones	Proposed land use zones
1	RE1 Public Recreation	RU5 Village
2	RU1 Primary Production	R5 Large Lot Residential
3	RU1 Primary Production	RE1 Public Recreation and/or RE2 Private Recreation
4	RU1 Primary Production	RE1 Public Recreation and/or RE2 Private Recreation
5	RU1 Primary Production	SP2 Special Activities
6	RU1 Primary Production	SP2 Special Activities
7	RU1 Primary Production	RU5 Village
8	RU1 Primary Production	E3 Environmental Management
9	RU1 Primary Production	E3 Environmental Management
10	R5 Large Lot Residential	R5 Large Lot Residential
11	RU1 Primary Production	RU5 Village
12	RU1 Primary Production	RE1 Public Recreation and/or RE2 Private Recreation
13	RU1 Primary Production	R5 Large Lot Residential (future)





Figure 1-3: Coleambally Candidate Rezoning sites





Figure 1-4: Jerilderie Candidate Rezoning sites



Site number	Current use	Proposed use
1	RU1 Primary Production	RU5 Village
2	IN1 General Industrial	RU5 Village
3	R5 Large Lot Residential	RU5 Village
4	RU1 Primary Production	R5 Large Lot Residential
5	RU1 Primary Production	R5 Large Lot Residential
6	RU1 Primary Production	IN1 General Industrial
7	RU1 Primary Production	IN1 General Industrial
8	R5 Large Lot Residential	RU1 Primary Production
9	R5 Large Lot Residential	RU1 Primary Production
10	R5 Large Lot Residential	RU1 Primary Production
11	RU1 Primary Production	RE2 Private Recreation
12	RU1 Primary Production	IN1 General Industrial (future)
13	RU1 Primary Production	IN1 General Industrial (future)

#### Table 1-3: Jerilderie site – proposed rezoning changes

### 1.3 Method

Biodiversity constraint information was obtained from various NSW Government, Local Land Services and Murrumbidgee Council databases, online information, and mapping tools (section 1.4).

Section 2 describes the landscape context of the Murrumbidgee LGA, and section 3 describes biodiversity constraints as they pertain to each site.

## **1.4 Sources of information**

GIS layer name	Reference
IBRA bioregions and subregion	NSW data portal
NSW landscape regions	Mitchell Landscapes V31
Rivers and streams	Six Viewer / SEED WMS topographic layer
Wetlands	Directory of Important Wetlands
Waterways	Six Viewer Clip and ship - hydroline
Key Fish Habitat	DPI Key Fish Habitat GIS layer
Connectivity of different areas of habitat	Riverina State Vegetation Plant Community Type map 4469 and ESRI Satellite
Native vegetation	Western State Vegetation Plant Community Type map 4492



## 1.4.1 Web sites (and links to documents)

Table 1-5: Web sites	and links to	documents	used in	this re	port
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Title	Web address
Legislation	
Commonwealth Environment Protection & Biodiversity Conservation Act 1999	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+ 1979+cd+0+N
Fisheries Management Act 1994	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1 994+cd+0+N
Biodiversity Conservation Act 2016	https://www.legislation.nsw.gov.au/~/view/act/2016/63
Biodiversity Conservation Regulation 2017	http://classic.austlii.edu.au/au/legis/nsw/consol_reg/bcr2017400/
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2 000+cd+0+N
Local Land Services Act 2013	https://www.legislation.nsw.gov.au/~/view/act/2013/51
Biodiversity	
Surveying threatened plants and their habitats NSW survey guide for the Biodiversity Assessment Method (2020)	https://www.environment.nsw.gov.au/-/media/OEH/Corporate- Site/Documents/Animals-and-plants/Biodiversity/surveying-threatened- plants-and-habitats-nsw-survey-guide-biodiversity-assessment-method- 200146.pdf
NSW Survey Guide for Threatened Frogs A guide for the survey of threatened frogs and their habitats for the Biodiversity Assessment Method (2020)	https://www.environment.nsw.gov.au/-/media/OEH/Corporate- Site/Documents/Animals-and-plants/Threatened-species/nsw-survey- guide-for-threatened-frogs-200440.pdf
'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method (2018)	https://www.environment.nsw.gov.au/-/media/OEH/Corporate- Site/Documents/Animals-and-plants/Threatened-species/species-credit- threatened-bats-survey-guide-180466.pdf
Biodiversity Assessment Methodology (DPIE, 2020)	https://www.environment.nsw.gov.au/-/media/OEH/Corporate- Site/Documents/Animals-and-plants/Biodiversity/biodiversity-assessment- method-2020-200438.pdf
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft (DEC, 2004)	https://www.environment.nsw.gov.au/-/media/OEH/Corporate- Site/Documents/Animals-and-plants/Threatened-species/draft-threatened- biodiversity-survey-guide.pdf
Survey requirements (birds, bats, reptiles, frogs, fish and mammals) for species listed under the EPBC Act	https://www.environment.gov.au/epbc/policy-statements
BAM Credit Calculator	https://www.lmbc.nsw.gov.au/bamcalc
Survey requirements (birds, bats, reptiles, frogs, fish and mammals) for species listed under the EPBC Act	http://www.environment.gov.au/topics/environmentprotection/environment- assessments.
Threatened biodiversity profile search	http://www.environment.nsw.gov.au/threatenedspeciesapp/
NSW BioNet	http://www.bionet.nsw.gov.au/
PlantNET	http://plantnet.rbgsyd.nsw.gov.au/
Threatened Species Assessment Guideline - The Assessment of Significance (DECCW, 2007)	http://www.environment.nsw.gov.au/resources/threatenedspecies /tsaguide07393.pdf
Significant impact guidelines 1.1, Environment Protection	https://www.environment.gov.au/system/files/resources/42f84df4-720b- 4dcf-b262-48679a3aba58/files/nes-guidelines_1.pdf



Title	Web address
and Biodiversity	
Conservation Act 1999	
Keith, D. A. (2004) Ocean	
Shores to Desert Dunes: The	
Native Vegetation of New	
South Wales and the ACT,	
NSW Department of	
Environment and	
Conservation.	
IBRA Bioregions and	https://www.opvironmont.psw.gov.ou/biorogions/DivorinaBiorogion.htm
subregions	https://www.environment.nsw.gov.au/bioregions/Kivermabioregion.ntm
Native Vegetation Regulatory	https://www.environment.nsw.gov.au/-/media/OEH/Corporate-
Map: method statement (OEH	Site/Documents/Animals-and-plants/Biodiversity/native-vegetation-
2013)	regulatory-map-method-statement-170495.pdf

## **1.5 Personnel contributing to this document**

This assessment has been completed and certified by suitably experienced ecologists and accredited biodiversity assessors (Table 1-6).

Name	Position	CV Details	Role in this biodiversity desktop assessment
Addy Watson	Biodiversity Manager	<ul> <li>Grad. Dip. Captive Vertebrate Management, Charles Sturt University</li> <li>Grad. Cert. Social Impact, University of NSW</li> <li>B. Env. Sc. University of New England.</li> <li>Diploma Project Management</li> <li>NSW Biodiversity Assessment Method Assessor: accreditation number BAAS19066).</li> <li>WHS White Card</li> </ul>	<b>Role</b> Project management Data analysis Report writing
Dr Heidi Kolkert	Principal Scientist   Biodiversity	<ul> <li>PhD (Science) University of New England</li> <li>Chancellor's Doctoral Research Medal (2021)</li> <li>BA-BSc (Hons) University of Tasmania</li> <li>NSW OEH BioBanking and Bio-certification Assessor: accreditation number 0127).</li> <li>Practicing member of the NSW Ecological Consulting Association</li> <li>WHS White Card and Blue Card</li> <li>Apply First Aid (Medilife), Remote First Aid (St John)</li> </ul>	<b>Role</b> Report editing

#### Table 1-6: Summary of AREA project teams' qualifications



## 2 Landscape context

## 2.1 Topography

Topography over the Murrumbidgee Local Government Area varies little with elevation ranging from approximately 105 to 130 metres (Figure 2-1).







## 2.2 IBRA bioregions and subregions

The Murrumbidgee Local Government Area lies in the Riverina IBRA bioregion and both the Murrumbidgee and Murray Fans IBRA subregions (Figure 2-2). Description of these subregions is provided in (Table 2-1).







#### **Riverina Bioregion**

The Riverina Bioregion lies in southwest NSW, extending into central-north Victoria. The bioregion is approximately 9,576,964 hectares, with 7,090,008 hectares or 74.03 per cent of it lying in NSW. The NSW portion of the bioregion occupies approximately 8.86 per cent of the State.

The Riverina Bioregion extends from Ivanhoe in the Murray Darling Depression Bioregion south to Bendigo, and from Narrandera in the east to Balranald in the west. Within its boundaries lie the towns of Hay, Coleambally, Deniliquin, Leeton, Mossgiel, Hillston, Booligal and Wentworth, while Griffith, Ivanhoe, Narrandera and Albury lie just outside its boundary in neighbouring bioregions.

The bioregion also includes outlying remnants of the Murray Darling Depression Bioregion in its western boundary, and the Victorian Midlands Bioregion in the south.

The Murray and Murrumbidgee Rivers and their major tributaries, the Lachlan and Goulburn Rivers, flow from the highlands in the east, westward across the Riverina plain.

Subregion	Geology	Characteristic landforms	Typical soils	Vegetation
Murrumbidgee	Quaternary alluvial sediments. Clay and sand with source bordering dunes and lakes.	Alluvial fan with distributary channels and floodplains, undulating plains with depressions. Source- bordering dunes common.	Red brown earths, grey and brown clays and deep siliceous sands on dunes.	River red gum and river cooba on channels. Black box, lignum and old man saltbush on floodplains. Myall and old man saltbush with other saltbush and grasses formerly widespread on backplains. White cypress pine on dunes.
Murray Fans	Quaternary alluvial sediments. Clay and sand with source bordering dunes, lakes and swamps.	Relatively confined alluvial fan constrained by sediments from northern Victorian rivers, the Murrumbidgee fan and the Cadell fault. Meandering channels, floodplains, source- bordering dunes, overflow lakes and swamps.	Red brown earths, grey clays and deep sands.	Extensive river red gum forests with river cooba on channels and low floodplains. Yellow Box and black box with saltbush on high floodplains and terraces. White cypress pines on dunes, sandy levees and lunettes.

#### Table 2-1: IBRA subregions



## 2.3 NSW Landscapes

Three NSW landscapes occur in the LEP sites and are listed in the dot points below. Figure 2-3 shows the NSW Landscapes across the LGA and Table 2-2 provides the descriptions for the three NSW landscapes which occur in the target sites.

#### **Darlington Point:**

- Murrumbidgee Channels and Floodplains
- Murrumbidgee Scalded Plains

#### **Coleambally:**

• Murrumbidgee Scalded Plains

#### Jerilderie:

- Murrumbidgee Channels and Floodplains
- Murrumbidgee Scalded Plains
- Murrumbidgee Depression Plains

NSW landscape	Description
Murrumbidgee Channels and Floodplains	Murrumbidgee Channels and Floodplains landscape includes parts of three land systems: Murrumbidgee, Lowbidgee and Riverland.
	Quaternary alluvium on seasonally inundated floodplains, active and inactive channels, billabongs, levees and swamps of the Murrumbidgee River and its effluent streams. Relief to 10m. Includes sca1ded alluvial flats, broad elevated floodplains and associated relict channels; isolated sandy rises, relief to 5m. Grey and brown clay with occasional areas of low sandy rise.
	Open forest of river red gum ( <i>Eucalyptus camaldulensis</i> ), river cooba ( <i>Acacia stenophylla</i> ), cooba ( <i>Acacia salicina</i> ), lignum ( <i>Muehlenbeckia cunninghamii</i> ), nitre goosefoot ( <i>Chenopodium nitrariaceum</i> ) with numerous grasses along the channels and floodplain. Black box ( <i>Eucalyptus largiflorens</i> ) woodland with lignum, nitre goosefoot, thorny saltbush ( <i>Rhagodia</i> spinescens), old man saltbush ( <i>Atriplex nummularia</i> ) and annual saltbushes ( <i>Atriplex</i> sp.) on more distal floodplains and back plains. Cumbungi ( <i>Typha orientalis</i> ), common reed ( <i>Phragmites australis</i> ) and nardoo ( <i>Marsilea drummondii</i> ) in flooded depressions.
Murrumbidgee	Quaternary alluvial plains with extensive scalding interpreted as relic floodplains or terraces.
Scalded Plains	Grey, brown and red cracking clays, red brown texture-contrast soils with scalds. Levees traces evident, relief generally <1m, up to 5m on associated pans, swamps and lunettes.
	Low shrublands and grasslands of bladder saltbush (Atriplex vesicaria), other annual
	saltbushes (Atriplex sp.), numerous burrs (Sclerolaena sp.), cottonbush (Maireana aphylla),
	bush minuria ( <i>Minuria cunninghamii</i> ), white-top grass ( <i>Austrodanthonia caespitosa</i> ), windmill grass ( <i>Chloris truncata</i> ), and hill wallaby grass ( <i>Austrodanthonia eriantha</i> ).
Murrumbidgee	Quaternary alluvial plains with numerous circular depressions interpreted as high floodplains or
Depression Plains	low terraces beyond the reach of average floodwaters, relief to 10m. Grey to brown clays and clay loams with linear patterns of sandy prior streams.
	Now extensive grasslands of white-top, windmill grass, sand broom, and spear grasses, heavily grazed and invaded by exotic species. Reported to have originally been myall ( <i>Acacia pendula</i> ), old man saltbush ( <i>Atriplex nummularia</i> ) and bladder saltbush ( <i>Atriplex vesicaria</i> ). Sandy ridges of prior streams support patches of white cypress pine ( <i>Callitris glaucophylla</i> ), with needlewood ( <i>Hakea leucoptera</i> ), western pittosporum ( <i>Pittosporum phylliraeoides</i> ) and spear grasses ( <i>Austrostipa</i> sp.).

#### Table 2-2: Descriptions of NSW Landscapes in LEP sites





Figure 2-3: NSW landscapes in Murrumbidgee LGA



## 3 Biodiversity constraints

## 3.1 Biodiversity Offsetting Scheme

The NSW Biodiversity Offsetting Scheme provides a transparent, consistent, and scientifically based system of biodiversity assessment and offsetting. The associated Biodiversity Assessment Method provides a repeatable and objective measure of biodiversity and is used to assess land for development proposals and for Biodiversity Stewardship Sites under the private land conservation scheme administered by the Biodiversity Conservator Trust.

Development Applications under Part 4 of the *Environment Planning and Assessment Act 1999* will require assessment under this scheme if the proposal meets one or more of the triggers listed below. Proposals approved through a Part 5 pathway of the *Environment Planning and Assessment Act 1999* may require assessment under this scheme if the proposal is likely to cause a significant impact to a listed species, population, or community (dot point number four below) or it there will be impact to an area of outstanding biodiversity value (dot point number one below).

There are four triggers which can require a proposal to be assessed using the biodiversity offsetting scheme. These are:

- The area of proposed impact to native vegetation is in an area mapped as *critical habitat* or an *area of outstanding biodiversity value*
- The area of proposed impact to native vegetation is in an area mapped on the NSW Government Biodiversity Values Map
- The area of proposed impact to native vegetation exceeds the area threshold as provided in section 7.2 of the Biodiversity Conservation Regulation 2017.
- The proposed impact will have a significant impact to a listed species, population, or community.

If one of these triggers occurs for a proposal, the biodiversity assessment must be assessed under the Biodiversity Offset Scheme and requires the use of the Biodiversity Assessment Method (2020) or other version as current at the time of the assessment.

Results from this assessment will determine if the proponent must retire biodiversity credits to offset the impact, and how many. Offsetting is only required if the quality of the vegetation to be impacted is above a quality threshold.

If none of the above triggers occur, biodiversity assessment must meet the requirement of the determining authority, including local council.

#### 3.1.1 Critical habitat/ area of outstanding biodiversity value

Critical habitat is also known as an area of outstanding biodiversity value. Impact to areas of outstanding biodiversity value automatically triggers assessment under the NSW Biodiversity Offset Scheme.

At the time of writing this report, no areas of outstanding biodiversity value under the *Biodiversity Conservation Act 2016*, the *Environment Protection and Biodiversity Conservation Act 1999* or the *Fisheries Management Act 1994* exist in the Murrumbidgee Local Government Area.



#### 3.1.2 Biodiversity Values Map

The Biodiversity Values Map indicates areas of predicted biodiversity values including protected riparian land, Ramsar Wetlands, identified vegetation such as rainforest, and listed species habitat (real and modelled or with potential for serious and irreversible impacts) and other designated biodiversity areas.

If clearing of native vegetation is proposed in any areas mapped on the Biodiversity Values Map, assessment under the Biodiversity Offset Scheme is triggered and preparation of a Biodiversity Development Assessment Report (BDAR), which indicates the biodiversity credits to be retired, is required. Areas in the same allotment which are not mapped in purple do not trigger this level of assessment in this way.

A <u>Biodiversity Values Explanation Report</u> which explains what biodiversity value/s is expected to occur is available from the NSW Government Map Review Team and can only be obtained with permission from the landowner. Acquiring this information is critical when informing field assessment within areas mapped on the biodiversity values map.

Landowners with biodiversity values mapped on their land can apply to have the mapping reconsidered if they believe the biodiversity value on their land is incorrectly mapped. Site specific searches for the mapped value would be required as evidence for this application.

Table 3-1 indicates which sites, at which town, contain areas mapped on the Biodiversity Values Map (yes or no), if the area is only a small portion of mapped in the site, and if the proposed land use is likely to include Development Applications (red text). Development in the mapped areas in sites 7 and 13 Jerilderie would require assessment under the biodiversity offset scheme, and potentially purchase of biodiversity credits. Development could be avoided in these sites, or the mapped area reassessed as discussed in the paragraph above.

The Biodiversity Values Map (BVM) includes most waterways including the Murrumbidgee River. Figures showing the Biodiversity Values Map for each town are provided in Figure 3-1, Figure 3-2 and Figure 3-3.

Land mapped on the Biodiversity Values Map will need to be avoided in proposed development sites, if the developer seeks to avoid assessment under the NSW Biodiversity Offset Scheme (see section 3.1.



Table 3-1: Biodiversity Values Map mapped in each site. Red text indicates where the proposed landuse is likely to involve a Development Application.

Site number	Darlington Point	Coleambally	Jerilderie	
1	No	No	Yes – Small portion only	
2	No	No	No	
3	No	No	No	
4	No	No	No	
5	No	No	No	
6	No	No	No	
7	Yes	No	Yes	
8	No	No	Yes – Small portion only	
9	No	No	No	
10	Yes	No	No	
11	No	No	Yes	
12	No	No	No	
13	No	No	Yes	
14	No			
15	No			
16	No			
17	Yes – Small portion only			





Figure 3-1: Biodiversity Values Map – Darlington Point





Figure 3-2: Biodiversity Values Map – Coleambally







### 3.1.3 Area threshold

The third trigger listed in Section 3.1 refers to the area threshold as provided in section 7.2 of the *Biodiversity Conservation Regulation 2017* (Table 3-2). The area of clearing of native vegetation which may be impacted without exceeding the area threshold is dictated by the minimum Lot size as designated by the local council in the Local Environmental Plan.

The current Local Environmental Plan review could consider the area of clearing constraints the current legislation places on a developer. For example, if minimum Lot size is set at two hectares, a development which impacts less than half a hectare of native vegetation will not trigger assessment under the Biodiversity Offsetting Scheme. Currently, most of the sites considered in this desktop review have a minimum Lot size of 200 hectares, however this will need to change to be compatible with the proposed recommended zoning.

# Table 3-2: Area threshold table as provided in section 7.2 of the Biodiversity Conservation Regulation 2017

Minimum lot size of land	Threshold for clearing
Less than 1 hectare	0.25 hectare or more
Less than 40 hectares but not less than 1 hectare	0.5 hectare or more
Less than 1,000 hectares but not less than 40 hectares	1 hectare or more
1,000 hectares or more	2 hectares or more

#### 3.1.4 Significant impact

Where the first three Biodiversity Offset Scheme triggers listed in Section 3.1 do not apply, the assessment must address the requirements of section 7.3 of the *Biodiversity Conservation Act 2016* (BC Act), as well as protected matters under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Tests of significance are used when a listed species, population or community is known or likely to occur in the impact footprint and is likely to be impacted by the proposal.

Requirements of the tests of significance are described in:

- Section 7.3 of the *Biodiversity Conservation Act 2016*
- Significant impact guidelines 1.1, Environment Protection and Biodiversity Conservation Act 1999

If a significant impact is likely to occur, the proposal must be assessed under the NSW Biodiversity Offset Scheme.



## 3.2 Threatened Ecological Communities

Plant Community Types (PCTs) are a community level classification of vegetation communities. PCTs are grouped to form Vegetation Classes within Vegetation Formations as described by Keith (2004).

Threatened ecological communities (TECs) are plant communities described and listed under the BC Act and/ or the EPBC Act. These are separate to descriptions of PCTs, vegetation classes and vegetation formations.

PCTs and TECs are assigned to the assemblage of the plants. They are not dependent on or otherwise liked to the presence of threatened species. Known presence of threatened species is discussed in section 3.3.

PCTs are described as being associated with particular TEC/s. A PCT may or may not be representative of the TEC. Presence of a PCT with an associated TEC does not necessarily indicate presence of the TEC. This can be due to the location, size or plant diversity thresholds of the TEC.

The NSW and the Commonwealth Governments provide descriptions and required characteristics of each TEC. Field assessment is required to confirm the consistency of the mapped vegetation with these descriptions and characteristics.

Under the Biodiversity Offset Scheme where offsetting with biodiversity credits is required, credits for a TEC are usually a higher cost than for impact to not threatened plant communities.

The following assessment of PCTs and TECs is based on vegetation mapping in the NSW Government Vegetation Data Riverina State Vegetation Map v1p2 PCT 4469. In AREA's experience, state vegetation maps provide a reasonably good estimate of the vegetation. However, given they are largely based on remote sensing data, when field assessment is conducted, they have been found to be an unreliable indicator of the actual PCT.

Table 3-3 indicates in which sites there is a PCT mapped which is known to be associated with a TEC, and if this PCT is only a sliver mapped in a site.

Table 3-4, Table 3-5 and Table 3-6 show which PCTs occur in the sites at each town, and which of these are associated with a TEC. Figures showing PCTs with an association with one or more TECs are provided in Figure 3-4, Figure 3-5 and Figure 3-6.

Where native vegetation (a PCT) occurs in a proposed development site, impact to it may trigger assessment under the Biodiversity Offset Scheme and may result in an offsetting requirement.

If a TEC is found to occur in the area proposed for clearing, it is likely the impact will require offsetting, with the price of credits likely to be more expensive that for vegetation which is not a TEC.

Clearing of native vegetation which is in very poor condition (below minimum quality measures) does not require the purchase and retirement of biodiversity credits. For a TEC, the minimum quality measure is lower than for vegetation which is not a TEC. This means even if a TEC is in poor condition, impact to it is more likely to require offsetting. Offsetting impact to a TEC follows the same process as for vegetation which is not a TEC, however offsetting requirements are more specific for a TEC and TEC credits are likely to be more expensive to purchase.

Site assessment would be required to confirm the presence of native vegetation and TECs, to provide a measure of quality and determine the offsetting requirement.



Impact to TECs, and other moderate to high quality vegetation should be avoided if the developer is seeking to avoid a requirement to purchase and retire biodiversity credits.

Site number	Darlington Point	Coleambally	Jerilderie
1	No	Sliver	No
2	Yes	Yes	No
3	Yes	No	No
4	No	Yes	No
5	Yes	Yes	No
6	Sliver	Yes	No
7	No	Yes	No
8	No	Yes	No
9	No	Yes	No
10	Yes	Sliver	No
11	No	Yes	No
12	Yes	Yes	No
13	Yes	Yes	No
14	No		
15	No		
16	Yes		
17	No		

Table 3-3: PCTs associated with one or more TECs in each site



#### Table 3-4: Plant Community Types mapped at Darlington Point

PCTID	PCT Name	Class	Formation	Associated with TEC
0	Not Native	Not Native	Not Native	None
2	River Red Gum-sedge dominated very tall open forest in frequently flooded forest wetland along major rivers and floodplains in south-western NSW	Inland Riverine Forests	Forested Wetlands	None
5	River Red Gum herbaceous-grassy very tall open forest wetland on inner floodplains in the lower slopes sub-region of the NSW South Western Slopes Bioregion and the eastern Riverina Bioregion.	Inland Riverine Forests	Forested Wetlands	None
10	River Red Gum - Black Box woodland wetland of the semi-arid (warm) climatic zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	Inland Riverine Forests	Forested Wetlands	None
16	Black Box grassy open woodland wetland of rarely flooded depressions in south western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	Inland Floodplain Woodlands	Semi-arid Woodlands (Grassy subformation)	None
17	Lignum shrubland wetland of the semi-arid (warm) plains (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	Inland Floodplain Shrublands	Freshwater Wetlands	None
26	Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion	Riverine Plain Woodlands	Semi-arid Woodlands (Grassy subformation)	Endangered BC Act and EPBC Act: Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions
44	Forb-rich Speargrass - Windmill Grass - White Top grassland of the Riverina Bioregion	Riverine Plain Grasslands	Grasslands	None
45	Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion	Riverine Plain Grasslands	Grasslands	Critically Endangered BC Act: Artesian Springs Ecological Community in the Great Artesian Basin Critically Endangered EPBC Act: Natural Grasslands of the Murray Valley Plains (Part)
53	Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains	Inland Floodplain Swamps	Freshwater Wetlands	Critically Endangered BC Act: Artesian Springs Ecological Community in the Great Artesian Basin

PCTID	PCT Name	Class	Formation	Associated with TEC
74	Yellow Box - River Red Gum tall grassy riverine woodland of NSW South Western Slopes Bioregion and Riverina Bioregion	Floodplain Transition Woodlands	Grassy Woodlands	Critically Endangered BC Act and EPBC Act: White Box - Yellow Box - Blakely's Red Gum Grassy 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
165	Derived corkscrew grass grassland/forbland on sandplains and plains in the semi-arid (warm) climate zone	Riverine Plain Grasslands	Grasslands	None

#### Table 3-5: Plant Community Types mapped at Coleambally

PCTID	PCT Name	Class	Formation	Associated with TEC
0	Not Native	Not Native	Not Native	None
16	Black Box grassy open woodland wetland of rarely flooded depressions in south western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	Inland Floodplain Woodlands	Semi-arid Woodlands (Grassy subformation)	None
19	Cypress Pine woodland of source-bordering dunes mainly on the Murray and Murrumbidgee River floodplains	Riverine Sandhill Woodlands	Semi-arid Woodlands (Shrubby sub- formation)	Endangered BC Act Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes bioregions (Part)
26	Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion	Riverine Plain Woodlands	Semi-arid Woodlands (Grassy subformation)	Endangered BC Act and EPBC Act: Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray-Darling Depression, Riverina and NSW South Western Slopes bioregions
28	White Cypress Pine open woodland of sand plains, prior streams and dunes mainly of the semi-arid (warm) climate zone	Semi-arid Woodlands (Shrubby sub- formation)	Riverine Sandhill Woodlands	Endangered BC Act Sandhill Pine Woodland in the Riverina, Murray-Darling Depression and NSW South Western Slopes bioregions (Part) Endangered BC Act: Acacia melvillei Shrubland in the Riverina and Murray-Darling Depression bioregions (Part)
44	Forb-rich Speargrass - Windmill Grass - White Top grassland of the Riverina Bioregion	Riverine Plain Grasslands	Grasslands	

PCTID	PCT Name	Class	Formation	Associated with TEC
45	Plains Grass grassland on alluvial mainly clay soils in the Riverina Bioregion and NSW South Western Slopes Bioregion	Riverine Plain Grasslands	Grasslands	Critically Endangered BC Act: Artesian Springs Ecological Community in the Great Artesian Basin Critically Endangered EPBC Act: Natural Grasslands of the Murray Valley Plains (Part)

#### Table 3-6: Plant Community Types mapped at Jerilderie

PCTID	PCT Name	Class	Formation	Associated with TEC
0	Not Native	Not Native	Not Native	None
2	River Red Gum-sedge dominated very tall open forest in frequently flooded forest wetland along major rivers and floodplains in south-western NSW	Inland Riverine Forests	Forested Wetlands	None
7	River Red Gum - Warrego Grass - herbaceous riparian tall open forest wetland mainly in the Riverina Bioregion	Inland Riverine Forests	Forested Wetlands	None
9	River Red Gum - wallaby grass tall woodland wetland on the outer River Red Gum zone mainly in the Riverina Bioregion	Inland Riverine Forests	Forested Wetlands	None
44	Forb-rich Speargrass - Windmill Grass - White Top grassland of the Riverina Bioregion	Riverine Plain Grasslands	Grasslands	None



500

1,000

1,500

2,000 m

Figure 3-4: PCTs with associated TECs – Darlington Point

Base layer: ESRI Satellite



AREA



Figure 3-5: PCTs with associated TECs – Coleambally





Figure 3-6: PCTs with associated TECs – Jerilderie



## **3.3 BioNet – species sighting records**

The BioNet database holds observations of flora and fauna species recorded around the state.

Verified observations must be of sufficient recency to be allowable for use as evidence of current use of the land by a listed species. To provide a broader understanding of past listed species sightings for this report, AREA has referred to records of listed species within 1500 metres of the sites which were recorded since 2000. Table 3-7, Table 3-8 and Table 3-9 list the species recorded within 1500 metres, since 2000, at each town. Figure 3-7, Figure 3-8 and Figure 3-9 show the location of these records.

The current Biodiversity Offset Scheme organises listed species into two categories:

- Included in Ecosystem credit species offsetting obligation for these species is included in the offsetting obligation of impact to native vegetation as determined by the Biodiversity Assessment Calculator. These species are generally assumed to be present as significant survey effort would be required to demonstrate they do not use the habitat present for activities such as foraging.
- As species credit species offsetting obligation for species credits species is in addition to the ecosystem credits. Species credit species may account for the breeding component of a species' habitat only. Likelihood of presence of these species is determined by confirming presence of habitat constraints such as suitable tree hollows for breeding owls, confirming geographic constraints such as east of the Newell Highway, consulting with a species expert who is recognised by the NSW Government, or by targeted survey.

Table 3-7, Table 3-8 and Table 3-9 also indicate which species are species credit species. Table 3-10 provides information provided by NSW Government regarding the survey method or habitat constraints as relevant for species credit species.

If threatened species are predicted or known to occur at a development site, a biodiversity assessment must be completed. If the proposal is to be assessed under the biodiversity offset scheme (see section 3.1) impact to species credit species or their habitat is likely to result in a requirement to purchase and retire species credits.

A population of Red Darling Pea is mapped in Jerilderie. Impact to this population, assuming it still exists, will require offsetting if the proposed development is assessed under Biodiversity Offset Scheme (see section 3.1). If the proposal does not trigger assessment under the Biodiversity Offset Scheme, the biodiversity assessment would consider if the development would have a significant impact under the *Biodiversity Conservation Act 2016* and the *Environment Protection and Biodiversity Conservation Act 1999*. If the assessor determined a significant impact was likely, the proposed development would require assessment under the Biodiversity Offset Scheme and purchase and retirement of species credits for this species (and potentially other biodiversity credits) would be required.

Impact to threatened species should be avoided wherever possible.



Scientific Name	Common Name	NSW Status	Commonwealth Status	Species credit species	Number of records
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not listed	No	4
Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not listed	No	1
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not listed	No	6
Vespadelus baverstocki	Inland Forest Bat	Vulnerable	Not listed	No	1
Anseranas semipalmata	Magpie Goose	Vulnerable	Not listed	No	1
Polytelis swainsonii	Superb Parrot	Vulnerable	Vulnerable	Yes - where there is breeding habitat only	30
Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not listed	No	1
Haliaeetus leucogaster	White-bellied Sea- Eagle	Vulnerable	Not listed	Yes - where there is breeding habitat only	1
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not listed	No	1

#### Table 3-7: Listed species recorded on BioNet within 1500m since 2000 – Darlington Point

#### Table 3-8: Listed species recorded on BioNet within 1500m since 2000 – Coleambally

Scientific Name	Common Name	NSW Status	Commonwealth Status	Species credit species	Number of records
Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not listed	No	2
Grantiella picta	Painted Honeyeater	Vulnerable	Vulnerable		1
Myotis macropus	Southern Myotis	Vulnerable			1
Polytelis swainsonii	Superb Parrot	Vulnerable	Vulnerable	Yes - where there is breeding habitat only	13

#### Table 3-9: Listed species recorded on BioNet within 1500m since 2000 - Jerilderie

Scientific Name	Common Name	NSW Status	Commonwealth Status	Species credit species	Number of records
Pilularia novae- hollandiae	Austral Pillwort	Endangered	Not listed	Yes	1
Grus rubicunda	Brolga	Vulnerable	Not listed	No	1
Phascolarctos cinereus	Koala	Vulnerable	Vulnerable	Yes - for important habitat only	2
Swainsona plagiotropis	Red Darling Pea	Vulnerable	Vulnerable	Yes	216
Swainsona murrayana	Slender Darling Pea	Vulnerable	Vulnerable	Yes	6
Sclerolaena napiformis	Turnip Copperburr	Endangered	Endangered	Yes	13



Town	Common name	Scientific name	Use of habitat	Survey and species information provided by NSW DPIE
	Superb Parrot	Polytelis swainsonii	Breeding only	Breeding habitat can be identified by the presence of habitat features and observed nest OR two or more birds seen on site.
Darlington Point	White-bellied Sea Eagle	Haliaeetus leucogaster	Breeding only	Breeding habitat is live large old trees within 1km of rivers, lakes, large dams or creeks, wetlands and coastlines AND the presence of a large stick nest within tree canopy; or an adult with nest material; or adults observed duetting within breeding period. Due to the similarities in nest structure and use of the same nests by White-bellied Sea Eagles and Wedge-tailed Eagles, where a nest is observed without a bird present, searches for prey remains/feathers below the structure should be undertaken. The differing diets of both species and distinctive adult feathers, should provide evidence of nest use, however; where prey items/feathers are absent, repeat visits to the nest until a bird is observed should be undertaken.
	Superb Parrot	Polytelis swainsonii	Breeding only	Breeding habitat can be identified by the presence of habitat features and observed nest OR two or more birds seen on site.
Coleambally	Southern Myotis	Myotis macropus	Any use of the habitat	<ul> <li>The species was allocated to species credit because it is dependent on waterways with pools of 3m wide or greater for foraging (which will be protected under legislation), habitat surrounding waterways is used for breeding and roosting. The species can be detected via survey using appropriate techniques (see Threatened Bat Survey Guide). Constraints based on information from Campbell Susan (2009) So long as it's near water: variable roosting behaviour of the large-footed myotis (<i>Myotis macropus</i>). Australian Journal of Zoology 57, 89-98. https://doi-org.virtual.anu.edu.au/10.1071/ZO09006. Additionally, selected &lt;1 for ave number of offspring because females do not give birth every (often miscarry etc).</li> <li>All habitat on the subject land where the subject land is within 200m of a waterbody with pools/stretches 3m or wider including rivers, creeks, billabongs, lagoons, dams and other waterbodies on the subject land must be mapped. Use aerial imagery to map waterbodies with pools/stretches 3m or wider on or within 200m of the subject land. Species polygon boundaries should align with PCTs on the subject land to which the species is associated that are within 200m of waterbodies mapped.</li> </ul>
	Austral Pillwort	Pilularia novae- hollandiae	Any use of the habitat	Survey: Survey Oct - Dec in drying mud after inundation. Strongly recommend expert report to discount presence or absence if conditions do not meet requirements. General: Presume seedbank based on similar species but unsure; dispersal assumed based on spores but no research to support.
Jerilderie	Koala	Phascolarctos cinereus	Important population only	Areas identified via survey as important habitat. 'Important' habitat (however this is not a mapped important habitat area) is defined by the density of koalas and quality of habitat determined by on- site survey - contact DPIE for more information.
	Red Darling Pea	Swainsona plagiotropis	Any use of the habitat	Search effort is preferred in September
	Slender Darling Pea	Swainsona murrayana	Any use of the habitat	General: Based on expert knowledge and observation. Search effort is preferred in September
	Turnip Copper Burr	Sclerolaena napiformis	Any use of the habitat	Search effort is preferred in September to December

#### Table 3-10: Species credit species recorded within 1500 metres of each town


Figure 3-7: BioNet species sighting records from 2000 to current, within 1500m - Darlington Point





Figure 3-8: BioNet species sighting records from 2000 to current, within 1500m - Coleambally





Figure 3-9: BioNet species sighting records from 2000 to current, within 1500m - Jerilderie



# 3.4 Serious and Irreversible Impact (SAII) candidate

Serious and Irreversible Impact (SAII) candidate species are species which are most at risk of extinction from development.

Table 3-11 presents the implications if an approving authority determines the proposed development will have a serious and irreversible impact on the candidate species or Threatened Ecological Community.

Candidate SAII species and communities may occur in the Murrumbidgee LGA.

### Table 3-11: Effect of serious and irreversible impact for different types of development and activities.

Taken from <u>https://www.environment.nsw.gov</u> scheme/ser	Taken from <a href="https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme/serious-and-irreversible-impacts">https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme/serious-and-irreversible-impacts</a>			
Type of development or activity	Effect of serious and irreversible impacts			
<ul> <li>Clearing proposals</li> <li>Part 4 development (that is not State Significant Development or State Significant Infrastructure)</li> </ul>	The approval authority must <b>not</b> grant approval if they determine the proposal is likely to have a serious and irreversible impact on biodiversity values.			
<ul> <li>State Significant Development</li> <li>State Significant Infrastructure</li> <li>Part 5 activities (where a proponent chooses to opt-in to the Biodiversity Offsets Scheme)</li> <li>Biodiversity Certification</li> </ul>	The approval authority can approve a proposal which is likely to have serious and irreversible impacts. The approval authority must take those impacts into consideration and determine whether there are any additional and appropriate measures that will minimise those impacts if approval is to be granted.			

Of the species identified in the BioNet species sighting record data presented in section 3.3, only one is a serious and irreversible impact candidate. This is the Austral Pillwort, which was recorded in 2000, slightly north of site 12 at Jerilderie.

In a Biodiversity Development Assessment Report (BDAR) the biodiversity assessor is required to provide additional information about the local population of the SAII candidate, the extent of the proposed impact to the local population, and the measure the proponent has taken to avoid impact to the threatened matter. It is the determining authority who decides if the proposal is or is not likely to have a serious and irreversible impact on the threatened matter, not the biodiversity assessor.

If the determining authority finds that the proposal (under Part 4) is likely to have a serious and irreversible impact on the threatened matter, this will prevent implementation of the proposal.

## 3.5 Land use

The NSW Landuse 2017 v1p2 spatial layer presents land use mapping at two scales known as secondary and tertiary – primary is not included in this layer. Secondary classifications have been presented in this analysis.

Two examples of primary, secondary, and tertiary land use classification are:

## Primary: Intensive uses

- Secondary: Intensive horticulture; Intensive animal husbandry; Manufacturing and industrial; Residential and Farm; Services; Utilities; Transport and Communication
- Tertiary (under Services): Commercial services; Public services; Precreation and culture; Defence facilities urban; Research facilities



### **Primary: Conservation and Natural Environments**

- Secondary: Nature conservation; Natural resources; Other minimal use
- Tertiary (under Other minimal use): Defence land natural areas; Stock route; Residual native cover; Rehabilitation

The NSW Landuse 2017 layer can be used to predict the likelihood of native vegetation at a site, particularly the ground layer, based on previous allowable land use and disturbance. This method is considered by NSW Government and biodiversity assessors, when determining if an area is consistent with the definition of Category 1 Land.

Category 1 Land is land consistent with the description provided in Section 60H of the *Local Land Services Act 2013.* If it can be demonstrated that the development site meets this description, the site is excluded from further assessment under the *Biodiversity Conservation Act 2016.* Category 1 Land determination applies to the groundcover vegetation only. Native trees and shrubs are Category 2 by default and impact must be assessed.

Figure 3-10 shows primary land use classes across the Murrumbidgee LGA. Figure 3-11 shows the land uses which are consistent with Category 1 and Category 2 land.

Figure 3-12 to Figure 3-17 present land uses mapped in each site per town. Table 3-12 shows Category 1 and Category 2 consistent land use mapping at each town – small portions are ignored for this table.

If a development site is confirmed to be consistent with the requirement for Category 1 Land, no further assessment or offsetting is required.

Site number	Darlington Point	Coleambally	Jerilderie
1	Category 1	Category 2	Category 2
2	Category 2	Both	Category 1
3	Both	Category 1	Category 1
4	Both	Both	Both
5	Both	Both	Both
6	Both	Both	Both
7	Category 2	Category 2	Category 2
8	Both	Both	Category 2
9	Both	Category 2	Both
10	Category 2	Category 1	Both
11	Category 1	Category 2	Both
12	Category 1	Category 2	Category 1
13	Category 1	Both	Category 2
14	Both		
15	Category 1	]	
16	Category 2		

### Table 3-12: Land use map results.

Both

17









Figure 3-11: Land consistent / inconsistent with Category 1 Land









Figure 3-13: Category 1 and Category 2 Land – Darlington Point









Figure 3-15: Category 1 and Category 2 Land – Coleambally









Figure 3-17: Category 1 and Category 2 Land – Jerilderie



# 3.6 Native Vegetation Regulatory Map

The Native Vegetation Regulatory Map (NVRM) is primarily relevant to rural activities; however, review of this map can highlight the general location of biodiversity constraints which are not otherwise included on the Biodiversity Values Map or the BioNet records.

For example, the NVRM may include areas where conservation agreements exist such as Property Vegetation Plans or biodiversity offset areas, or a listed species is known to occur, but location data is withheld as it could aid the unlawful collection of the species (such as some orchids).

Riparian areas associated with the Murrumbidgee River, Gum Creek, Uri Creek and Waddi Creek in Darlington Point and Billabong Creek in Jerilderie are mapped as Category 2: Vulnerable regulated land on this map. This indicates a high likelihood native vegetation is present and approval will be required to impact this vegetation.

Category 2: Sensitive regulated land is more likely to contain know listed species. No areas of Category 2: Sensitive regulated land is mapped within the target sites.

Site number	Darlington Point	Coleambally	Jerilderie
1	No	No	Yes
2	No	No	No
3	No	No	No
4	No	No	No
5	No	No	No
6	No	No	No
7	Yes	No	No
8	No	No	Yes – Portion only
9	No	No	No
10	Yes	No	No
11	No	No	Yes
12	No	No	No
13	No	No	No
14	No		·
15	No		
16	No	]	
17	Yes		

### Table 3-13: NVR map results



















# 3.7 IBRA subregion threatened species search

The IBRA subregion threatened species search predicts species, populations and communities listed under the *Biodiversity Conservation Act 2016* with potential to occur in the subregion (Appendix A). The Keith vegetation class which supports these listed matters is also indicated in this search.

The IBRA subregion search results are used to inform biodiversity assessments, particularly where the Biodiversity Assessment Method is not required. All species, populations and communities highlighted by this list, and filtered by the appropriate vegetation class are considered for their likelihood of occurring in the development site, and the likelihood they will be impacted by the proposal.

The IBRA search results are provided in Appendix A to demonstrate the range of species, populations and communities which may occur in the target sites. When specific site development is proposed (i.e. subdivision, housing development or other impact) a list of all threatened species known or predicted to occur (BA and EPBC Act) will be collated for predictive modelling for threatened species detection. Thus, no further analysis of this list will occur until a specific development has been proposed.

# 3.8 EPBC Act – Matters of National Environmental Significance: Protected Matters Report

The EPBC Act Matters of National Significance – Protected Matters Report (MNES) is generated via the online Protected Matters Search Tool (<u>https://www.environment.gov.au/epbc/protected-matters-search-tool</u>). The report identifies a list of matters relevant to the Commonwealth predicted within a set distance from a site. For this report a buffer of 1500 metres around the sites has been used. Table 3-14 summarises the report from each town. The full reports are provided in Appendix A.

Listed threatened species are assessed under NSW legislation in accordance with a bilateral agreement with the Commonwealth, unless there is a significant impact to a Commonwealth listed matter, or if impact to the species cannot otherwise be managed or offset under the NSW processes.

Matters highlighted in the MNES report must be considered as part of any biodiversity assessment of a development site. Impact to these matters is usually addressed under state legislation, however if a significant impact to a Commonwealth listed matter is likely to occur, the proposal should be referred to the Commonwealth. Where impact to a listed matter is already addressed under state processes, no additional offsetting is required. The Commonwealth may require additional offsetting where the impact is not offset or addressed under the state processes.

There are no matters in this report which would indicate constraints for the current plan rezoning plan.



MNES	Darlington Point	Coleambally	Jerilderie
World Heritage Properties	None	None	None
National Heritage Places	None	None	None
Wetlands of International Importance	4 All more than 300km upstream.	4 All more than 300km upstream.	4 All more than 200km upstream
Great Barrier Reef Marine Park	None	None	None
Commonwealth Marine Area	None	None	None
Listed Threatened Ecological Communities	5 Two were also associated with PCTs on the state vegetation map	4 One is also associated with PCTs on the state vegetation map	5 None are also associated with PCTs on the state vegetation map
Listed Threatened Species	20	16	25
Listed Migratory Species	9 All bird species	9 All bird species	11 All bird species
Commonwealth Land	None	1 Australian Telecommunications Corporation	1 Australian Telecommunications Corporation
Commonwealth Heritage Places	None	None	None
Listed Marine Species	15 All bird species	15 All bird species	18 All bird species
Whales and Other Cetaceans	None	None	None
Critical Habitats	None	None	None
Commonwealth Reserves Terrestrial	None	None	None
Australian Marine Parks	None	None	None
State and Territory Reserves	1 Murrumbidgee Valley Regional Park mapped along the Murrumbidgee River within 1500m.	None	1 Jerilderie Nature Reserve
Regional Forest Agreements	None	None	None
Invasive Species	22	16	25
Nationally Important Wetlands	None	None	None
Key Ecological Features (Marine)	None	None	None

### Table 3-14: EPBC Act – Matter of National Environmental Significance results

## 3.9 Weeds

Weeds present a threat to biodiversity as well as rural livelihoods. Weeds must be managed where a Biodiversity Stewardship Site is established under the Biodiversity Conservation Act 2016.

Local Land Services (LLS) and Murrumbidgee Council have existing weed programs and identified priority weeds lists:

 Priority weeds for the Riverina LLS region are listed here: <u>https://weeds.dpi.nsw.gov.au/WeedBiosecurities?AreaId=9</u>



- Priority weeds for the Murray LLS region are listed here: <u>https://weeds.dpi.nsw.gov.au/WeedBiosecurities?AreaId=5</u>
- Priority wees for Murrumbidgee Council are listed here:

The Department of Planning, Industry and Environment (DPIE) maintain a list of weeds known as High Threat Weeds. These weeds are specified separately from other exotic species in the application of the Biodiversity Assessment Method. The DPIE has also identified weeds on this list as likely to respond to management and where there is a real chance that management actions can result in eradication of the weed from a target site.



# 3.10 Local Land Services

Rural activities on rural land which involve the clearing of native vegetation are approved under the *Local Land Services Act 2013*, and in accordance with the Land Management (Native Vegetation) Code 2017 (the code). This includes allowable activities, of which Local Land Services (LLS) must be notified, activities which must be approved by LLS and activities for which LLS may defer to the *Biodiversity Conservation Act 2016* and the appropriate regulatory authority for this act and activity.

The code provides for the following rural land management activities:

- Management of Invasive Native Species – permits clearing of native vegetation that has been identified as an invasive native species, and permits certain agricultural activities in treatment areas, in certain circumstances
- Pasture expansion permits a range of clearing of woody native vegetation, by uniform thinning and mosaic thinning
- Continuing use which permits clearing of post-1990 regrowth in previously cleared areas; permits continuation of clearing consistent with land management activities undertaken prior to commencement of the Local Land Services Amendment Act 2016; permits clearing associated with a rotational land management activity and authorises re-categorisation of land in certain circumstances
- Equity which permits clearing of native vegetation; provides for recategorisation of areas cleared of native vegetation in accordance with the Part; and provides for establishment of set aside areas on Category 2- regulated land
- Farm Plan permits clearing of native vegetation on Category 2- regulated land; provides for re-categorisation of areas cleared of native vegetation in accordance with the Part; provides for establishment of set aside areas on Category 1- exempt land and Category 2 – regulated land; and provides for recategorisation of set aside areas established in accordance with the Part.

The code may be implemented while the land is being managed as a rural property, by a rural property manager. It may not be implemented if the land is already the subject of a Development Application.

Local Land Services (LLS) coordinates biodiversity programs which are relevant to the Murrumbidgee LGA and the target sites. The Riverina and Murray LLS regions occurs in the Murrumbidgee LGA (Figure 3-21).

Murrumbidgee Council has an opportunity to encourage land management outcomes which contribute to, or add reach to, the existing LLS programs.



#### Figure 3-21: Local Land Services areas



(from https://www.lls.nsw.gov.au/regions)

### **Plains Wanderer**

Plains Wanderer is a small ground dwelling bird listed as *endangered* under the Biodiversity Conservation Act 2016 and as *critically endangered* under the Environment Protection and Biodiversity Conservation Act 1999.

Local Land Services (Murray) coordinate a Plains Wanderer conservation incentive program known as Paddock for plains Wanderers. The target area for this program extends throughout the Murrumbidgee LGA (Figure 3-22).

Where sites are zoned for conservation or other activity consistent with native vegetation, targeted habitat management for this species may be an opportunity to enhance biodiversity values.



### Figure 3-22: Paddocks for Plains-wanderers project target area.

(LLS 2019) - From https://www.lls.nsw.gov.au/\_\_data/assets/pdf\_file/0010/1249039/INCENTIVE-PACK-2019.20-Plainswanderer.pdf



## Swift Parrots

LLS provides incentives and guidance to enhance habitat for the Swift Parrot and other threatened woodland species and is currently targeting the mid and eastern areas of the Riverina Region. Programs seek to protect, restore and enhance Swift Parrot habitat.

The NSW government maintains a map of important Swift Parrot habitat. The nearest mapped Swift Parrot important areas are approximately 120 to 150 kilometres east of the target sites.



# 4 Recommendations

Clearing of native vegetation and impacts to listed matters is permitted in NSW, so long as the required assessment, approval and offsetting is implemented. Awareness, compliance with and consideration of biodiversity matters at the early planning stage of any development can contribute to a smoother, simpler and cheaper approval pathway.

As a result of this desktop assessment, AREA makes the following recommendations:

- Work with land holders to apply for a Biodiversity Values Explanation Report for the Biodiversity Values mapped in the sites targeted for development.
- Consider the area threshold as per section 7.2 of the Biodiversity Conservation Regulation 2017. Provide a minimum lot size which balances the needs of the proposed zone with the likelihood of developers or home builders to impact an area of native vegetation which exceeds this area threshold trigger.
- Encourage avoidance of impact to native vegetation wherever possible during the process of detailed proposal design in any development site with the goal to reduce the requirement to offset the development.
- Consider areas with flora mapped on the BioNet species sighting records database where these species are species credit species. Impact to species credit species will generate an additional biodiversity credit requirement.

Some areas in the local environment may be available to use as Biodiversity Stewardship Sites which may provide all, or some, of the credits required for offsetting the impact. For example, Lot 431 DP1013379 and Lot 7007 DP1025054 (and the area between this Lot and the Newell Highway) which both support a known population of Red Darling Pea, Turnip Copperburr and Slender darling Pea.

- Ensure impact assessors consider whether land has the potential to be determined consistent with Category 1 Land before applying the Biodiversity Assessment Method.
- Work with current rural land holders on rural land to implement allowable activities to clear vegetation before the site is subject of a Development Activity, in accordance with the Land Management (Native Vegetation) Code 2017.

Table 4-1 presents the sites to which the results of this review may have implications for the land zoning, and the subsequent development. The cells with green highlighting are the sites where Development Applications are likely to be required for the proposed land use.

Ultimately, assessment of the vegetation on the site would be required to inform any Development Application.



Site ID	Darlington Point	Coleambally	Jerilderie
1		<ul> <li>Threatened ecological community</li> <li>Native vegetation</li> </ul>	<ul> <li>Biodiversity Values Map – small portion</li> <li>Native vegetation</li> </ul>
2	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>	
3	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>		
4	Native vegetation		Native vegetation
5	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>		Native vegetation
6			Native vegetation
7		<ul> <li>Threatened ecological community</li> <li>Native vegetation</li> </ul>	<ul><li>Biodiversity Values Map</li><li>Native vegetation</li></ul>
8			<ul> <li>Biodiversity Values Map – small portion</li> <li>Native vegetation</li> </ul>
9			Native vegetation
10		Threatened ecological community	Native vegetation
11	Native vegetation	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>	
12	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>		
13	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>	<ul><li>Threatened ecological community</li><li>Native vegetation</li></ul>	<ul><li>Biodiversity Values Map</li><li>Native vegetation</li></ul>
14	Native vegetation		
15	Native vegetation		
16			
17	Biodiversity Values Map –     small portion		

## Table 4-1: Constraints summary for each site if proposed zoning change occurs



Murrumbidgee IBRA subregion predicted species, populations, and communities search – see next page.



#### DPIE Predicted threatened species for Murrumbidgee IBRA subregion

All are known from the subregion except those highlighted in yellow which are predicted

Scientific Name	Common Name	NSW Status	Vegetation Classes
Amphibians			
Crinia sloanei	Sloane's Froglet	Vulnerable	Floodplain Transition Woodlands, Highly disturbed areas with no or limited native vegetation, Inland Floodplain Swamps, Inland Riverine Forests bodies, rivers, lakes, streams (not wetlands), Western Peneplain Woodlands, Western Slopes Grassy Wo
Litoria raniformis	Southern Bell Frog	Endangered	Highly disturbed areas with no or limited native vegetation, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlan Fens, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Tempe lakes, streams (not wetlands)
Birds			
Anseranas semipalmata	Magpie Goose	Vulnerable	Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Gibber Chenopod Shrublands, Highly disturbed areas with r Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Saline lakes, Montane Lakes, North-we Shrublands, Riverine Plain Grasslands, Semi-arid Floodplain Grasslands, Water bodies, rivers, lakes, streams (not wetlands),
Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Lagoons, Coastal Headland Heaths, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclero Forests, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Inland Riverine Forests, Inland Rocky Hill Woodlands, Litte Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment V Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Riverine Sandhill Woodlands, South Coast Sands Dry Sclerophyll Forests, South Coast Wet Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forest Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Subalpine Woodlands, Sydney Coastal Dry Sclerophyll Forests, Tableland Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Sydney Montane Heaths, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Sclerophyll Forests, Wallum Sand Heaths, Western Slopes Dry Sclerophyll Forests, Western Slopes Grassy
Ardeotis australis	Australian Bustard	Endangered	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Desert Woodlands, Floodplain Transition Woodlands, Gibber Chenopod Shrubland areas with no or limited native vegetation, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Sand Woodlands, North-west Floodplain Woodlands, North-west Plain Shrublands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Chenopod Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Floodplain Grasslands, Mulga Shrublands, Subtropical Semi-arid Woodlands, Western Peneplain Woodlands, Western Slopes Grasslands, Western
Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	<ul> <li>Aeolian Chenopod Shrublands, Alpine Bogs and Fens, Alpine Fjaeldmarks, Alpine Heaths, Alpine Herbfields, Brigalow Clay Plain Woodlands Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal Freshwater La Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Col Temperate Rainforests, Cumberland Dry Sclerophyll Forests, Des Woodlands, Eastern Riverine Forests, Floodplain Transition Woodlands, Gibber Chenopod Shrublands, Gibber Transition Shrublands, Highly dis Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverin Saline lakes, Littoral Rainforests, Mangrove Swamps, Marine environments, Maritime Grasslands, Montane Bogs and Fens, Montane Lakes, Mor Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Woodlands, Rocky cliffs, major rock outcrops etc, Rocky islands, Saltmarshes, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Seag Semi-arid Sand Plain Woodlands, South Coast Heaths, South Coast Sands Dry Sclerophyll Forests, Southern Monta Forests, Southern Tableland Grassy Woodlands, South Coast Sands Dry Sclerophyll Forests, Southern Monta Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Monta Forests, Southern Tableland Grassy Woodlands, Subtropical Rainforests, Subtropical Semi-arid Woodlands, Sublapine Woodlands, Subtropical Rainforests, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, S Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Suthern Tableland Grasslands, Terrestrial saline environments, Upper Riverina Dry Sclerophyll Forests, Water Modes</li></ul>
Botaurus poiciloptilus	Australasian Bittern	Endangered	Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Coastal Swamp Forests, Eastern Riverine Forests, Highly dis Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Mangrove Swamps, Maritime ( Lakes, Northern Montane Heaths, North-west Floodplain Woodlands, Saltmarshes, Water bodies, rivers, Iakes, stre
Burhinus grallarius	Bush Stone- curlew	Endangered	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Lagoons, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Eastern Riv Gibber Chenopod Shrublands, Gibber Transition Shrublands, Highly disturbed areas with no or limited native vegetation, Hunter-Macleay Dry Sc Inland Riverine Forests, Mangrove Swamps, Maritime Grasslands, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll



s, Upper Riverina Dry Sclerophyll Forests, Water bodlands

nds, Inland Riverine Forests, Montane Bogs and erate Montane Grasslands, Water bodies, rivers,

no or limited native vegetation, Inland Floodplain st Floodplain Woodlands, Riverine Chenopod , Western Slopes Grasslands

Coastal Floodplain Wetlands, Coastal Freshwater rophyll Forests, Dry Rainforests, Eastern Riverine oral Rainforests, New England Dry Sclerophyll Wet Sclerophyll Forests, Northern Gorge Dry shyll Forests, North-west Slopes Dry Sclerophyll et Sclerophyll Forests, South East Dry Sclerophyll ts, Southern Tableland Dry Sclerophyll Forests, rests, Sydney Coastal Heaths, Sydney Hinterland and Clay Grassy Woodlands, Upper Riverina Dry v Woodlands

ds, Gibber Transition Shrublands, Highly disturbed e Forests, Inland Saline lakes, North-west Alluvial Shrublands, Riverine Plain Grasslands, Riverine , Semi-arid Sand Plain Woodlands, Stony Desert n Slopes Grassy Woodlands

, Caves, rock fissures etc, Central Gorge Dry agoons, Coastal Headland Heaths, Coastal Heath sert Woodlands, Dry Rainforests, Dune Mallee turbed areas with no or limited native vegetation, he Forests, Inland Rocky Hill Woodlands, Inland ntane Wet Sclerophyll Forests, New England Dry scarpment Dry Sclerophyll Forests, Northern aths, Northern Tableland Dry Sclerophyll Forests, Woodlands, North-west Plain Shrublands, North-Riverine Plain Woodlands, Riverine Sandhill grass Meadows, Semi-arid Floodplain Grasslands, South East Dry Sclerophyll Forests, Southern ne Heaths, Southern Tableland Dry Sclerophyll rn Wattle Dry Sclerophyll Forests, Stony Desert Sydney Coastal Heaths, Sydney Hinterland Dry Clay Grassy Woodlands, Temperate Montane (not wetlands), Western Peneplain Woodlands, s, Yetman Dry Sclerophyll Forests

sturbed areas with no or limited native vegetation, Grasslands, Montane Bogs and Fens, Montane ams (not wetlands)

Coastal Floodplain Wetlands, Coastal Freshwater verine Forests, Floodplain Transition Woodlands, clerophyll Forests, Inland Floodplain Woodlands, in Coast Dry Sclerophyll Forests, North Coast Wet yll Forests, Northern Tableland Dry Sclerophyll

Scientific Name	Common Name	NSW Status	Vegetation Classes
			Forests, Northern Tableland Wet Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-west Floodplain Woodlands, North-west Plain Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sa arid Floodplain Grasslands, Semi-arid Sand Plain Woodlands, South Coast Sands Dry Sclerophyll Forests, Southern Lowland Wet Sclerophyll Fore Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Subtropical Semi-arid Woodlands, Temperate Montane Grass Riverina Dry Sclerophyll Forests, Water bodies, rivers, lakes, streams (not wetlands), Western Peneplain Woodlands, Western Slopes Dry Sclerophyl Western Slopes Grassy Woodlands
Calidris ferruginea	Curlew Sandpiper	Endangered	Coastal Freshwater Lagoons, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Saline lakes, Mangrove Swamps, Marine environm Floodplain Grasslands, Terrestrial saline environments, Water bodies, rivers, lakes, streams (not wetla
Calyptorhynchus lathami	Glossy Black- Cockatoo	Vulnerable	Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Co Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dry Rainforests, Eastern Riverine Forests, Flood Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Littoral Ra Dry Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Montane He Northern Tableland Wet Sclerophyll Forests, Northern Warm Temperate Rainforests, North-west Alluvial Sand Woodlands, North-west Floodplair Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Sandhill Woodlands, Semi-arid Sand Plain Woodlands, South Coast Heaths, South C Wet Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Clay Grassy Woodlands, Upper Riverina Dry Sclerophyll Forests, Sydney Montane Heaths, Sydney Sand Flats
Calyptorhynchus lathami -	Glossy Black- Cockatoo,	Endangered	Floodplain Transition Woodlands, Inland Rocky Hill Woodlands, Riverine Sandhill Woodlands, Western Peneplain Woodlands, West
endangered population	Riverina population	Population	
Certhionyx variegatus	Pied Honeyeater	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Desert Woodlands, Dune Mallee Woodlands, Floodplain Transition Woodlands, Shrublands, Inland Floodplain Shrublands, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, North-west All Woodlands, North-west Plain Shrublands, Riverine Chenopod Shrublands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain M Semi-arid Sand Plain Woodlands, Stony Desert Mulga Shrublands, Subtropical Semi-arid Woodlands, Western Per
Chthonicola sagittata	Speckled Warbler	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dry Rainforests, Eastern Riverine Forests, Floodplain Transition Woodlands, Hunter-Ma Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Scleroph Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-we Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, South Coast Sand Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Sydney Coastal Dry Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hinterland Dry Sclerophyll Forests, Sydney Mon Dry Sclerophyll Forests, Tableland Clay Grassy Woodlands, Temperate Montane Grasslands, Upper Riverina Dry Sclerophyll Forests, Western Sclerophyll Forests, Western Slopes Grassy Woodlands, Western Vine Thickets, Yetman Dry Sclerophyll
Circus assimilis	Spotted Harrier	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal F Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Desert Woodlands, Du Floodplain Transition Woodlands, Gibber Chenopod Shrublands, Gibber Transition Shrublands, Highly disturbed areas with no or limited native v Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Inland Saline lakes, Marine environment Montane Lakes, New England Grassy Woodlands, Northern Montane Heaths, North-west Alluvial Sand Woodlands, North-west Floodplain Wood Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Saltmarshes, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Floodplain Grasslands, Semi-arid Sand Plain Woodlands Southern Tableland Grassy Woodlands, Stony Desert Mulga Shrublands, Subalpine Woodlands, Subtropical Semi-arid Woodlands, Sydney Co Terrestrial saline environments, Wallum Sand Heaths, Water bodies, rivers, lakes, streams (not wetlands), Western Peneplain Woodlands, Western Grasslands, Western Slopes Grassy Woodlands, Yetman Dry Sclerophyll Forests
Climacteris affinis - endangered population	White- browed Treecreeper population in Carrathool local	Endangered Population	Floodplain Transition Woodlands, Semi-arid Sand Plain Woodlands, Western Peneplain Woodland



a Shrublands, North-west Slopes Dry Sclerophyll altmarshes, Sand Plain Mulga Shrublands, Semirests, Southern Tableland Dry Sclerophyll Forests, erophyll Forests, Sydney Coastal Heaths, Sydney slands, Terrestrial saline environments, Upper lerophyll Forests, Western Slopes Grasslands,

ents, Saltmarshes, Seagrass Meadows, Semi-arid ands)

bastal Headland Heaths, Coastal Heath Swamps, adplain Transition Woodlands, Hunter-Macleay Dry ainforests, Montane Bogs and Fens, New England a Escarpment Dry Sclerophyll Forests, Northern eaths, Northern Tableland Dry Sclerophyll Forests, n Woodlands, North-west Slopes Dry Sclerophyll Coast Sands Dry Sclerophyll Forests, South Coast hyll Forests, Southern Lowland Wet Sclerophyll uthern Warm Temperate Rainforests, Subalpine ophyll Forests, Sydney Montane Dry Sclerophyll ophyll Forests, Wallum Sand Heaths, Western Sclerophyll Forests

tern Slopes Dry Sclerophyll Forests

Gibber Chenopod Shrublands, Gibber Transition luvial Sand Woodlands, North-west Floodplain Iallee Woodlands, Sand Plain Mulga Shrublands, neplain Woodlands

ts, Coastal Floodplain Wetlands, Coastal Valley acleay Dry Sclerophyll Forests, Inland Floodplain h Coast Dry Sclerophyll Forests, North Coast Wet hyll Forests, Northern Hinterland Wet Sclerophyll est Floodplain Woodlands, North-west Slopes Dry ds Dry Sclerophyll Forests, Southern Escarpment hyll Forests, Subalpine Woodlands, Subtropical ntane Dry Sclerophyll Forests, Sydney Sand Flats rn Peneplain Woodlands, Western Slopes Dry Il Forests

Freshwater Lagoons, Coastal Headland Heaths, une Mallee Woodlands, Eastern Riverine Forests, vegetation, Inland Floodplain Shrublands, Inland ts, Maritime Grasslands, Montane Bogs and Fens, dlands, North-west Plain Shrublands, North-west e Plain Woodlands, Riverine Sandhill Woodlands, ls, South Coast Sands Dry Sclerophyll Forests, pastal Heaths, Temperate Montane Grasslands, rn Slopes Dry Sclerophyll Forests, Western Slopes

ds

Scientific Name	Common Name	NSW Status	Vegetation Classes
	government area south of the Lachlan River and Griffith local government area		
Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forest Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Eastern Riverine Forests, Floodplain Transition Woodlands, Riverine Forests, Inland Rocky Hill Woodlands, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerop Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-west Slopes Dry Sclerophyll Forests, South Coast Sands Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Hinterland Dry Sclero Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Subalpine Woodlands, Sydney Coastal Dry Sclero Hinterland Dry Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Clay Grass Upper Riverina Dry Sclerophyll Forests, Western Slopes Dry Sclerophyll Forests, Western Slopes Grassy Woodlands, Western Vine Ti
Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Heaths, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Desert Wood Eastern Riverine Forests, Floodplain Transition Woodlands, Gibber Transition Shrublands, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodp Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Littoral Rainforests, Montane Bogs and Fens, Montane Wet Scl Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Montane Heaths, Northe Tableland Wet Sclerophyll Forests, Northern Warm Temperate Rainforests, North-west Alluvial Sand Woodlands, Riverine Plain Woodlands, Riv Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Woodlands, Riv Woodlands, Sand Plain Mulga Shrublands, Semi-arid Sand Plain Woodlands, South Coast Heaths, South Coast Sands Dry Sclerophyll Forests, Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Lowland Wet Sc Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Wet Sclerophyll Forests, Stony Desert Mulga Shrublands, Subalpine Woodlands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Tablela Grassy Woodlands, Upper Riverina Dry Sclerophyll Forests, Wallum Sand Heaths, Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests
Epthianura albifrons	White-fronted Chat	Vulnerable	Aeolian Chenopod Shrublands, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Gibber Chenopod Shrubland vegetation, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Saline lakes, Mangrove Swamps, Marine environments, Maritime Lakes, North-west Plain Shrublands, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Saltmarshes, Semi-arid Floodplain Grassland Grasslands, Terrestrial saline environments, Water bodies, rivers, lakes, streams (not wetlands), Western Slop
Falco hypoleucos	Grey Falcon	Endangered	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Desert Woodlands, Dune Mallee Woodlands, Eastern Riverine Forests, Flood Shrublands, Gibber Transition Shrublands, Highly disturbed areas with no or limited native vegetation, Inland Floodplain Shrublands, Inland Floo Inland Riverine Forests, Inland Rocky Hill Woodlands, Inland Saline lakes, North-west Alluvial Sand Woodlands, North-west Floodplain Wood Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, San Grasslands, Semi-arid Sand Plain Woodlands, Stony Desert Mulga Shrublands, Subtropical Semi-arid Woodlands, Terrestrial saline environm wetlands), Western Peneplain Woodlands, Western Slopes Grasslands
Falco subniger	Black Falcon	Vulnerable	
Grantiella picta	Painted Honeyeater	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coasta Wetlands, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Desert Woodlands, Eastern Riverine Forests, Floodplain Tran Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, New England Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern G Wet Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Riverine Plain Woodlands, Ri Woodlands, Sand Plain Mulga Shrublands, Semi-arid Sand Plain Woodlands, Southern Tableland Dry Sclerophyll Forests, Southern Tablelan Sclerophyll Forests, Stony Desert Mulga Shrublands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Western Pene Forests, Western Slopes Grassy Woodlands, Western Vine Thickets, Yetman Dry Sclerophyll Forests
Grus rubicunda	Brolga	Vulnerable	Aeolian Chenopod Shrublands, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Floodplain Transition Woo native vegetation, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Saline Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, Semi-arid Floodplain Grasslands, Water bodies, rivers, Iakes, strea



ts, Coastal Floodplain Wetlands, Coastal Swamp Hunter-Macleay Dry Sclerophyll Forests, Inland ohyll Forests, North Coast Wet Sclerophyll Forests, ern Hinterland Wet Sclerophyll Forests, Northern y Sclerophyll Woodlands, Pilliga Outwash Dry ophyll Forests, Southern Tableland Dry Sclerophyll erophyll Forests, Sydney Coastal Heaths, Sydney sy Woodlands, Temperate Montane Grasslands, hickets, Yetman Dry Sclerophyll Forests

s, Coastal Floodplain Wetlands, Coastal Headland dlands, Dry Rainforests, Dune Mallee Woodlands, olain Shrublands, Inland Floodplain Swamps, Inland lerophyll Forests, New England Dry Sclerophyll ry Sclerophyll Forests, Northern Escarpment Wet ern Tableland Dry Sclerophyll Forests, Northern dlands, North-west Plain Shrublands, North-west verine Sandhill Woodlands, Sand Plain Mallee South Coast Wet Sclerophyll Forests, South East Sclerophyll Forests, Southern Montane Heaths, arm Temperate Rainforests, Southern Wattle Dry Forests, Sydney Coastal Heaths, Sydney Hinterland and Clay Grassy Woodlands, Temperate Montane ests, Western Slopes Grasslands, Western Slopes

ds, Highly disturbed areas with no or limited native Grasslands, Montane Bogs and Fens, Montane ds, Sydney Coastal Heaths, Temperate Montane pes Grasslands

dplain Transition Woodlands, Gibber Chenopod podplain Swamps, Inland Floodplain Woodlands, dlands, North-west Plain Shrublands, Riverine nd Plain Mulga Shrublands, Semi-arid Floodplain nents, Water bodies, rivers, lakes, streams (not

al Dune Dry Sclerophyll Forests, Coastal Floodplain Insition Woodlands, Gibber Transition Shrublands, Dry Sclerophyll Forests, New England Grassy Gorge Dry Sclerophyll Forests, Northern Hinterland odlands, North-west Floodplain Woodlands, Northiverine Sandhill Woodlands, Sand Plain Mallee and Grassy Woodlands, Southern Tableland Wet and Dry Sclerophyll Forests, Sydney Sand Flats Dry eplain Woodlands, Western Slopes Dry Sclerophyll ests

odlands, Highly disturbed areas with no or limited lakes, North-west Floodplain Woodlands, Riverine ams (not wetlands), Western Peneplain Woodlands

Scientific Name	Common Name	NSW Status	Vegetation Classes
Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal F Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dune Mallee Woodlands Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Inland Saline lakes, Littoral Rainforests, Mangrove Swamps, Marine environments, Maritime Grasslands, Montane Bogs and Fens, Montane Lak England Grassy Woodlands, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Wet S Sclerophyll Forests, Northern Montane Heaths, Northern Tableland Dry Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-west Flood North-west Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Grassland Woodlands, Saltmarshes, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Floodplain Grasslands, Semi-arid Sand Plain Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Subalpine Woodlands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Sydney Coastal Heaths, Sydney Sand Flats Woodlands, Temperate Montane Grasslands, Upper Riverina Dry Sclerophyll Forests, Wallum Sand Heaths, Water bodies, rivers, lakes, streams Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grassy Woodlands, Yetman Dry
Hieraaetus morphnoides	Little Eagle	Vulnerable	Aeolian Chenopod Shrublands, Alpine Bogs and Fens, Alpine Fjaeldmarks, Alpine Heaths, Alpine Herbfields, Brigalow Clay Plain Woodlands, Cer Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Headland Heaths, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Desert Woodlands, Dry Rainforests, Dune Mallee Woodlands, Eastern R Gibber Chenopod Shrublands, Gibber Transition Shrublands, Highly disturbed areas with no or limited native vegetation, Hunter-Macleay Dry Sc Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Inland Saline lakes, Mangro Grasslands, Montane Bogs and Fens, Montane Lakes, Montane Wet Sclerophyll Forests, New England Dry Sclerophyll Forests, New England Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Northern Montane Heaths, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Northern Montane Heaths, North-west Plain Shrublands, North-west Slopes Dry Sclerophyll Woodl Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, North-west Slopes Dry Sclerophyll Wood Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, South Coast Heaths, Southern Montane Heaths, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Montane, Southern Tableland Dry Sclerophyll Forests, Southern Montane, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Dry Sclerophyll Forests, Southern Montane Heaths, Southern Tableland Dry Sclerophyll Forests, Southern Montane, Southern Tableland Dry Sclerophyll Forests, Southern Montane, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland We Rainforests, Southern Wattle Dry Sclerophyll Forests, Story Dese
Lathamus discolor	Swift Parrot	Endangered	Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, C Heaths, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dry Rainforest Woodlands, Highly disturbed areas with no or limited native vegetation, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Woodland Woodlands, Littoral Rainforests, Montane Bogs and Fens, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Coa Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophy Forests, Northern Tableland Wet Sclerophyll Forests, Northern Warm Temperate Rainforests, North-west Alluvial Sand Woodlands, North-west Sl Dry Sclerophyll Forests, Riverine Sandhill Woodlands, South Coast Sands Dry Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tablelan Sclerophyll Forests, Sydney Coastal Dry Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hinterland Dry Sclerophyll Forests, Sydney Sand Grassy Woodlands, Upper Riverina Dry Sclerophyll Forests, Wallum Sand Heaths, Western Slopes Dry Sclerophyll Forests, Western Slopes Dry Sclerophyll Forest
Leipoa ocellata	Malleefowl	Endangered	Dune Mallee Woodlands, Inland Rocky Hill Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Sand Plain Mallee Woodlands, Sydney Hinterla Sclerophyll Forests
Limosa limosa	Black-tailed Godwit	Vulnerable	Aeolian Chenopod Shrublands, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Inland Floodplain Shrublands, Inland Floodplain Sw Marine environments, Maritime Grasslands, Montane Lakes, North-west Floodplain Woodlands, Saltmarshes, Seagrass Meadows, Terrestrial sa streams (not wetlands)
Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Desert Woodlands, Dune Mallee Woodlands, Eastern Riverine Forests, Flood Shrublands, Gibber Transition Shrublands, Highly disturbed areas with no or limited native vegetation, Inland Floodplain Woodlands, Inland River Saline lakes, North-west Alluvial Sand Woodlands, North-west Floodplain Woodlands, North-west Plain Shrublands, North-west Slopes Dry Sclero Forests, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee V arid Floodplain Grasslands, Semi-arid Sand Plain Woodlands, Stony Desert Mulga Shrublands, Subtropical Semi-arid Woodlands, Water bodies Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Gras
Lophoictinia isura	Square-tailed Kite	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Wetlands, Coastal Freshwater Lagoons, Coastal Headland Heaths, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy We Desert Woodlands, Eastern Riverine Forests, Floodplain Transition Woodlands, Gibber Transition Shrublands, Hunter-Macleay Dry Sclerophyll Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Montane Wet Sclerophyll Forests, New



reshwater Lagoons, Coastal Headland Heaths, ds, Eastern Riverine Forests, Floodplain Transition nd Riverine Forests, Inland Rocky Hill Woodlands, kes, New England Dry Sclerophyll Forests, New Sclerophyll Forests, Northern Hinterland Wet odplain Woodlands, North-west Plain Shrublands, nds, Riverine Plain Woodlands, Riverine Sandhill Woodlands, South Coast Sands Dry Sclerophyll

Southern Tableland Wet Sclerophyll Forests, Dry Sclerophyll Forests, Tableland Clay Grassy s (not wetlands), Western Peneplain Woodlands, ry Sclerophyll Forests

ntral Gorge Dry Sclerophyll Forests, Clarence Dry Coastal Heath Swamps, Coastal Swamp Forests, iverine Forests, Floodplain Transition Woodlands, lerophyll Forests, Inland Floodplain Shrublands, ve Swamps, Marine environments, Maritime Grassy Woodlands, North Coast Dry Sclerophyll orthern Gorge Dry Sclerophyll Forests, Northern Forests, Northern Warm Temperate Rainforests, llands, Pilliga Outwash Dry Sclerophyll Forests, rops etc, Rocky islands, Saltmarshes, Sand Plain uth Coast Sands Dry Sclerophyll Forests, South ophyll Forests, Southern Lowland Wet Sclerophyll et Sclerophyll Forests, Southern Warm Temperate ical Semi-arid Woodlands, Sydney Coastal Dry tane Heaths, Sydney Sand Flats Dry Sclerophyll rests, Wallum Sand Heaths, Water bodies, rivers, opes Grassy Woodlands, Western Vine Thickets,

Coastal Freshwater Lagoons, Coastal Headland ts, Eastern Riverine Forests, Floodplain Transition ds, Inland Riverine Forests, Inland Rocky Hill east Dry Sclerophyll Forests, North Coast Wet yll Forests, Northern Tableland Dry Sclerophyll lopes Dry Sclerophyll Woodlands, Pilliga Outwash in Escarpment Wet Sclerophyll Forests, Southern and Grassy Woodlands, Southern Tableland Wet d Flats Dry Sclerophyll Forests, Tableland Clay stern Slopes Grassy Woodlands

nd Dry Sclerophyll Forests, Western Slopes Dry

amps, Inland Saline lakes, Mangrove Swamps, aline environments, Water bodies, rivers, lakes,

plain Transition Woodlands, Gibber Chenopod ine Forests, Inland Rocky Hill Woodlands, Inland ophyll Woodlands, Pilliga Outwash Dry Sclerophyll Woodlands, Sand Plain Mulga Shrublands, Semis, rivers, lakes, streams (not wetlands), Western assy Woodlands

I Dune Dry Sclerophyll Forests, Coastal Floodplain oodlands, Cumberland Dry Sclerophyll Forests, I Forests, Inland Floodplain Shrublands, Inland v England Dry Sclerophyll Forests, New England

Scientific Name	Common Name	NSW Status	Vegetation Classes
			Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, I Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Table Sand Woodlands, North-west Floodplain Woodlands, North-west Plain Shrublands, North-west Slopes Dry Sclerophyll Woodlands, Pilliga Outwa Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mulg Semi-arid Sand Plain Woodlands, South Coast Sands Dry Sclerophyll Forests, South Coast Wet Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, S Tableland Wet Sclerophyll Forests, Stony Desert Mulga Shrublands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Sydney Montane Heaths, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Sclerophyll Forests, Water bodies, rivers, lakes, streams (not wetlands), Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Sclerophyll Forests
Melanodryas cucullata cucullata	Hooded Robin (south- eastern form)	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forest Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Desert Woodlands, Dune Mallee Woodlands, Eastern Riverine Forests, Floodplain Tran Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill W Sclerophyll Forests, New England Grassy Woodlands, North Coast Wet Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, North- Hinterland Wet Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, North-west Allu Woodlands, North-west Plain Shrublands, North-west Slopes Dry Sclerophyll Woodlands, Semi-arid Sand Plain Woodlands, South Coast Sand Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Sand Plain Woodlands, South Coast Sand Wet Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy W Forests, Stony Desert Mulga Shrublands, Subalpine Woodlands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, S Sclerophyll Forests, Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grass Sclerophyll Forests, Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grass
Melithreptus gularis gularis	Black- chinned Honeyeater (eastern subspecies)	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Eastern Riverine Forests, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyl Riverine Forests, Inland Rocky Hill Woodlands, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Coast Wet Sclerop Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-we Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Sandhill Woodlands, South Coast Sands Dry Sclerophyll Forests, South Tableland Grassy Woodlands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hinterl Sclerophyll Forests, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Clay Grassy Woodlands, Upper Riverina Dry Sclerophyll Forests, Western Slopes Grassy Woodlands, Yetman Dry Sclerophyll Forests
Neophema pulchella	Turquoise Parrot	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coa Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dry Rainforests, Eastern Riverine Forests, Floodplain Transition Wood Inland Riverine Forests, Inland Rocky Hill Woodlands, Maritime Grasslands, Montane Bogs and Fens, New England Dry Sclerophyll Forests, Ne Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forest Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Northern Warm Temperate Rainforests, North-west Al Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, South Coast Sa Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Subalpine Woodlands, Sydney Coastal Dry Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hir Dry Sclerophyll Forests, Sydney Montane Heaths, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Clay Grassy Woodlands, Upper Riverin Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grassy Woodlands
Ninox connivens	Barking Owl	Vulnerable	<ul> <li>Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Lagoons, Coastal Headland Heaths, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclero Forests, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain Swamps, Forests, Inland Rocky Hill Woodlands, Littoral Rainforests, Montane Bogs and Fens, Montane Wet Sclerophyll Forests, New England Dry Sclero North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Montane Heaths, Northern Tableland Dry Sclerophyll Forests, North Warm Temperate Rainforests, North-west Alluvial Sand Woodlands, North-west Floodplain Woodlands, North-west Slopes Dry Sclerophyll Forests, Secrephyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Sclerophyll Forests, Southern Tableland Wet Sclerophyll Forests, Southern Warm Temperate Rainforests, Sublepine Woodlands, Subtropical Forests, Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Warm Temperate Rainforests, Sublepine Woodlands, Subtropical Forests, Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Warm Temperate Rainforests, Sublepine Woodlands, Subtropical Forests, Woodlands, Southern Tableland Wet Sclerophyll</li></ul>
Oxyura australis	Blue-billed Duck	Vulnerable	Aeolian Chenopod Shrublands, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Coastal Swamp Forests, I Swamps, Inland Saline lakes, Montane Lakes, Water bodies, rivers, lakes, streams (not wetlands



Northern Escarpment Wet Sclerophyll Forests, eland Wet Sclerophyll Forests, North-west Alluvial ash Dry Sclerophyll Forests, Riverine Chenopod ga Shrublands, Semi-arid Floodplain Grasslands, I Forests, Southern Escarpment Wet Sclerophyll outhern Tableland Grassy Woodlands, Southern Sydney Coastal Heaths, Sydney Hinterland Dry d Clay Grassy Woodlands, Upper Riverina Dry Western Slopes Grassy Woodlands, Yetman Dry

ts, Coastal Floodplain Wetlands, Coastal Valley nsition Woodlands, Gibber Transition Shrublands, /oodlands, Maritime Grasslands, New England Dry orthern Gorge Dry Sclerophyll Forests, Northern uvial Sand Woodlands, North-west Floodplain enopod Shrublands, Riverine Plain Woodlands, ds Dry Sclerophyll Forests, Southern Escarpment Woodlands, Southern Tableland Wet Sclerophyll Sydney Coastal Heaths, Sydney Hinterland Dry mperate Montane Grasslands, Upper Riverina Dry y Woodlands, Western Vine Thickets, Yetman Dry

ts, Coastal Floodplain Wetlands, Coastal Valley phyll Forests, Inland Floodplain Woodlands, Inland phyll Forests, Northern Hinterland Wet Sclerophyll est Floodplain Woodlands, North-west Slopes Dry hern Tableland Dry Sclerophyll Forests, Southern land Dry Sclerophyll Forests, Sydney Montane Dry stern Peneplain Woodlands, Western Slopes Dry

astal Headland Heaths, Coastal Heath Swamps, dlands, Hunter-Macleay Dry Sclerophyll Forests, ew England Grassy Woodlands, North Coast Dry ts, Northern Hinterland Wet Sclerophyll Forests, illuvial Sand Woodlands, North-west Slopes Dry ands Dry Sclerophyll Forests, South Coast Wet brests, Southern Tableland Grassy Woodlands, interland Dry Sclerophyll Forests, Sydney Montane ha Dry Sclerophyll Forests, Wallum Sand Heaths, ands, Yetman Dry Sclerophyll Forests

Coastal Floodplain Wetlands, Coastal Freshwater rophyll Forests, Dry Rainforests, Eastern Riverine Inland Floodplain Woodlands, Inland Riverine ophyll Forests, New England Grassy Woodlands, nt Wet Sclerophyll Forests, Northern Gorge Dry ern Tableland Wet Sclerophyll Forests, Northern dlands, Pilliga Outwash Dry Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern and Dry Sclerophyll Forests, Southern Tableland Rainforests, Subtropical Semi-arid Woodlands, Forests, Sydney Montane Heaths, Sydney Sand m Slopes Dry Sclerophyll Forests, Western Slopes

nland Floodplain Shrublands, Inland Floodplain )

Scientific Name	Common Name	NSW Status	Vegetation Classes
Pachycephala inornata	Gilbert's Whistler	Vulnerable	Dune Mallee Woodlands, Floodplain Transition Woodlands, Inland Floodplain Shrublands, Inland Floodplain Woodlands, Inland Riverine Forests, Sclerophyll Forests, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Semi-arid Sand Plain Woodlands, Stony Desert Mulga Shrub Slopes Dry Sclerophyll Forests, Western Slopes Grassy Woodlands
Pedionomus torquatus	Plains- wanderer	Endangered	Gibber Chenopod Shrublands, Riverine Chenopod Shrublands, Riverine Plain Grasslands
Petroica boodang	Scarlet Robin	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forest Swamps, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dry Rainforests, Eastern Riverine Forests, Floodplain Transit Forests, Inland Riverine Forests, Inland Rocky Hill Woodlands, Montane Bogs and Fens, Montane Wet Sclerophyll Forests, New England Dry Sclero North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Go Wet Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Northern Warm Temperate Rain west Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Plain Woodlands, Riverine Sandhill Woodlands, S Escarpment Wet Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forests, Southern Monta Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Sublapine Woodlands, Subtropical Semi-arid Woo Sydney Coastal Heaths, Sydney Hinterland Dry Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Sydney Montane Heaths, Sydney S Grassy Woodlands, Temperate Montane Grasslands, Upper Riverina Dry Sclerophyll Forests, Western Vine Thickets, Yetman Dry Sclerophyll Forests
Petroica phoenicea	Flame Robin	Vulnerable	Alpine Herbfields, Central Gorge Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal Headland Heaths, Coastal Heath Swamps, Coa Rainforests, Cumberland Dry Sclerophyll Forests, Eastern Riverine Forests, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Woodlands, Maritime Grasslands, Montane Bogs and Fens, Montane Wet Sclerophyll Forests, New England Dry Sclerophyll Forests, New England Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, North-west Slopes Dry Sclerophyll Woodlands, South Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Montane Heath Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Subalpine Woodlands, Sydney Coastal Dry Sclerophyll Forests, Tableland Grasslands, Upper Riverina Dry Sclerophyll Forests, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Stry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grasslands, Western Slopes Stry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Gra
Polytelis anthopeplus monarchoides	Regent Parrot (eastern subspecies)	Endangered	Dune Mallee Woodlands, Highly disturbed areas with no or limited native vegetation, Inland Floodplain Woodlands, Inland Riverine Forests, Ri Woodlands, Semi-arid Sand Plain Woodlands
Polytelis swainsonii	Superb Parrot	Vulnerable	Brigalow Clay Plain Woodlands, Eastern Riverine Forests, Floodplain Transition Woodlands, Highly disturbed areas with no or limited native very Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, North-west Alluvial Sand Woodlands, North-west Floodplain Wood Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Plain Grasslands, Riverine Plain Woodlands, Riverine San Semi-arid Floodplain Grasslands, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Subtropical Semi-arid Wo Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grassy Woodlands, Subtropical Semi-arid Wo
Pomatostomus temporalis temporalis	Grey- crowned Babbler (eastern subspecies)	Vulnerable	Brigalow Clay Plain Woodlands, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coastal S Eastern Riverine Forests, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Flood Rocky Hill Woodlands, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Dry Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Tableland Dry Scleroph Forests, North-west Alluvial Sand Woodlands, North-west Floodplain Woodlands, North-west Plain Shrublands, North-west Slopes Dry Scleroph Forests, Riverine Chenopod Shrublands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mul South Coast Sands Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hinterland Dry Sclerophyll Forests, Sydney Sand Flats Dry Sclerophyll Forests, Tablelan Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grassy Woodlands, Yetr
Pyrrholaemus brunneus	Redthroat	Vulnerable	Aeolian Chenopod Shrublands, Gibber Chenopod Shrublands, Inland Floodplain Shrublands, Inland Saline lakes, Riverin
Rostratula australis	Australian Painted Snipe	Endangered	Aeolian Chenopod Shrublands, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Coastal Swamp Forests, Eas no or limited native vegetation, Inland Floodplain Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, west Floodplain Woodlands, Saltmarshes, Semi-arid Floodplain Grasslands, Water bodies, rivers, lakes, stream
Stagonopleura guttata	Diamond Firetail	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Floodplain Wetlands, Coast Sclerophyll Forests, Dry Rainforests, Eastern Riverine Forests, Floodplain Transition Woodlands, Gibber Transition Shrublands, Highly disturbed a Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodla England Grassy Woodlands, North Coast Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyl Forests, Northern Tableland Wet Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-west Floodplain Woodlands, North-west Slopes Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Woodlands, South Coast Sands Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Forests, Southern Tableland Dry Sclerophyll Forests, Southern



Inland Rocky Hill Woodlands, Pilliga Outwash Dry lands, Western Peneplain Woodlands, Western

ts, Coastal Floodplain Wetlands, Coastal Heath tion Woodlands, Hunter-Macleay Dry Sclerophyll erophyll Forests, New England Grassy Woodlands, orge Dry Sclerophyll Forests, Northern Hinterland nforests, North-west Floodplain Woodlands, North-South East Dry Sclerophyll Forests, Southern ane Heaths, Southern Tableland Dry Sclerophyll odlands, Sydney Coastal Dry Sclerophyll Forests, Sand Flats Dry Sclerophyll Forests, Tableland Clay y Sclerophyll Forests, Western Slopes Grasslands,

astal Valley Grassy Woodlands, Cool Temperate Forests, Inland Riverine Forests, Inland Rocky Hill d Grassy Woodlands, North Coast Wet Sclerophyll s, Northern Hinterland Wet Sclerophyll Forests, Coast Sands Dry Sclerophyll Forests, South East hs, Southern Tableland Dry Sclerophyll Forests, rests, Sydney Coastal Heaths, Sydney Hinterland and Clay Grassy Woodlands, Temperate Montane stern Slopes Grassy Woodlands

iverine Sandhill Woodlands, Sand Plain Mallee

egetation, Inland Floodplain Shrublands, Inland dlands, North-west Plain Shrublands, North-west idhill Woodlands, Sand Plain Mallee Woodlands, bodlands, Upper Riverina Dry Sclerophyll Forests, ands, Yetman Dry Sclerophyll Forests

wamp Forests, Coastal Valley Grassy Woodlands, Iplain Woodlands, Inland Riverine Forests, Inland st Wet Sclerophyll Forests, Northern Escarpment hyll Forests, Northern Tableland Wet Sclerophyll hyll Woodlands, Pilliga Outwash Dry Sclerophyll Iga Shrublands, Semi-arid Sand Plain Woodlands, al Semi-arid Woodlands, Sydney Coastal Dry d Clay Grassy Woodlands, Western Peneplain man Dry Sclerophyll Forests

ne Chenopod Shrublands

stern Riverine Forests, Highly disturbed areas with Montane Bogs and Fens, Montane Lakes, Norths (not wetlands)

tal Valley Grassy Woodlands, Cumberland Dry areas with no or limited native vegetation, Hunterands, New England Dry Sclerophyll Forests, New yll Forests, Northern Tableland Dry Sclerophyll s Dry Sclerophyll Woodlands, Pilliga Outwash Dry I Plain Mallee Woodlands, Semi-arid Sand Plain rests, Southern Tableland Grassy Woodlands,

Scientific Name	Common Name	NSW Status	Vegetation Classes
			Southern Tableland Wet Sclerophyll Forests, Subalpine Woodlands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Sclerophyll Forests, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Clay Grassy Woodlands, Temperate Montane Grasslands, Upper River lakes, streams (not wetlands), Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slope Yetman Dry Sclerophyll Forests
Stictonetta naevosa	Freckled Duck	Vulnerable	Aeolian Chenopod Shrublands, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Heath Swamps, Coastal Swamp Forests Shrublands, Inland Floodplain Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Saline lakes, Montane Lakes, Semi-arid Flo streams (not wetlands)
Tyto novaehollandiae	Masked Owl	Vulnerable	Brigalow Clay Plain Woodlands, Caves, rock fissures etc, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Du Wetlands, Coastal Headland Heaths, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cool Temperate Rainforests, Cumberland Dr Riverine Forests, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Shrublands, Inland Floodplain S Riverine Forests, Inland Rocky Hill Woodlands, Littoral Rainforests, Montane Wet Sclerophyll Forests, New England Dry Sclerophyll Forests, Ne Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Dry Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Tableland Dry Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, Northern V Sand Woodlands, North-west Floodplain Woodlands, North-west Slopes Dry Sclerophyll Forests, South Coast Wet Sclerophyll Forests, South Coast Sands Dry Sclerophyll Forests, South Coast Wet Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, South Coast Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Southern Tableland Wet Sclerophyll Forests, Southern Warm Temperate Rainforests, Subalpine Woodlands, Subtropical Rainforests, Subtropi Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hinterland Dry Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Western Woodlands, Western Vine Thickets, Yetman Dry Sclerophyll Forests, Westerr
Community			
Acacia melvillei Sh Riverina and Mu Depression b	rrubland in the rray-Darling ioregions	Endangered Ecological Community	Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Sand Pla
<i>Allocasuarina I</i> Woodland in the Murray-Darling Bioregio	<i>luehmannii</i> Riverina and Depression ons	Endangered Ecological Community	Riverine Sandhill Woodlands
Inland Grey Box W Riverina, NSW So Slopes, Cobar Nandewar and E South Bior	loodland in the outh Western Peneplain, Brigalow Belt egions	Endangered Ecological Community	Brigalow Clay Plain Woodlands, Floodplain Transition Woodlands, Western Slopes Dry Sclerophyll Fo
Myall Woodland i Riverine Plains, I South, Cobar Pene Darling Depression NSW South Wes bioregio	n the Darling Brigalow Belt eplain, Murray- n, Riverina and stern Slopes ons	Endangered Ecological Community	North-west Floodplain Woodlands, Riverine Chenopod Shrublands, Riverine Plain Woodlands, Semi-arid Floodplain Grasslands,
Sandhill Pine Wo Riverina, Murr Depression and Western Slopes	odland in the ay-Darling NSW South s bioregions	Endangered Ecological Community	Riverine Sandhill Woodlands
White Box - Yellow Red Gum Grassy Derived Native Gr NSW North Coast, Tableland, Nande Belt South, Sydney Eastern Highlands Western Slopes Corner and Riveri	Box – Blakely's Woodland and assland in the New England war, Brigalow y Basin, South s, NSW South s, NSW South a Bioregions	Critically Endangered Ecological Community	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Valley Grassy Woodlands, Floo Sclerophyll Forests, Inland Floodplain Woodlands, Inland Riverine Forests, New England Grassy Woodlands, Northern Tableland Dry Scleroph Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Sandhill Woodlands, Southern Tableland Dry Sclerophyll Forests, Southern Tablel Woodlands, Temperate Montane Grasslands, Upper Riverina Dry Sclerophyll Forests, Western Slopes Dry Sclerophyll Forests Yetman Dry Sclerophyll Forests
Mammals			

Murrumbidgee Council LEP review Biodiversity Constraints Analysis



, Sydney Coastal Heaths, Sydney Hinterland Dry erina Dry Sclerophyll Forests, Water bodies, rivers, opes Grassy Woodlands, Western Vine Thickets,

s, Eastern Riverine Forests, Inland Floodplain odplain Grasslands, Water bodies, rivers, lakes,

Ine Dry Sclerophyll Forests, Coastal Floodplain ry Sclerophyll Forests, Dry Rainforests, Eastern Swamps, Inland Floodplain Woodlands, Inland ew England Grassy Woodlands, North Coast Dry Forests, Northern Gorge Dry Sclerophyll Forests, Warm Temperate Rainforests, North-west Alluvial iverine Plain Woodlands, Rocky cliffs, major rock y Sclerophyll Forests, Southern Escarpment Wet I Forests, Southern Tableland Grassy Woodlands, ical Semi-arid Woodlands, Sydney Coastal Dry nd Flats Dry Sclerophyll Forests, Tableland Clay n Slopes Grasslands, Western Slopes Grassy

lain Woodlands

orests

, Western Peneplain Woodlands

odplain Transition Woodlands, Hunter-Macleay Dry hyll Forests, North-west Slopes Dry Sclerophyll eland Grassy Woodlands, Tableland Clay Grassy Grasslands, Western Slopes Grassy Woodlands,

Scientific Name	Common Name	NSW Status	Vegetation Classes
Chalinolobus picatus	Little Pied Bat	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Caves, rock fissures etc, Desert Woodlands, Dry Rainforests, Dune Mallee Wo Transition Woodlands, Gibber Chenopod Shrublands, Gibber Transition Shrublands, Inland Floodplain Shrublands, Inland Floodplain Swamps, Forests, Inland Rocky Hill Woodlands, Inland Saline Iakes, New England Grassy Woodlands, Northern Tableland Dry Sclerophyll Forests, Nor Floodplain Woodlands, North-west Plain Shrublands, North-west Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, F Woodlands, Riverine Sandhill Woodlands, Rocky cliffs, major rock outcrops etc, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Se Plain Woodlands, Southern Tableland Grassy Woodlands, Stony Desert Mulga Shrublands, Subtropical Semi-arid Woodlands, Water bodies, r Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grassy Woodlands, Western Vine Thickets, Yo
Myotis macropus	Southern Myotis	Vulnerable	Caves, rock fissures etc, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests, Coa Lagoons, Coastal Headland Heaths, Coastal Heath Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cool Temperate Rainfor Rainforests, Eastern Riverine Forests, Floodplain Transition Woodlands, Highly disturbed areas with no or limited native vegetation, Hunter-Mac Shrublands, Inland Floodplain Swamps, Inland Riverine Forests, Littoral Rainforests, Mangrove Swamps, Marine environments, Maritime Grassla Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Es Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Woodlands, Rocky cliffs, Meadows, South Coast Heaths, South Coast Sands Dry Sclerophyll Forests, South Coast Wet Sclerophyll Woodlands, Rocky cliffs, Meadows, South Coast Heaths, South Coast Sands Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forests, South East Dry Sclerophyll Forests, Southern Hinterland Dry Sclerophyll Forests, Southern Warm Temperate Rainforests, Southern Wattle Dry Sclerophyll Forests, Subalpine Woodlands, S Sclerophyll Forests, Southern Warm Temperate Rainforests, Southern Wattle Dry Sclerophyll Forests, Subalpine Woodlands, S Sclerophyll Forests, Sydney Coastal Heaths, Sydney Hinterland Dry Sclerophyll Forests, Sydney Montane Dry Sclerophyll Forests, Sydney Sand Grassy Woodlands, Temperate Montane Grasslands, Terrestrial saline environments, Wallum Sand Heaths, Water bodies, rivers, lakes, streams Forests, Western Slopes Grassy Woodlands, Western Vine Thickets
Saccolaimus flaviventris	Yellow- bellied Sheathtail- bat	Vulnerable	<ul> <li>Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Caves, rock fissures etc, Central Gorge Dry Sclerophyll Forests, Clarence Dry Scherophyll Forests, Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Headland Heaths, Coastal Heath Swamps, Coastal Swamp Fore Temperate Rainforests, Cumberland Dry Sclerophyll Forests, Desert Woodlands, Dry Rainforests, Eastern Riverine Forests, Floodplain Transiti Gibber Transition Shrublands, Highly disturbed areas with no or limited native vegetation, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Inland Saline lakes, Littoral Rainforests, Mangrove Swamps, Maritim Lakes, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyl Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, North-west Alluvial Sand Woodlands, North Shrublands, North-west Slopes Dry Sclerophyll Forests, Northern Warm Temperate Rainforests, North-west Alluvial Sand Woodlands, North-west Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-west Slopes Dry Sclerophyll Forests, Southern Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Floodplain Gra Coast Sands Dry Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Subtropical Rainforests, Subtropical Rainforests, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Southern Southern Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Southern Tableland Wet Sclerophyll Forests, Southern Table</li></ul>
Vespadelus baverstocki	Inland Forest Bat	Vulnerable	Dune Mallee Woodlands, Gibber Transition Shrublands, Inland Floodplain Woodlands, Inland Rocky Hill Woodlands, North-west Floodplain Wood Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mulga Shrublands, Semi-arid Sand Plain Woodlands, Stony Desert Mulga Shrub wetlands), Western Peneplain Woodlands
Phascolarctos cinereus	Koala	Vulnerable	Brigalow Clay Plain Woodlands, Central Gorge Dry Sclerophyll Forests, Clarence Dry Sclerophyll Forests, Coastal Dune Dry Sclerophyll Forests Swamps, Coastal Swamp Forests, Coastal Valley Grassy Woodlands, Cumberland Dry Sclerophyll Forests, Dry Rainforests, Eastern Riverine For Macleay Dry Sclerophyll Forests, Inland Floodplain Woodlands, Inland Riverine Forests, Inland Rocky Hill Woodlands, Littoral Rainforests, Mon Forests, New England Dry Sclerophyll Forests, New England Grassy Woodlands, North Coast Dry Sclerophyll Forests, North Coast Wet Sclerophyll Forests, Northern Escarpment Wet Sclerophyll Forests, Northern Gorge Dry Sclerophyll Forests, Northern Hinterland Wet Sclerophyll Forests, Northern Warm Temperate Rainforests, North-west Alluvial Sand Woodlands, North-west Floodplain Woodlands Pilliga Outwash Dry Sclerophyll Forests, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Semi-arid Sa Sclerophyll Forests, South Coast Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Escarpment Wet Sclerophyll Forests, Southern Lowland Wet Sclerophyll Forests, Southern Tableland Dry Sclerophyll Forests, Southern Tableland Grassy Woodlands, Subtropical Semi-arid Woodlands, Sydney Coastal Dry Sclerophyll Forests, Sydney Coastal Hea Sydney Montane Dry Sclerophyll Forests, Sydney Sand Flats Dry Sclerophyll Forests, Tableland Clay Grassy Woodlands, Upper Riverina Dry Sclerophyll Forests, Tableland Clay Grassy Woodlands, Western Vine Thickets, Yetman Dry Sclerophyll Forests, Restern Slopes Dry Sclerophyll Forests, Western Slopes Grassy Woodlands, Western Vine Thickets, Yetman Dry Sclerophyll Forests, Protects, Sterophyll Forests, Sterophyll Forests, Western Slopes Grassy Woodlands, Western Vine Thickets, Yetman Dry Sclerophyll Forests, Protects,
Plants			



bodlands, Eastern Riverine Forests, Floodplain Inland Floodplain Woodlands, Inland Riverine th-west Alluvial Sand Woodlands, North-west Riverine Chenopod Shrublands, Riverine Plain emi-arid Floodplain Grasslands, Semi-arid Sand rivers, lakes, streams (not wetlands), Western fetman Dry Sclerophyll Forests

astal Floodplain Wetlands, Coastal Freshwater orests, Cumberland Dry Sclerophyll Forests, Dry cleay Dry Sclerophyll Forests, Inland Floodplain ands, Montane Bogs and Fens, New England Dry scarpment Dry Sclerophyll Forests, Northern aths, Northern Tableland Dry Sclerophyll Forests, major rock outcrops etc, Saltmarshes, Seagrass Forests, Southern Escarpment Wet Sclerophyll outhern Tableland Grassy Woodlands, Southern Subtropical Rainforests, Sydney Coastal Dry d Flats Dry Sclerophyll Forests, Tableland Clay s (not wetlands), Western Slopes Dry Sclerophyll

clerophyll Forests, Coastal Dune Dry Sclerophyll ests, Coastal Valley Grassy Woodlands, Cool ion Woodlands, Gibber Chenopod Shrublands, ain Shrublands, Inland Floodplain Swamps, Inland ne Grasslands, Montane Bogs and Fens, Montane yll Forests, Northern Escarpment Dry Sclerophyll orthern Montane Heaths, Northern Tableland Dry orth-west Floodplain Woodlands, North-west Plain n Grasslands, Riverine Plain Woodlands, Riverine asslands, Semi-arid Sand Plain Woodlands, South ophyll Forests, Southern Lowland Wet Sclerophyll hern Warm Temperate Rainforests, Stony Desert Sydney Hinterland Dry Sclerophyll Forests, Sydney er Riverina Dry Sclerophyll Forests, Wallum Sand n Slopes Grasslands, Western Slopes Grassy

dlands, Riverine Chenopod Shrublands, Riverine blands, Water bodies, rivers, lakes, streams (not

ts, Coastal Floodplain Wetlands, Coastal Heath prests, Floodplain Transition Woodlands, Huntertane Bogs and Fens, Montane Wet Sclerophyll wyll Forests, Northern Escarpment Dry Sclerophyll thern Tableland Dry Sclerophyll Forests, Northern ds, North-west Slopes Dry Sclerophyll Woodlands, and Plain Woodlands, South Coast Sands Dry , Southern Hinterland Dry Sclerophyll Forests, leland Wet Sclerophyll Forests, Southern Warm aths, Sydney Hinterland Dry Sclerophyll Forests, lerophyll Forests, Western Peneplain Woodlands, Sclerophyll Forests

Scientific Name	Common Name	NSW Status	Vegetation Classes
Pilularia novae- hollandiae	Austral Pillwort	Endangered	Coastal Floodplain Wetlands, Coastal Freshwater Lagoons, Coastal Swamp Forests, Floodplain Transition Woodlands, Highly disturbed areas with Swamps, Inland Floodplain Woodlands, Inland Riverine Forests, Riverine Plain Grasslands, Riverine Plain Woodlands, Southern
Austrostipa wakoolica	A spear- grass	Endangered	Floodplain Transition Woodlands, Inland Floodplain Shrublands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Wood Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes
Brachyscome muelleroides	Claypan Daisy	Vulnerable	Inland Floodplain Swamps, Riverine Plain Grasslands
Brachyscome papillosa	Mossgiel Daisy	Vulnerable	Aeolian Chenopod Shrublands, Floodplain Transition Woodlands, Inland Floodplain Shrublands, Inland Floodplain Woodlands, Inland Saline lake Grasslands, Semi-arid Floodplain Grasslands
Calotis moorei	A burr-daisy	Endangered	Aeolian Chenopod Shrublands, Gibber Transition Shrublands, Riverine Chenopod Shrublands, Riverine Sandhill Woodlands, Sand Plain Mall
Convolvulus tedmoorei	Bindweed	Endangered	Inland Floodplain Shrublands, Inland Saline lakes, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodla
Cullen parvum	Small Scurf- pea	Endangered	Floodplain Transition Woodlands, Inland Riverine Forests, Riverine Plain Grasslands, Western Slopes Grass
Lepidium monoplocoides	Winged Peppercress	Endangered	Aeolian Chenopod Shrublands, Floodplain Transition Woodlands, Gibber Transition Shrublands, Inland Floodplain Shrublands, Inland Floodplain S Floodplain Woodlands, Pilliga Outwash Dry Sclerophyll Forests, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Wood Floodplain Grasslands, Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Yetman Dry Sc
Leptorhynchos orientalis	Lanky Buttons	Endangered	Floodplain Transition Woodlands, Inland Floodplain Shrublands, Inland Floodplain Swamps, Riverine Plain Grasslands, F
Maireana cheelii	Chariot Wheels	Vulnerable	Gibber Transition Shrublands, Inland Saline lakes, North-west Floodplain Woodlands, Riverine Chenopod Shrublands, Riverine Plain Grasslands, Woodlands
Solanum karsense	Menindee Nightshade	Vulnerable	Aeolian Chenopod Shrublands, Highly disturbed areas with no or limited native vegetation, Inland Floodplain Shrublands, Inland Floodplain Swar lakes, Riverine Chenopod Shrublands, Semi-arid Floodplain Grasslands
Swainsona murrayana	Slender Darling Pea	Vulnerable	Aeolian Chenopod Shrublands, Brigalow Clay Plain Woodlands, Floodplain Transition Woodlands, Gibber Chenopod Shrublands, Gibber Trans Inland Floodplain Woodlands, Inland Saline lakes, North-west Floodplain Woodlands, North-west Plain Shrublands, Riverine Chenopod Shrubla Woodlands, Riverine Sandhill Woodlands, Semi-arid Floodplain Grasslands, Western Slopes Grasslands, Western Slop
Swainsona plagiotropis	Red Darling Pea	Vulnerable	Riverine Chenopod Shrublands, Riverine Plain Grasslands, Riverine Plain Woodlands, Semi-arid Floodplain
Swainsona sericea	Silky Swainson- pea	Vulnerable	Floodplain Transition Woodlands, Gibber Chenopod Shrublands, Inland Rocky Hill Woodlands, New England Dry Sclerophyll Forests, New Engla Sclerophyll Forests, Northern Tableland Wet Sclerophyll Forests, North-west Plain Shrublands, North-west Slopes Dry Sclerophyll Woodlands, Grasslands, Riverine Plain Woodlands, Riverine Sandhill Woodlands, Sand Plain Mulga Shrublands, Semi-arid Floodplain Grasslands, Southern T Wet Sclerophyll Forests, Subalpine Woodlands, Tableland Clay Grassy Woodlands, Temperate Montane Grasslands, Upper Riverina Dry Sclero Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slopes Grassy Woodlands, State Sta
Caladenia arenaria	Sand-hill Spider Orchid	Endangered	Floodplain Transition Woodlands, Riverine Sandhill Woodlands
Diuris sp. (Oaklands, D.L. Jones 5380)	Oaklands Diuris	Endangered	Floodplain Transition Woodlands, Riverine Sandhill Woodlands
Diuris tricolor	Pine Donkey Orchid	Vulnerable	Coastal Valley Grassy Woodlands, Floodplain Transition Woodlands, Hunter-Macleay Dry Sclerophyll Forests, Inland Floodplain Woodlands, New Dry Sclerophyll Forests, North-west Alluvial Sand Woodlands, North-west Slopes Dry Sclerophyll Woodlands, Pilliga Outwash Dry Sclerophyll F Tableland Grassy Woodlands, Western Peneplain Woodlands, Western Slopes Dry Sclerophyll Forests, Western Slopes Grasslands, Western Slo Forests
Grevillea ilicifolia subsp. ilicifolia	Holly-leaf Grevillea	Critically Endangered	Dune Mallee Woodlands, Inland Rocky Hill Woodlands, Sand Plain Mallee Woodlands
Sclerolaena napiformis	Turnip Copperburr	Endangered	Riverine Plain Grasslands, Riverine Plain Woodlands
Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Floodplain Transition Woodlands, Inland Floodplain Woodlands, Inland Riverine Forests, Riverine Sandhill
Reptiles			
Tiliqua occipitalis	Western Blue-tongued Lizard	Vulnerable	Aeolian Chenopod Shrublands, Dune Mallee Woodlands, Riverine Sandhill Woodlands, Sand Plain Mallee Woodlands, Sand Plain Mulga Sh



h no or limited native vegetation, Inland Floodplain Tableland Dry Sclerophyll Forests dlands, Semi-arid Floodplain Grasslands, Western rassy Woodlands

s, Riverine Chenopod Shrublands, Riverine Plain

ee Woodlands, Sand Plain Mulga Shrublands

nds, Semi-arid Floodplain Grasslands

y Woodlands

Swamps, Inland Floodplain Woodlands, North-west dlands, Sand Plain Mallee Woodlands, Semi-arid derophyll Forests

Riverine Plain Woodlands

, Riverine Plain Woodlands, Semi-arid Sand Plain

mps, Inland Floodplain Woodlands, Inland Saline

ition Shrublands, Inland Floodplain Shrublands, ands, Riverine Plain Grasslands, Riverine Plain pes Grassy Woodlands

Grasslands

and Grassy Woodlands, Northern Tableland Dry Riverine Chenopod Shrublands, Riverine Plain Tableland Grassy Woodlands, Southern Tableland rophyll Forests, Western Peneplain Woodlands, lands

v England Grassy Woodlands, Northern Tableland Forests, Riverine Sandhill Woodlands, Southern opes Grassy Woodlands, Yetman Dry Sclerophyll

Woodlands

hrublands, Semi-arid Sand Plain Woodlands

### **EPBC Act Protected Matters Report**

Separate reports generated for sites at Darlington Point, Coleambally and Jerilderie – see next page


Australian Government

Department of Agriculture, Water and the Environment

# **EPBC** Act Protected Matters Report

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

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

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

Report created: 27/01/21 14:53:22

Summary Details Matters of NES Other Matters Protected by the EPBC Act Extra Information Caveat Acknowledgements

Uri State Forest Darlington Point Sturt Highwall Ugobit State Forest Ugobit State Forest Darlington Point

This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2015

Coordinates Buffer: 1.5Km



Willbriggie

## Summary

#### Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	20
Listed Migratory Species:	9

#### Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

#### **Extra Information**

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	22
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

## **Details**

### Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Banrock station wetland complex	500 - 600km upstream
Hattah-kulkyne lakes	300 - 400km upstream
Riverland	400 - 500km upstream
The coorong, and lakes alexandrina and albert wetland	500 - 600km upstream

#### Listed Threatened Ecological Communities

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

Name	Status	Type of Presence
Buloke Woodlands of the Riverina and Murray-Darling	Endangered	Community may occur
Depression Bioregions	<b>-</b> , ,	within area
Grey Box (Eucalyptus microcarpa) Grassy Woodlands	Endangered	Community likely to occur
Australia		within area
Poplar Box Grassy Woodland on Alluvial Plains	Endangered	Community may occur
		within area
<u>Weeping Myall Woodlands</u>	Endangered	Community likely to occur
		within area
White Box-Yellow Box-Blakely's Red Gum Grassy	Critically Endangered	Community likely to occur
Woodland and Derived Native Grassland		within area
Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat
		likely to occur within area
Colidria formuninon		
Curlow Sondhingr [956]	Critically Endopagrad	Species or species habitat
Curiew Sandpiper [656]	Childany Endangered	may occur within area
Falco hypoleucos		
Grey Falcon [929]	Vulnerable	Species or species habitat
		likely to occur within area
<u>Grantiella picta</u>		
Painted Honeyeater [470]	Vulnerable	Species or species habitat
		likely to occur within area
Leipoa ocellata		
Malleefowl [934]	Vulnerable	Species or species habitat
		likely to occur within area
		-
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat
		may occur within area
Pedionomus torquatus		
Plains-wanderer [906]	Critically Endangered	Species or species habitat
	Childeny Endengered	known to occur within area

[Resource Information]

Name	Status	Type of Presence
Pezoporus occidentalis		
Night Parrot [59350]	Endangered	Extinct within area
Polytelis swainsonii		
Superb Parrot [738]	Vulnerable	Breeding known to occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Fish		
Galaxias rostratus		
Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat may occur within area
Maccullochella macquariensis		
Trout Cod [26171]	Endangered	Species or species habitat may occur within area
Maccullochella peelii		
Murray Cod [66633]	Vulnerable	Species or species habitat known to occur within area
Macquaria australasica		
Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
Frogs		
Litoria raniformis		
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Nyctophilus corbeni		
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Phascolarctos cinereus (combined populations of Qld. N	SW and the ACT)	
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Austrostipa wakoolica [66623]	Endangered	Species or species habitat may occur within area

Brachyscome papillosa Mossgiel Daisy [6625]	Vulnerable	Species or species habitat may occur within area
<u>Swainsona murrayana</u> Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name or	the EPBC Act - Threatened	Species list.
Name	Threatened	Type of Presence
Migratory Marine Birds		
<u>Apus pacificus</u> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat may occur within area

Migratory Wetlands Species

Name	Threatened	Type of Presence
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

#### Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name	e on the EPBC Act - Threa	tened Species list.
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat

#### Cattle Egret [59542]

Calidris acuminata Sharp-tailed Sandpiper [874]

Calidris ferruginea Curlew Sandpiper [856]

Calidris melanotos Pectoral Sandpiper [858]

Chrysococcyx osculans Black-eared Cuckoo [705]

Gallinago hardwickii Latham's Snipe, Japanese Snipe [863] may occur within area

Species or species habitat may occur within area

Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within area

Name	Threatened	Type of Presence
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Mviagra cvanoleuca		
Satin Flycatcher [612]		Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

#### Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Murrumbidgee Valley	NSW

#### **Invasive Species**

[Resource Information]

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

Name	Status	Type of Presence
Birds		
Acridotheres tristis		
Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis		
Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus		
House Sparrow [405]		Species or species

Name	Status	Type of Presence
Passor montanus		habitat likely to occur within area
Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Sturnus vulgaris		
Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula		
Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Bos taurus		
Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris		
Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis		
Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus		
House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area

Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]

Lycium ferocissimum African Boxthorn, Boxthorn [19235]

**Plants** 

Rubus fruticosus aggregate Blackberry, European Blackberry [68406]

Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]

Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]

Solanum elaeagnifolium

Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323]

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

## Coordinates

-34.551063 145.961741,-34.550851 146.024741,-34.566543 146.024226,-34.568098 146.01427,-34.572904 146.007403,-34.576579 146.00088,-34.606396 146.001395,-34.606679 145.984744,-34.565271 145.962084,-34.551063 145.961741

## Acknowledgements

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-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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Australian Government

Department of Agriculture, Water and the Environment

# **EPBC** Act Protected Matters Report

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

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

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

Report created: 27/01/21 14:56:22

Summary Details Matters of NES Other Matters Protected by the EPBC Act Extra Information Caveat Acknowledgements



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Coordinates Buffer: 1.5Km



## Summary

#### Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	4
Listed Threatened Species:	16
Listed Migratory Species:	9

#### Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

#### **Extra Information**

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

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	16
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

## Details

### Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Banrock station wetland complex	500 - 600km upstream
Hattah-kulkyne lakes	300 - 400km upstream
Riverland	400 - 500km upstream
The coorong, and lakes alexandrina and albert wetland	500 - 600km upstream

#### Listed Threatened Ecological Communities

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

Name	Status	Type of Presence
Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions	Endangered	Community may occur within area
Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern	Endangered	Community likely to occur within area
Weeping Myall Woodlands	Endangered	Community likely to occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area
Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus		
Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Falco hypoleucos		
Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area

[Resource Information]

Grantiella picta		
Painted Honeyeater [470]	Vulnerable	Species or species habitat known to occur within area
Leipoa ocellata		
Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pedionomus torguatus		
Plains-wanderer [906]	Critically Endangered	Species or species habitat likely to occur within area
Polytelis swainsonii		
Superb Parrot [738]	Vulnerable	Species or species

Name	Status	Type of Presence
		habitat known to occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Fish		
Galaxias rostratus		
Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745] Macquaria australasica	Critically Endangered	Species or species habitat may occur within area
Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area
Frogs		
Litoria raniformis		
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area
Mammals		
Nyctophilus corbeni Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area
Phaseolarates sincrous (combined populations of Old J	VSW and the ACT)	
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat may occur within area
Plants		
Brachyscome papillosa Mossgiel Daisy [6625]	Vulnerable	Species or species habitat may occur within area
Swainsona murravana		
Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the	ne EPBC Act - Threatened	Species list.
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat

likely to occur within area

Migratory Terrestrial Species

<u>Motacilla flava</u> Yellow Wagtail [644]

Myiagra cyanoleuca Satin Flycatcher [612]

Migratory Wetlands Species <u>Actitis hypoleucos</u> Common Sandpiper [59309]

Calidris acuminata Sharp-tailed Sandpiper [874]

Calidris ferruginea Curlew Sandpiper [856]

Calidris melanotos Pectoral Sandpiper [858] Species or species habitat may occur within area

Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within

Name	Threatened	Type of Presence
Gallinago hardwickii		area
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

#### Other Matters Protected by the EPBC Act

#### Commonwealth Land

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

#### Name

Commonwealth Land - Australian Telecommunications Commission

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name	me on the EPBC Act - Threa	tened Species list.
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		

Great Egret, White Egret [59541]

Species or species habitat known to occur within area

[Resource Information]

Ardea ibis Cattle Egret [59542]

Calidris acuminata Sharp-tailed Sandpiper [874]

Calidris ferruginea Curlew Sandpiper [856]

<u>Calidris melanotos</u> Pectoral Sandpiper [858]

<u>Chrysococcyx osculans</u> Black-eared Cuckoo [705]

Gallinago hardwickii Latham's Snipe, Japanese Snipe [863] Species or species habitat may occur within area

Species or species habitat may occur within area

Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat likely to occur within area

Species or species habitat may occur within

Name	Threatened	Type of Presence
<u>Haliaeetus leucogaster</u> White-bellied Sea-Eagle [943]		area Species or species habitat
<u>Merops ornatus</u> Rainbow Bee-eater [670]		Species or species habitat
<u>Motacilla flava</u> Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

#### Extra Information

#### **Invasive Species**

[Resource Information]

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

Name	Status	Type of Presence
Birds		

Anas platyrhynchos Mallard [974]

Carduelis carduelis European Goldfinch [403]

Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]

Passer domesticus House Sparrow [405]

Sturnus vulgaris Common Starling [389]

Turdus merula Common Blackbird, Eurasian Blackbird [596] Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur

Namo	Status	Type of Presence
Name	Status	within area
Mammals		
Bos taurus		
Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris		
Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus		
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis		
Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus		
House Mouse [120]		Species or species habitat likely to occur within area
Orvctolagus cuniculus		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Rubus fruticosus aggregato		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area

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

### Coordinates

 $-34.793099\ 145.889332, -34.840451\ 145.88813, -34.839888\ 145.862209, -34.794367\ 145.869076, -34.793099\ 145.889332, -34.840451\ 145.840451\ 145.8$ 

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-Tasmanian Museum and Art Gallery, Hobart, Tasmania

-Other groups and individuals

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Australian Government

Department of Agriculture, Water and the Environment

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Report created: 27/01/21 14:56:37

**Summary Details** Matters of NES Other Matters Protected by the EPBC Act **Extra Information** Caveat

**Acknowledgements** 



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**Coordinates** Buffer: 1.5Km



## Summary

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World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	4
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	25
Listed Migratory Species:	11

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

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

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

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	18
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

#### **Extra Information**

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

State and Territory Reserves:	1
Regional Forest Agreements:	None
Invasive Species:	25
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

## **Details**

### Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Banrock station wetland complex	500 - 600km upstream
Hattah-kulkyne lakes	200 - 300km upstream
Riverland	400 - 500km upstream
The coorong, and lakes alexandrina and albert wetland	500 - 600km upstream

#### Listed Threatened Ecological Communities

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.

NameStatusType of PresenceBuloke Woodlands of the Riverina and Murray-Darling Depression BioregionsEndangeredCommunity may occur within areaGrey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-easternEndangeredCommunity likely to occur within areaAustralia Natural Grasslands of the Murray Valley PlainsCritically EndangeredCommunity likely to occur
Buloke Woodlands of the Riverina and Murray-Darling Depression BioregionsEndangeredCommunity may occur within areaGrey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-easternEndangeredCommunity likely to occur within areaAustralia Natural Grasslands of the Murray Valley PlainsCritically EndangeredCommunity likely to occur
Depression Bioregionswithin areaGrey Box (Eucalyptus microcarpa) Grassy WoodlandsEndangeredCommunity likely to occurand Derived Native Grasslands of South-easternEndangeredWithin areaAustraliaNatural Grasslands of the Murray Valley PlainsCritically EndangeredCommunity likely to occur
Grey Box (Eucalyptus microcarpa) Grassy WoodlandsEndangeredCommunity likely to occurand Derived Native Grasslands of South-easternwithin areaAustraliaNatural Grasslands of the Murray Valley PlainsCritically EndangeredCommunity likely to occur
<u>Australia</u> Natural Crasslands of the Murray Valley Plains Natural Crasslands of the Murray Valley Plains
Australia Natural Grasslands of the Murray Valley Plains
Natural Grasslands of the Murray Valley Plains Critically Endangered Community likely to occur
within area
Weeping Myall Woodlands Endangered Community likely to occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Critically Endangered Community may occur
Woodland and Derived Native Grassland within area
Listed Threatened Species [Resource Information
Name Status Type of Presence
Birds
Anthochaera phrygia
Regent Honeyeater [82338] Critically Endangered Foraging, feeding or related
behaviour may occur within
area
Botaurus poiciloptilus
Australasian Bittern [1001] Endangered Species or species habitat
likely to occur within area
\$
Calidris ferruginea
Curlew Sandpiper [856] Critically Endangered Species or species habitat
may occur within area
Falco hypoleucos
Grev Falcon [929] Vulnerable Species or species habitat
likely to occur within area
Grantiella picta
Painted Honeveater [470] Vulnerable Species or species habitat
likely to occur within area
Hirundapus caudacutus
White-throated Needletail [682] Vulnerable Species or species habitat
while throated Needletah [002] valuerable valuerable may occur within area
may occur within area
Lathamus discolor
Swift Parrot [744] Critically Endangered Species or species babitat
known to occur within area

[Resource Information]

Name	Status	Type of Presence	
Numenius madagascariensis			
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area	
Pedionomus torquatus			
Plains-wanderer [906]	Critically Endangered	Species or species habitat likely to occur within area	
Polvtelis swainsonii			
Superb Parrot [738]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area	
Rostratula australis			
Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area	
Fish			
Galaxias rostratus			
Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745]	Critically Endangered	Species or species habitat may occur within area	
Maccullochella macquariensis			
Trout Cod [26171]	Endangered	Species or species habitat may occur within area	
Maccullochella peelii			
Murray Cod [66633]	Vulnerable	Species or species habitat known to occur within area	
Macquaria australasica			
Macquarie Perch [66632]	Endangered	Species or species habitat may occur within area	
Frogs			
Litoria raniformis			
Growling Grass Frog, Southern Bell Frog, Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828]	Vulnerable	Species or species habitat likely to occur within area	
Mammals			
Nyctophilus corbeni			
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat may occur within area	
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)			
Koala (combined populations of Queensland, New	Vulnerable	Species or species habitat	

South Wales and the Australian Capital Territory) [85104] Pteropus poliocephalus		known to occur within area
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Plants		
Amphibromus fluitans		
River Swamp Wallaby-grass, Floating Swamp Wallaby-grass [19215]	Vulnerable	Species or species habitat may occur within area
Austrostipa wakoolica		
[66623]	Endangered	Species or species habitat likely to occur within area
Brachyscome muelleroides		
Mueller Daisy [15572]	Vulnerable	Species or species habitat may occur within area
Sclerolaena napiformis		
Turnip Copperburr [11742]	Endangered	Species or species habitat known to occur within area
Swainsona murrayana		
Slender Darling-pea, Slender Swainson, Murray Swainson-pea [6765]	Vulnerable	Species or species habitat likely to occur within area

Name	Status	Type of Presence
Swainsona plagiotropis		
Red Darling-pea, Red Swainson-pea [10804]	Vulnerable	Species or species habitat likely to occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name	on the EPBC Act - Threatene	ed Species list.
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
<u>Myiagra cyanoleuca</u>		
Satin Flycatcher [612]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat

Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]

Pandion haliaetus Osprey [952] Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within area

#### Other Matters Protected by the EPBC Act

#### Commonwealth Land

[Resource Information]

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

#### Name

Commonwealth Land - Australian Telecommunications Corporation

Listed Marine Species [Resource Information] \* Species is listed under a different scientific name on the EPBC Act - Threatened Species list. Name Threatened Type of Presence

Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<u>Ardea alba</u> Great Egret, White Egret [59541]		Species or species habitat likely to occur within area
<u>Ardea ibis</u> Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<u>Calidris ferruginea</u> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<u>Calidris melanotos</u> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<u>Chrysococcyx osculans</u> Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
<u>Gallinago hardwickii</u> Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
<u>Haliaeetus leucogaster</u> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area

Lathamus discolor

Swift Parrot [744]

Merops ornatus Rainbow Bee-eater [670]

Motacilla flava Yellow Wagtail [644]

Myiagra cyanoleuca Satin Flycatcher [612]

Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]

Pandion haliaetus Osprey [952]

Rostratula benghalensis (sensu lato) Painted Snipe [889] Critically Endangered

Species or species habitat known to occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Species or species habitat may occur within area

Critically Endangered

Species or species habitat may occur within area

Species or species habitat may occur within area

Endangered\*

Species or species habitat likely to occur within area

#### **Extra Information**

State and Territory Reserves	[Resource Information]
Name	State
Jerilderie	NSW

#### **Invasive Species**

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

Name	Status	Type of Presence
Birds		
Alauda arvensis		
Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitat likely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat

Passer domesticus House Sparrow [405]

Passer montanus Eurasian Tree Sparrow [406]

Streptopelia chinensis Spotted Turtle-Dove [780]

Sturnus vulgaris Common Starling [389]

Turdus merula Common Blackbird, Eurasian Blackbird [596]

#### Mammals

Canis lupus familiaris Domestic Dog [82654] likely to occur within area

[Resource Information]

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species

Name	Status	Type of Presence
		habitat likely to occur within
Felis catus		area
Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Mus musculus		
House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus		
Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus		
Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides		
Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Lycium ferocissimum		
African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Nassella neesiana		
Chilean Needle grass [67699]		Species or species habitat likely to occur within area
Opuntia spp.		
Prickly Pears [82753]		Species or species habitat likely to occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat

Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]

Species or species habitat likely to occur within area

Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]

Senecio madagascariensis Fireweed, Madagascar Ragwort, Madagascar Groundsel [2624]

Solanum elaeagnifolium

Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323] Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]

likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

Species or species habitat likely to occur within area

## Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

## Coordinates

-35.337646 145.760111,-35.371247 145.758738,-35.369008 145.701575,-35.355288 145.701403,-35.345068 145.734705,-35.337646 145.760111

## 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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