



Natural Area
CONSULTING MANAGEMENT SERVICES

City of Bunbury

Flora and Fauna Survey – Harris Rd, Bunbury

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Document Title	BUNB-R-Harris Rd Flora Fauna Survey				
Location	Client Folders NAC V2\City of Bunbury\Harris Dodson Flora & Fauna Surveys\Harris Rd\Report				
Draft/Version No.	Date	Changes	Prepared by	Approved by	Status
Draft	March 2021	New Document	MG/KS	SH	Draft for client review and comment
V1	April 2021	Minor Changes	KS	SH	Superseded
V2	April 2021	Minor Changes	JW	KS	Final

Executive Summary

Natural Area Consulting Management Services (Natural Area) was contracted by the City of Bunbury to undertake a detailed flora and vegetation, and a basic fauna survey within a portion of Harris Road reserve. Survey outcomes will inform the clearing permit approvals processes for the site and determine the requirement for an *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) referral.

The survey aimed to determine:

- flora and fauna species present (native and non-native)
- the extent and boundaries of vegetation type and condition
- the location of declared rare or priority flora, fauna and/or ecological communities
- the location of potential habitat trees for threatened black cockatoos and the threatened Western Ringtail Possum.

The flora and vegetation survey within the site confirmed:

- a total of 41 flora species (taxa) from 22 families
- a total of nine weed and 22 native species
- one vegetation type Marri, Jarrah and Peppermint Woodland
- vegetation condition ranged from Degraded to Completely Degraded with the majority (97%) of the site Completely Degraded
- no threatened or priority flora species or ecological communities were recorded.

The fauna survey within the site confirmed:

- a total of 10 fauna species of which two mammals were introduced
- five bird, one invertebrate, one reptile and three mammals were recorded
- one threatened species the Baudin's Cockatoo (*Calyptorhynchus baudinii*) was recorded flying over the site
- no roosting, nesting or feeding by black cockatoos was found
- ten habitat trees with a DBH >500 mm were recorded on site, which are potential roosting trees for black cockatoos
- no signs of individuals, scats, dreys (vegetative nests) or scratches up trees by the threatened Western Ringtail Possum were recorded on site
- minimal habitat was recorded for the Western Ringtail Possum with 16 *Agonis flexuosa* (Peppermint) their preferred foraging tree present, with a number of these immature and higher quality habitat in adjacent properties.

As the flora vegetation, and fauna surveys are to inform proposed clearing permit applications, the outcomes were assessed against the ten Western Australian Clearing Principles and the EPBC Act Referral guidelines for the three threatened black cockatoo species. The proposed clearing is not likely to be at variance to the ten clearing principles. The clearing does not trigger any of the values for significant environmental impacts and therefore a referral under the EPBC Act is not considered to be warranted.

Natural Area has the following recommendations:

- where possible pruning of vegetation is to occur over the removal of a potential habitat trees

- clearing operations should be conducted in accordance with Dieback and weed hygiene requirements. Vehicles, machinery and equipment should be cleaned and free of weeds and soil prior to entering the site.
- clearing should be undertaken in dry conditions to minimise effects on hydrological flows and reduce potential for pathogen introduction (e.g. Dieback)
- clearing should be undertaken in a one directional manner (e.g. west to east) to allow any fauna present to disperse into adjacent vegetation.

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1.0 Introduction

Natural Area Consulting Management Services (Natural Area) was contracted by the City of Bunbury to undertake a detailed flora and vegetation, and a basic fauna survey within a portion of Harris Road reserve. Survey outcomes providing information relating to environmental values within the site to inform clearing permit applications and determine if a EPBC Act referral is required.

1.1 Location

The Harris Road survey area is located in the City of Bunbury approximately 8 km south east of the Bunbury town centre and covers an area of approximately 0.822 ha (Figure 1). The survey area includes a portion of Harris Road and the vegetated strips within the road reserve with the entire survey area proposed for clearing. The survey area occurs outside of an environmentally sensitive area (Department of Water and Environment and Regulation 2021).

1.2 Scope

The scope of works associated with the survey works included:

- an initial desktop assessment to determine environmental values and conservation significant flora, fauna, habitat, vegetation, or other environmental features (such as riparian areas, wetlands) relating to the survey area
- a detailed flora and vegetation assessment including a desktop and on-ground component
- on-ground detailed flora survey of the area to determine:
 - flora species composition (native and non-native)
 - presence of any priority or threatened flora species
 - vegetation type and condition
- on-ground basic fauna survey to record opportunistic sightings of fauna or evidence of their presence including tracks, scats, dens, warrens, and calls
- habitat assessment for the presence of the threatened Western Ringtail Possum (*Pseudocheirus occidentalis*) including direct observations and indicators of presence including conducting a night stalk
- habitat assessment for black cockatoos, including the presence of habitat trees with a diameter at breast height (DBH) >500 mm and determining the presence of foraging and nesting habitat for threatened black cockatoos
- reporting outcomes of the survey.



Legend
[Red outline] Site Boundary



Figure 1:
Site Location
Harris Road, Bunbury WA

Client: City of Bunbury
Date: 26/02/2021
Created by: K. Sadgrove
Image Source: Nearmap, 2021
Datum: GDA 94



2.0 Site Characteristics

2.1 Regional Context

According to Interim Biogeographical Regionalisation of Australia (IBRA) descriptions, Bunbury is located within the Swan Coastal Plain region. The Swan Coastal Plain comprises two major divisions, the Swan Coastal Plain 1 -Dandaragan Plateau and Swan Coastal Plain 2 -Perth Coastal Plain (Mitchell, Williams and Desmond, 2002), with Harris Road situated in the latter. This area is described as a low-lying coastal plain with sands of colluvial and aeolian origin, as well as alluvial river flats and coastal limestone. The region is dominated by Banksia and/or Jarrah Woodland over sandy soils associated with the dune systems, with Paperbark (*Melaleuca*) in swampy/damp areas and Jarrah Woodland to the east where the Swan Coastal Plain rises (Mitchell, Williams & Desmond, 2002).

2.2 Climate

The climate experienced in the area is warm Mediterranean, with dry, hot summers and cool, wet winters. According to the Bureau of Meteorology (Bunbury, Station ID 009965, 2021):

- average rainfall is 718.4 mm pa, with the majority falling between May and September
- average maximum temperature ranges from 17.7 °C in winter to 29.1 °C in summer, with the highest recorded maximum being 40.8 °C
- average minimum temperatures range from 7.6 °C in winter to 14.9 °C in summer, with the lowest recorded minimum being -3.0 °C
- predominant wind directions include morning easterlies and westerly sea breezes during summer months, with an average wind speed of 15.5 km/h and gusts of more than 100 km/h during storm events.

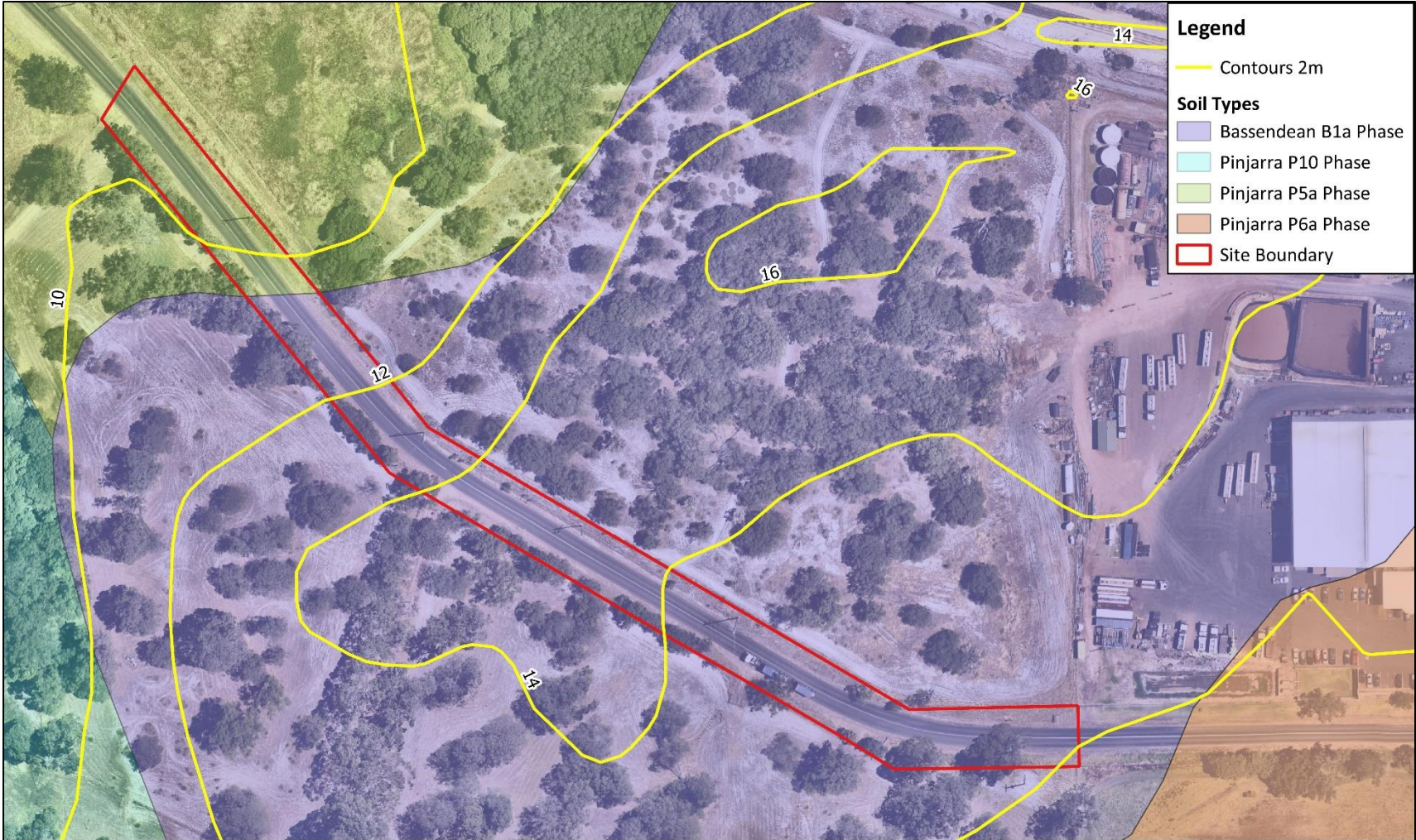
2.3 Soils and Topography


According to the Natural Resource Info (NRInfo) data maintained by the Department Primary Industries and Regional Development (DPIRD, 2021) two soil types exists within the site, namely Bassendean B1a Phase and Pinjarra P5a Phase (Figure 2; Table 1). Site topography ranges from 10 to 14 m Australian Height Datum (AHD), with the highest elevation in the centre of the survey area decreasing to 10 m AHD in the north-west and 12 m AHD in the south-east. The survey area occurs within the Moderate to Low risk category for Acid Sulphate Soils (ASS) (Department of Water and Environment and Regulation (2021a).

Table 1: Soil types within the Harris Road survey site

Soil Type	Code	Description
Bassendean B1a Phase	212Bs__B1a	Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands with an intensely coloured yellow B horizon occurring within 1 m of the surface; marri and jarrah dominant.
Pinjarra P5a Phase	213Pj__P5a	Poorly drained flats. Cracking clays similar to P5 with a thin veneer of grey sand.

Source: Department of Primary Industries and Regional Development 2021



 **Figure 2:**
Soils and Topography
Harris Road, Bunbury WA

Client: City of Bunbury
Date: 2/03/2021
Created by: K. Sadgrove
Image Source: Nearmap, 2021
Datum: GDA 94

0 25 50 m

N

2.4 Hydrology

Both ends of the survey area is situated within a multiple use wetland including approximately the first 100 m to the north-west of the site and 37 m at the south-east of the site. This is classified as a low lying flat Palusplain Wetland (geomorphic wetland), which is described as a seasonally waterlogged flat and is listed as a multiple use wetland and not listed as Conservation or Resource Enhancement within the management category (DBCA 2021d). Groundwater salinity within the survey area is 500 – 1000 mg/L Total Dissolved Salts (TDS) which is classified as marginal quality (Department of Water and Environment and Regulation 2021b).

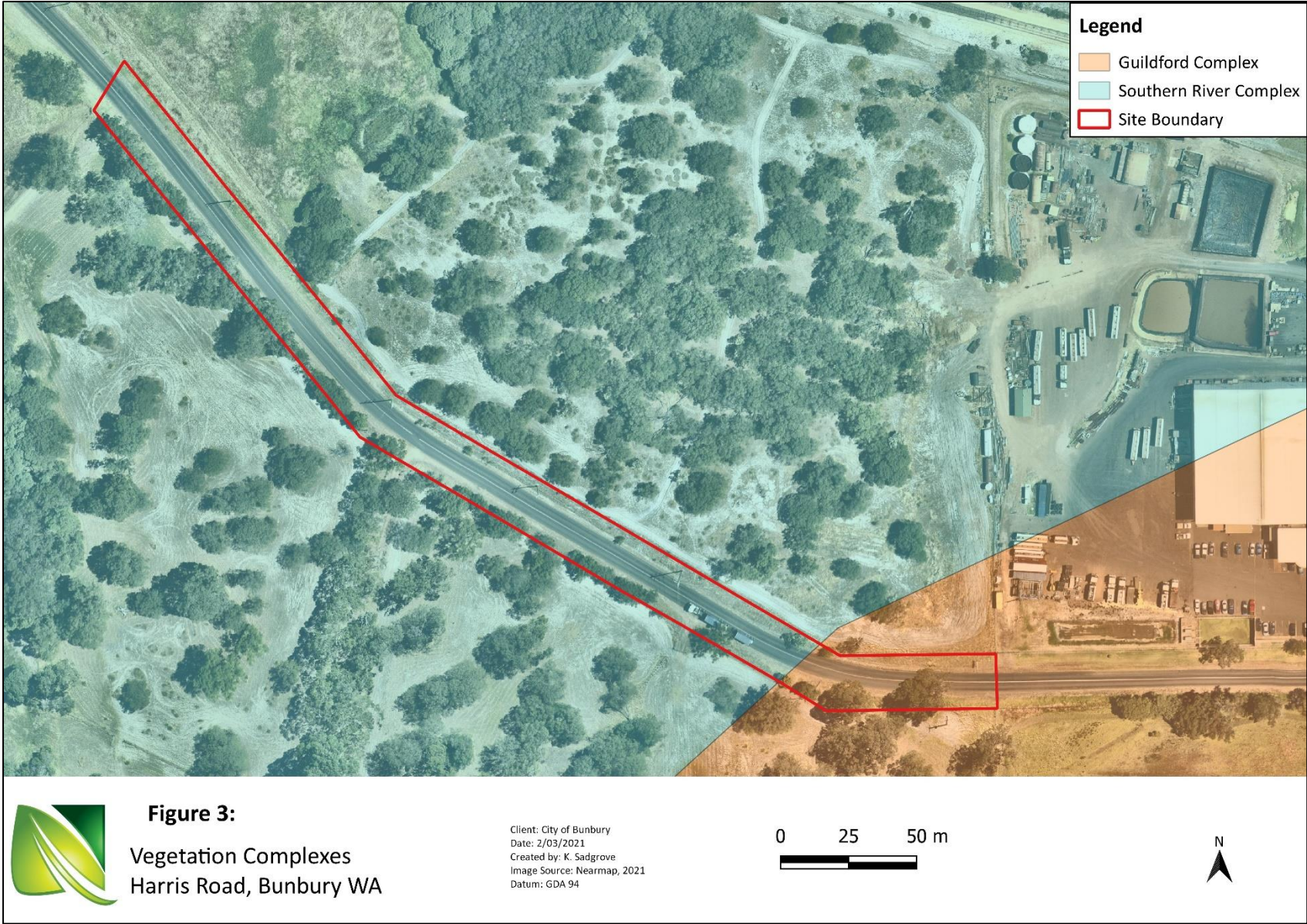
2.5 Vegetation Complex

Two vegetation complexes occur within the survey area, namely Guilford Complex and the Southern River Complex (Hedde *et al.*, 1980). The majority of the site is situated within the Southern River Complex with a small portion on the eastern end of the survey area in the Guilford Complex, these complexes are described in the Table 2, Figure 3.

Table 2: Vegetation complex descriptions

Vegetation Complex	Description
Guilford Complex	Dominated by a mixture of an open-forest, in sections a tall open-forest, of marri-wandoo-jarrah and a woodland of wandoo, and can include fringing woodlands of <i>Eucalyptus rudis</i> – <i>Melaleuca raphiophylla</i> along the streams. The other remnant plant species in this complex include <i>Banksia grandis</i> , <i>Kingia australis</i> , <i>Xanthorrhoea preissii</i> and species of <i>Hardenbergia</i> and <i>Hibbertia</i> .
Southern River Complex	Elevated areas of open Marri-Jarrah-Banksia woodland and <i>Eucalyptus rudis</i> – <i>Melaleuca raphiophylla</i> along the streams (Hedde <i>et al.</i> , 1980). With the survey site occurring south of the Murray River where <i>Agonis flexuosa</i> occurs in association with <i>Eucalyptus rudis</i> and <i>Melaleuca raphiophylla</i>

Source: Hedde *et al.*, 1980



2.6 Fauna Habitat

There is potential for the three threatened black cockatoos and their habitat to occur on site including, the Carnaby's Cockatoo (*Calyptorhynchus latirostris*) listed as endangered under the *EPBC Act 1999* (Cth), the Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksia naso*) and the Baudin's Black Cockatoo (*Calyptorhynchus baudinii*) listed as vulnerable; all are listed as threatened under the *Biodiversity Conservation Act 2016* (WA). Western Ringtail possums (*Pseudocheirus occidentalis*) are listed as threatened under the *Biodiversity Conservation Act 2016* (WA) and as Critically Endangered under the *EPBC Act 1999* (Cth).

According to NationalMap (DBCA 2021e), a small portion of the site is located within an area which is identified as medium habitat suitability for the Western Ringtail Possum. The site is also classified as a Carnaby's Cockatoo Unconfirmed Breeding Area within the Swan Coastal Plain and Jarrah Forest IBRA region and Carnaby's Cockatoo areas requiring investigating as feeding habitat in the Swan Coastal Plain (SCP) IBRA region (DBCA 2021f). The site lies just inside the boundary for the unconfirmed breeding area and is likely to be within the designated buffer zone. Previous observations by the City of Bunbury, environmental Team Leader noted the presence of known foraging trees, *Agonis flexuosa* for the threatened Western Ringtail Possum and several potential threatened Black Cockatoo habitat trees.

2.7 Heritage Values

A search of the Aboriginal Heritage Inquiry System identified no listed Aboriginal Heritage Sites, although one site is recorded, Other Heritage Place 5816: Artifacts/Scatter (Status: Lodged) occurring within the western portion of the survey site (Department of Planning, Lands and Heritage 2021). A Lodged status means that information has been received but an assessment has not been completed to determine if it meets Section 5 of the *Aboriginal Heritage Act 1972* (Department of Planning, Lands and Heritage 2021). A search of the inHerit State Heritage Council register identified no European heritage sites within the survey site or within close proximity of the site (Government of Western Australia 2021).

3.0 Methodology

3.1 Objectives

The objective of the survey was to collect sufficient data to provide adequate information to inform clearing permit applications and determine the requirement for a EPBC Act referral.

3.2 Desktop and Literature Review

A desktop flora and vegetation survey was undertaken to determine:

- likely native and non-native flora and fauna species present
- current extent of native vegetation
- general floristic community types
- likely presence of threatened or priority flora and fauna species
- likely presence of any threatened or priority ecological communities.

The following databases were accessed to obtain relevant information:

- NatureMap (Department of Biodiversity, Conservation and Attractions, 2021c) (Appendix 1)
- Protected Matters Search Tool (Department of Agriculture, Water and the Environment 2021) (Appendix 2)
- FloraBase (Department of Biodiversity, Conservation and Attractions, 2021a)

Summary sheets of threatened flora potentially occurring in the area were created for quick reference in the field (Appendix 3).

3.3 Flora On-ground Methodology

Natural Area Ecologist Sharon Hynes and assistant Ben Connor survey the area on 15 and 16 February 2021, with key GPS data recorded using a handheld Samsung tablet loaded with GIS mapping software (Mappt). A night stalk was also conducted within the site on the evening of 15 February 2021 to record fauna presence. Information recorded during the surveys included:

- identification of flora species present by walking the site, including targeting declared rare and priority species indicated as potentially present during desktop assessments
- assessing boundaries of vegetation type and condition extent across the site
- determining the presence of any further threatened or priority listed flora species and/or ecological communities listed under the *Biodiversity and Conservation Act 2016* (WA) and/or the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
- recording locations of habitat trees with a DBH >500 mm which have the potential to provide habitat in the form of foraging, roosting or nesting for threatened black cockatoos
- opportunistic sightings of fauna were recorded while traversing the site (either directly or indications of their presence) including scats, tracks, calls and diggings including the identification habitat suitable for the Western Ringtail Possum.

The flora and vegetation survey was conducted in accordance with *Technical Guidance- Flora and Vegetation Surveys for Environmental Impact Assessment* (Environmental Protection Authority, 2016). The basic fauna survey was undertaken in accordance with *Technical Guidance- Terrestrial vertebrate fauna surveys for*

environmental impact assessment (Environmental Protection Authority, 2020). Samples were collected, or photographs taken of unfamiliar species to enable later identification.

3.3.1 Vegetation Type

The vegetation type was determined using the structural classes described in *Bush Forever Volume 2* (Government of Western Australia, 2000), and records dominant over, middle and understorey species. A tablet equipped with GPS mapping software (Mappt) was used to mark the change in vegetation type across the site. A description of the various structural classes is provided in Table 3.

Table 3: Vegetation structural classes

Life Form/Height Class	Canopy Percentage Cover			
	100 – 70%	70 – 30%	30 - 10%	10 – 2 %
Trees over 30 m	Tall closed forest	Tall open forest	Tall woodland	Tall open woodland
Trees 10 – 30 m	Closed forest	Open forest	Woodland	Open woodland
Trees under 10 m	Low closed forest	Low open forest	Low woodland	Low open woodland
Tree Mallee	Closed tree mallee	Tree mallee	Open tree mallee	Very open tree mallee
Shrub Mallee	Closed shrub mallee	Shrub mallee	Open shrub mallee	Very open shrub mallee
Shrubs over 2 m	Closed tall scrub	Tall open scrub	Tall shrubland	Tall open shrubland
Shrubs 1 – 2 m	Closed heath	Open heath	Shrubland	Open shrubland
Shrubs under 1 m	Closed low heath	Open low heath	Low shrubland	Low open shrubland
Grasses	Closed grassland	Grassland	Open grassland	Very open grassland
Herbs	Closed herbland	Herbland	Open herbland	Very open herbland
Sedges	Closed sedgeland	Sedgeland	Open sedgeland	Very open sedgeland

(Source: Government of Western Australia, 2000)

3.3.2 Vegetation Condition

Vegetation condition was assessed using the rating scale outlined in *Bush Forever Volume 2* (Government of Western Australia, 2000). A tablet equipped with GPS mapping software (Mappt) was used to mark the vegetation condition across the site. Table 4 provides a description of the rating scale.

Table 4: Vegetation condition ratings

Category		Description
1	Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
2	Very Good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
3	Good	More obvious signs of damage caused by human activities since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly less aggressive weeds.
4	Poor	Still remains basic vegetation structure or ability to regenerate to it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
5	Very Poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
6	Completely Degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising of weed or crop species with isolated native trees or shrubs.

3.3.3 Limitations

A number of limitations associated with both desktop and on-site flora surveys exist, including:

- the survey was conducted outside of the optimal time of year for flora species in the south west, with those species present at the time of the survey recorded
- database searches only provide an indication of what flora species may be present, with on ground surveys required to confirm those actually present
- the differing databases are reliant on information submitted via various reporting mechanisms, so all records of a particular species or ecological community within a specified area may not be complete
- information on species provided on some databases include out-of-date species names, meaning that names need to be checked for currency
- on-ground surveys indicate species present at the time of the assessment, with species flowering at different times not always able to be identified
- not all species flower every year
- some fauna species are highly mobile and may utilise the site as part of their range but may not be present within the site at the time of the survey
- certain fauna species are shy or difficult to observe and may not be observed even though they are present on site
- species are active at different times and are not always able to be identified.

4.0 Results

4.1 Desktop Survey

A review of NatureMap identified a total of 807 flora and 297 fauna species which could potentially occur within a 10 km radius of the site including:

- 481 dicotyledons
- two gymnosperms
- 319 monocotyledons
- five ferns
- ten amphibians
- 171 birds
- 68 invertebrates
- 23 mammals
- 25 reptiles.

4.1.1 Significant Flora

A review of NatureMap indicated 41 conservation significant flora species listed under the *Biodiversity Conservation Act 2016* (WA), potentially occurring within 10 km of the site (Department of Biodiversity Conservation and Attractions, 2021b). A review of the Protected Matters Search Tool (PMST) indicated 18 significant flora species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cwlth) as potentially occurring within a 10 km radius of the site (Department of Agriculture, Water and the Environment 2021).

Due to the survey requested to be conducted in early 2021, this has resulted in the survey being undertaken outside the optimal time of year (spring) for the South West Botanical Region, meaning the potential presence of some conservation significant flora cannot be ruled out (e.g., orchid species). Although the presence of significant flora is considered unlikely, due to the degraded nature of the site and previous clearing for road construction.

Of the 53 conservation significant species potentially found in the area, it was determined that the site conditions (soil type, drainage, location) may be suitable for 16 (highlighted in green) of these species (Table 5). Conservation code descriptions are provided in Appendix 4.

Table 5: Threatened and Priority flora species listed by NatureMap and PMST

Species Name	Cons Code	NatureMap	PMST
<i>Acacia flagelliformis</i>	P4	X	
<i>Acacia semitrullata</i>	P4	X	
<i>Adelphacme minima</i>	P3	X	
<i>Andersonia gracilis</i>	EN		X
<i>Angianthus drummondii</i>	P3	X	
<i>Aponogeton hexapetalus</i>	P4	X	
<i>Austrostipa bronwenae</i>	T / EN	X	X

Species Name	Cons Code	NatureMap	PMST
<i>Austrostipa jacobiana</i>	T / CR	X	X
<i>Banksia nivea subsp. uliginosa</i>	EN		X
<i>Banksia squarrosa subsp. argillacea</i>	VU		X
<i>Boronia tetragona</i>	P3	X	
<i>Brachyscias verecundus</i>	CR		X
<i>Caladenia speciosa</i>	P4	X	
<i>Caladenia huegelii</i>	EN		X
<i>Carex tereticaulis</i>	P3	X	
<i>Chamaescilla gibsonii</i>	P3	X	
<i>Chamelaucium sp. S coastal plain</i>	VU		X
<i>Chamelaucium sp. Yoongarillup</i>	P4	X	
<i>Craspedia sp. Waterloo</i>	P2	X	
<i>Diuris drummondii</i>	T / VU	X	X
<i>Diuris purdiei</i>	EN		X
<i>Drakaea micrantha</i>	T / VU	X	X
<i>Eleocharis keigheryi</i>	T / VU	X	X
<i>Eucalyptus rudis subsp. cratyantha</i>	P4	X	
<i>Gastrolobium whicherense</i>	P2	X	
<i>Grevillea rosieri</i>	P2	X	
<i>Lambertia echinata subsp. occidentalis</i>	EN		X
<i>Lasiopetalum membranaceum</i>	P3	X	
<i>Leptomeria furtiva</i>	P2	X	
<i>Leucopogon sp. Busselton</i>	P2	X	
<i>Lomandra whicherensis</i>	P3	X	
<i>Ornduffia submersa</i>	P4	X	
<i>Pithocarpa corymbulosa</i>	P3	X	
<i>Platysace filiformis</i>	P3	X	
<i>Puccinellia vassica</i>	P1	X	
<i>Pultenaea skinneri</i>	P4	x	
<i>Rumex drummondii</i>	P4	x	
<i>Schoenus benthamii</i>	P3	X	
<i>Schoenus capillifolius</i>	P3	X	

Species Name	Cons Code	NatureMap	PMST
<i>Schoenus loliaceus</i>	P2	X	
<i>Stylidium longitubum</i>	P4	X	
<i>Stylidium paludicola</i>	P3	X	
<i>Stylidium perplexum</i>	P1	X	
<i>Synaphea hians</i>	P3	X	
<i>Synaphea odocoileops</i>	P1	X	
<i>Synaphea polypodioides</i>	P3	X	
<i>Synaphea sp. Fairbridge Farm</i>	T	X	X
<i>Synaphea sp. Pinjarra Plain</i>	EN		X
<i>Synaphea sp. Serpentine</i>	CR		X
<i>Synaphea stenoloba</i>	EN		X
<i>Thelymitra variegata</i>	P2	X	
<i>Verticordia attenuata</i>	P3	X	

(Source: Department of Biodiversity, Conservation and Attractions, 2021a)

4.1.2 Threatened Ecological Communities

A review of the PMST report indicated that there are five listed Threatened Ecological Communities (TEC) that could potentially occur within 10 km of the site (Table 6). Whilst conducting on-ground surveys the likelihood of these TEC's will be assessed through species composition and vegetation structure to determine if requirements are met.

Table 6: Potential Threatened Ecological Communities within the Harris Road survey area

Name	Status	Presence
Banksia woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur
Clay Pans of the Swan Coastal Plain	Critically Endangered	Community likely to occur
<i>Corymbia calophylla</i> - <i>Xanthorrhoea preissii</i> woodlands and shrublands, Swan Coastal Plain	Endangered	Community known to occur
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur
Tuart (<i>Eucalyptus gomphocephala</i>) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur

4.1.3 Significant Fauna

A review of NatureMap indicated 41 conservation significant fauna species listed under the *Biodiversity*

Conservation Act 2016 (WA), potentially occurring within 10 km of the site (Department of Biodiversity Conservation and Attractions, 2021b). A review of the Protected Matters Search Tool (PMST) (Department of the Environment and Energy, 2021) indicated 16 significant fauna species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (Cwlth) as potentially occurring within a 10 km radius of the site.

Of the 48 conservation significant species potentially found in the area, it was determined that the site conditions (soil type, drainage, location) may be suitable for 8 (highlighted in green) of these species (Table 7). Conservation code descriptions are provided in Appendix 3.

Table 7: Threatened and Priority fauna species listed by NatureMap, PMST, and DBCA

Species Name	Common Name	Cons. Code	Nature Map	PMST	DBCA
<i>Actitis hypoleucos</i>	Common Sandpiper	IA	X		
<i>Anous tenuirostris subsp. melanops</i>	Australian Lesser Noddy	T / VU	X	X	
<i>Arenaria interpres</i>	Ruddy Turnstone	IA	X		
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	IA	X		
<i>Calidris canutus</i>	Red Knot	EN / IA	X	X	
<i>Calidris ferruginea</i>	Curlew Sandpiper	T / CR	X	X	
<i>Calidris ruficollis</i>	Red-necked Stint	IA	X		
<i>Calidris tenuirostris</i>	Great Knot	T	X		
<i>Calyptorhynchus banksii subsp. naso</i>	Forest Red-tailed Black Cockatoo	T / VU	X	X	
<i>Calyptorhynchus baudinii</i>	Baudin's Cockatoo	T / EN	X	X	
<i>Calyptorhynchus latirostris</i>	Carnaby's Cockatoo	T / EN	X	X	
<i>Charadrius leschenaultii</i>	Greater Sand Plover	T	X		
<i>Ctenotus ora</i>	Coastal Plains Skink	P3	X		
<i>Dasyurus geoffroii</i>	Chuditch, Western Quoll	T / VU	X	X	
<i>Falco peregrinus</i>	Peregrine Falcon	S	X		
<i>Hydromys chrysogaster</i>	Water-rat, Rakali	P4	X		
<i>Hydroprogne caspia</i>	Caspian Tern	IA	X		
<i>Idiosoma sigillatum</i>	Swan Coastal Plain shield-backed trapdoor spider	P3	X		
<i>Isodon fusciventer</i>	Quenda, southwestern brown bandicoot	P4	X		
<i>Limosa lapponica</i>	Bar-tailed Godwit	IA	X		

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<i>Limosa limosa</i>	Black-tailed Godwit	IA	X	
<i>Notamacropus irma</i>	Western Brush Wallaby	P4	X	
<i>Numenius madagascariensis</i>	Eastern Curlew	T / CR	X	X
<i>Numenius phaeopus</i>	Whimbrel	IA	X	
<i>Oxyura australis</i>	Blue-billed Duck	P4	X	
<i>Pandion cristatus</i>	Eastern Osprey	IA	X	
<i>Phascogale tapoatafa</i>	Brush-tailed Phascogale	S	X	
<i>Phascogale tapoatafa subsp. wambenger</i>	South-western Brush-tailed Phascogale, Wambenger	S	X	
<i>Plegadis falcinellus</i>	Glossy Ibis	IA	X	
<i>Pluvialis fulva</i>	Pacific Golden Plover	IA	X	
<i>Pluvialis squatarola</i>	Grey Plover	IA	X	
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum	T / CR	X	X
<i>Psophodes nigrogularis subsp. nigrogularis</i>	Western Whipbird (western heath)	T	X	
<i>Sterna hirundo</i>	Common Tern	IA	X	
<i>Thalasseus bergii</i>	Crested Tern	IA	X	
<i>Thinornis rubricollis</i>	Hooded Plover, Hooded Dotterel	P4	X	
<i>Tringa brevipes</i>	Grey-tailed Tattler	P4	X	
<i>Tringa glareola</i>	Wood Sandpiper	IA	X	
<i>Tringa nebularia</i>	Common Greenshank, greenshank	IA	X	
<i>Tringa stagnatilis</i>	Marsh Sandpiper, little greenshank	IA	X	
<i>Xenus cinereus</i>	Terek Sandpiper	IA	X	
<i>Bettongia pencillata ogilbyi</i>	Woylie	EN		X
<i>Botaurus poiciloptilus</i>	Australasian Bittern	EN		X
<i>Falco hypoleucos</i>	Grey Falcon	VU		X
<i>Pachyptila turtur subantarctica</i>	Fairy Prion (southern)	VU		X
<i>Rostratula australis</i>	Australian Painted Snipe	EN		X
<i>Setonix brachyurus</i>	Quokka	VU		X
<i>Sternula nereis nereis</i>	Australian Fairy Tern	VU		X

4.2 Flora Survey Results

4.2.1 Flora

A total of 41 flora species (taxa) were recorded from 22 families, of which 19 were weeds and 22 were native species. All native species recorded were common species with no priority or threatened flora species and no declared pests or Weeds of National Significance (WoNS) identified within the survey area. The most common species recorded were from the Poaceae (Grass) and Fabaceae (Pea) families, with all the grasses and most of the peas recorded being weeds. All native understorey species consisted of few individuals that were sparsely located.

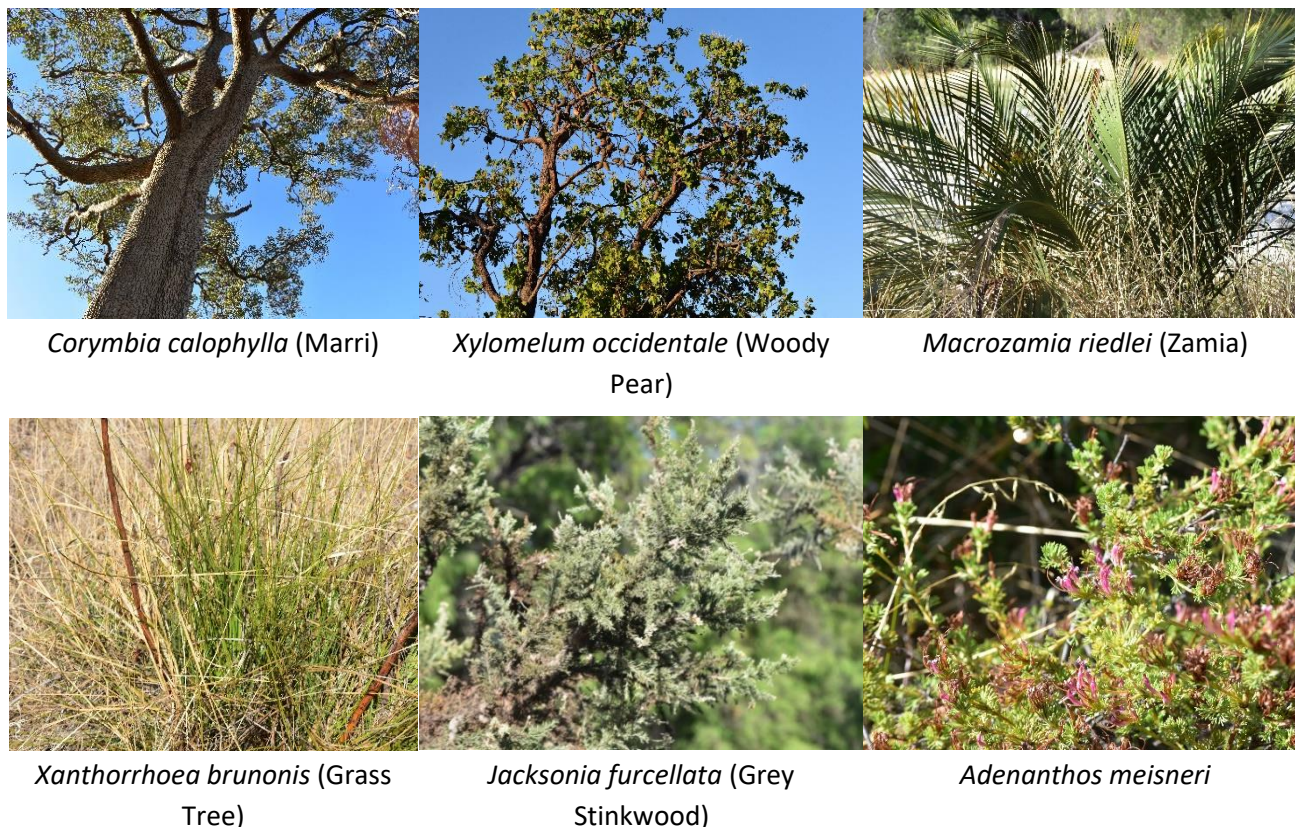


Figure 5: Examples of native flora species recorded



Flinders Range Wattle (**Acacia iteaphylla*)



**Euphorbia maculata*



Perennial Veldt Grass (**Ehrharta calycina*)



African Lovegrass (**Eragrostis curvula*)

Figure 6: Examples of weed flora species recorded

4.2.2 Vegetation Type

The vegetation type determined on site was Marri, Jarrah and Peppermint Woodland (CcEmAfW). This consisted of *Eucalyptus marginata* (Jarrah), *Corymbia calophylla* (Marri) and *Agonis flexuosa* (Peppermint) trees over a sparse middle storey of mixed native shrubs and an understorey dominated by weedy grasses and herbs. The middle storey was incredibly sparse and was not dominated by any particular species, with a mix of one or few individuals of each species found spread throughout the road reserve survey area.

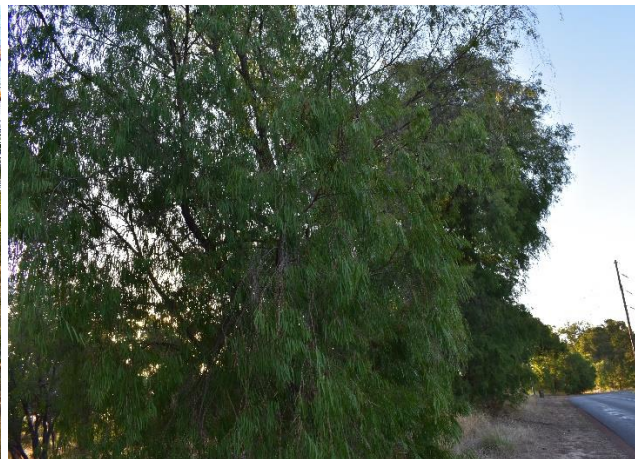
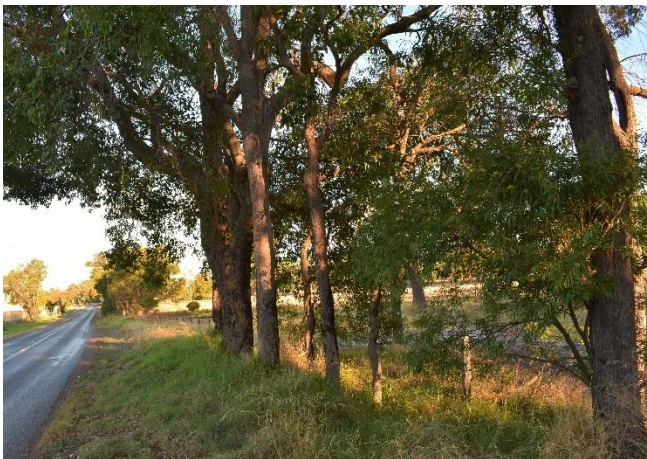


Figure 7: Vegetation within Harris Road reserve survey area

4.2.3 Threatened and Priority Ecological Communities

No threatened or priority ecological communities were found on site during the 2021 survey. The only likely TEC indicated by the desktop search that could potentially occur based on remnant native species composition is the *Corymbia calophylla* - *Xanthorrhoea preissii* woodlands and shrublands, Swan Coastal Plain ecological community. However, due to the lack of native species present including those that comprise this floristic community and the degraded nature of the site it is not considered to be part of this TEC.

4.2.4 Vegetation Condition

Vegetation condition across the survey area ranged from Degraded to Completely Degraded (Table 8, Figure 8), with majority of the site in Completely Degraded condition. The survey area consists of thin strips of vegetation along the road reserve of Harris Road and consists of trees over sparse native shrubs and herbs, and a high-density understorey of weedy grasses and herbs.

Table 8: Vegetation condition

Vegetation Condition	Pristine	Excellent	Very Good	Good	Degraded	Completely Degraded	Totals
Area (ha)	0	0	0	0	0.0237	0.797	0.8207
Area (%)	0	0	0	0	2.88	97.11	100



4.3 Fauna Survey Results

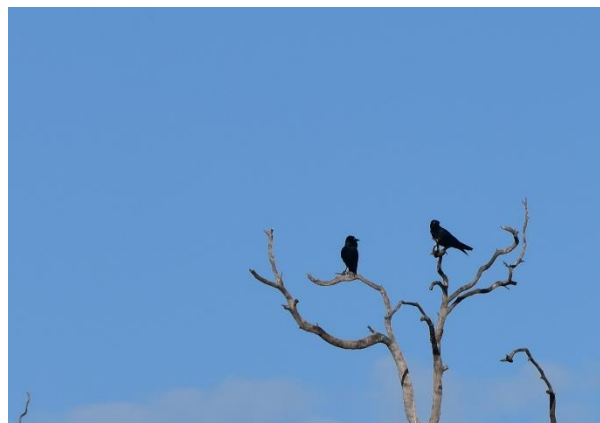
A total of 10 fauna species were recorded within the survey area during the 2021 survey, including eight natives and two introduced species (Table 9, Figure 9).

Table 9: Fauna species observed, *denotes introduced species

Family	Scientific Name	Common Name
Bird		
Accipitridae	<i>Aquila audax</i>	Wedge-tailed Eagle
Cacatuidae	<i>Calyptorhynchus baudinii</i>	Baudin's Cockatoo
Corvidae	<i>Corvus coronoides</i>	Australian Raven
Maluridae	<i>Malurus splendens</i>	Splendid Fairy-wren
Psittacidae	<i>Platycercus zonarius</i>	Twenty-eight Parrot
Invertebrate		
Nephilidae	<i>Nephila edulis</i>	Australian Golden Orb Weaver
Mammal		
Macropodidae	<i>Macropus fuliginosus</i>	Kangaroo (tracks)
Leporidae	* <i>Oryctolagus cuniculus</i>	European Rabbit (deceased animal, burrow and tracks)
Canidae	* <i>Vulpes vulpes</i>	Red Fox (tracks)
Reptile		
Scincidae	<i>Cryptoblepharus buehneri</i>	Snake-eyed Skink



European Rabbit burrow
(**Oryctolagus cuniculus*)



Australian Raven
(**Corvus coronoides*)



Red Fox tracks
(**Vulpes vulpes*)



Twenty-eight Parrot (*Platycercus zonarius*)

Figure 9: Observed fauna within Harris Road survey area

4.3.1 Fauna Habitat

A total of 10 habitat trees were recorded within the site with a diameter at breast height (DBH) >500 mm, which are potential roosting habitat for threatened black cockatoos (Figure 10). No hollows suitable for use for nesting by black cockatoos were found within the site although one Marri tree was present with small hollows which were not large enough to provide cockatoo habitat. No roosting or feeding of black cockatoos was recorded, with one Baudin's Cockatoo observed flying over the site and landing in a Marri tree to the south of the site. Feeding on Marri nuts by other bird species was noted on site, with markings indicating Twenty-eight Parrot feeding. Twenty-eight Parrots were also noted on site during the survey. The limited number of trees in the road verge means that the feeding and roosting habitat has a moderate habitat value for foraging and roosting. Higher value habitat is present in adjacent properties with more mature trees present and a more intact canopy. Habitat trees and their locations are listed in Appendix 6.

Western Ringtail Possum habitat was recorded within the survey area although it was minimal with 16 immature *Agonis flexuosa* (Peppermint) trees present (Figure 11). No signs of individual possums, dreys (vegetative nests), scratches up trees or scats were recorded within the survey area during the 2021 survey. It is possible possums may use this area as a transitional zone to get to the higher value habitat areas to the north and south of the road verge survey area. These larger areas of possum habitat present within the adjacent properties provide dense cover and therefore more protection to possums.





5.0 Implications of Results

5.1 Flora and Vegetation

Natural Area's February 2021 survey of a portion of Harris Road, Bunbury recorded 41 flora species from 22 families, of which 19 (46.3%) were introduced and 22 (55.7%) were native. One vegetation type was determined within the survey site, namely Marri, Jarrah and Peppermint Woodland. Vegetation condition within the site ranged from Degraded to Completely Degraded with the majority (97%) of the site in Completely Degraded condition. The survey area consists of thin strips of vegetation along the road reserve of Harris Road and consists of trees over sparse native shrubs and herbs, and a high-density understorey of weedy grasses and herbs.

5.2 Significant Flora

No threatened or priority flora species were identified during the February 2021 flora survey. Due to the survey being undertaken outside of the optimal time of year (spring) for the South West Botanical Region the potential presence of some conservation significant flora cannot be ruled out (e.g., orchid species). Although the presence of significant flora is considered unlikely, due to the degraded nature of the site and previous parkland clearing of the site.

5.3 Threatened Ecological Communities (TEC)

No priority or threatened ecological communities (TEC) were recorded during the 2021 survey. Vegetation present was degraded in nature with low species diversity, and therefore did not meet patch size and condition requirements to be classified as any of the potentially occurring TEC's.

5.4 Fauna

A total of 10 fauna species were observed during the February 2021 survey, of which two were introduced species. Of the 10 species observed five were birds, one an invertebrate, one a reptile and three mammals. Sightings of fauna consisted of observations of their presence which included tracks and burrows as well as individuals sighted. Previous observations by the City of Bunbury, Environmental Team Leader noted the presence of known foraging trees, *Agonis flexuosa* for the threatened Western Ringtail Possum and several potential threatened Black Cockatoo habitat trees occurring within the site.

5.5 Significant Fauna

5.5.1 Possum Habitat

Western Ringtail Possum habitat was recorded within the survey area although it was minimal with 16 immature *Agonis flexuosa* (Peppermint) trees present. No signs of individual possums, dreys (vegetative nests), scratches up trees or scats were recorded. Larger areas of possum habitat are present within adjacent properties to the north and south of the road reserve providing dense cover and therefore more protection.

According to the EPBC Act policy statement 3.10, *Significant impact guidelines for the vulnerable western ringtail possum (Pseudocheirus occidentalis) in the southern Swan Coastal Plain, Western Australia*, the Harris Road survey area is located within Supporting Habitat (Area 3) (Department of the Environment,

Water, Heritage, and the Arts 2009). An assessment against the criteria outlined for Significant Impact Assessment for supporting habitat is shown in Table 10. The proposed clearing area is smaller than the remnant patch requirements and the existing habitat is in a fragmented state. Therefore, impacts to Western Ringtail Possums are minimal and referral to the Environmental Protection Authority (EPA) is not considered to be warranted.

Table 10: Significant Impact Assessment criteria for Area 3- Supporting Habitat

Actions with Potential Significant Impacts	Comment
Clearing in a remnant habitat patch that is greater than 0.5 ha in size	<ul style="list-style-type: none"> Total clearing area is 0.8207 ha (including existing road) although this entire area does not contain suitable habitat in the form of <i>Agonis flexuosa</i> trees. The majority of the <i>Agonis flexuosa</i> trees occur within the southern road reserve with the habitat covering approximately 0.096 ha.
Clearing of more than 50 % of a remnant habitat patch that is between 0.1 and 0.5 ha in size	<ul style="list-style-type: none"> The <i>Agonis flexuosa</i> trees occur within the southern road reserve with the habitat covering approximately 0.096 ha and is therefore less than the habitat patch requirement.
Fragmentation of existing habitat linkages	<ul style="list-style-type: none"> Habitat trees which are separated by more than six metres are classified as a fragmented habitat (Department of the Environment, Water, Heritage, and the Arts 2009). All <i>Agonis flexuosa</i> trees recorded during the 2021 survey are separated by distances greater than 6 m. The current distance between habitat trees at Harris Road, constitutes a habitat that is already subjected to fragmentation.

5.5.2 Black Cockatoo Habitat

A total of 10 habitat trees were recorded within the site with a diameter at breast height (DBH) >500 mm, which are potential roosting habitat for threatened black cockatoos. No hollows suitable for use for nesting by black cockatoos were found within the site although one Marri tree was present with small hollows, which may increase in size and provide potential cockatoo habitat in the future. No roosting or feeding by black cockatoos was recorded, with one Baudin's Cockatoo observed flying over the site. Feeding was noted by Twenty-eight Parrots on site, with bite marks visible on Marri nuts. Due to the limited number of trees present within in the road verge, the site has a low-moderate habitat value for foraging and roosting. Higher value habitat is present in adjacent properties with more mature trees present with a more intact canopy providing more opportunities for foraging. Assessment of the site characteristics against the referral guidelines for the three threatened black cockatoo species is shown in Table 11, with impacts not considered significant and referral under the EPBC Act not warranted.

Table 11: Referral guidelines for the three threatened black cockatoo species

Guideline		Comment
High risk of significant impacts: referral recommended	<ul style="list-style-type: none"> Clearing of any known nesting tree Clearing or degradation of any part of a vegetation community known to contain breeding habitat Clearing of more than 1 ha of quality foraging habitat. Clearing or degradation (including pruning the top canopy) of a known night roosting site Creating a gap of greater than 4 km between patches of black cockatoo habitat (breeding, foraging or roosting). 	<p>Unlikely to be high risk of significant impacts:</p> <ul style="list-style-type: none"> No known nesting trees were identified during the February 2021 survey. One Marri was observed with small hollows which were not a sufficient size to be used by cockatoos Portions of the site occurs within Carnaby's Cockatoo Unconfirmed Breeding Area within the Swan Coastal Plain and Jarrah Forest IBRA region and Carnaby's Cockatoo areas requiring investigating as feeding habitat in the Swan Coastal Plain (DBCA 2021f). The site lies just inside the boundary for the unconfirmed breeding area and is likely to be within the designated buffer zone. Proposed clearing area covers 0.822 ha which is not completely vegetated and includes the existing road as well as the road reserve. The site contains less than 1 ha of good quality foraging habitat. The site is not listed as a known roosting location according to the DBCA data provided in NationalMap. No evidence of roosting was observed during the 2021 survey although a total of 10 habitat trees (DBH > 500mm) were recorded within the site with no suitable hollows for black cockatoos observed. Due to the limited number of trees in the road verge means that the feeding and roosting habitat has a moderate habitat value for foraging and roosting. The proposed clearing does not create a gap of greater than 4 km between patches of black cockatoo habitat as it is limited to the existing road reserve boundary with foraging habitat occurring either side of the existing road.

Guideline		Comment
Uncertainty: referral recommended or contact the department	<ul style="list-style-type: none"> ▪ Degradation (such as through altered hydrology or fire regimes) of more than 1 ha of foraging habitat. Significance will depend on the level and extent of degradation and the quality of the habitat. ▪ Clearing or disturbance in areas surrounding black cockatoo breeding, foraging or night roosting habitat that has the potential to degrade habitat through introduction of invasive species, edge effects, hydrological changes, increased human visitation or fire. ▪ Actions that do not directly affect the listed species but that have the potential for indirect impacts such as increasing competitors for nest hollows. ▪ Actions with the potential to introduce known plant diseases such as <i>Phytophthora</i> spp. to an area where the pathogen was not previously known. 	<ul style="list-style-type: none"> ▪ Proposed clearing area covers 0.822 ha which is not completely vegetated and includes the existing road as well as the road reserve. The clearing would be less than 1 ha of foraging habitat. ▪ The proposed clearing area is within the existing road reserve and is currently subjected to edge effects from the existing use as a road, which are not expected to increase. Edge effects are not expected to increase as the land use within this area will not be altered, clearing is to occur within the current road reserve and with the area already highly altered due to historic clearing for the road and the existing degraded nature of the site. ▪ The presence of invasive species, hydrological changes, increased human visitation and fire occurrences are not expected to be increased through the proposed clearing. These effects are not expected to increase as the existing land use will not be altered with clearing to occur within the current road reserve. The area would already be subjected to invasive species, potential fires and the proposed development does not introduce further human visitation. ▪ The site does not contain any nesting hollows which can currently be used by black cockatoos as the hollows present are not sufficient size and therefore no increased competition for nesting hollows is expected. ▪ The proposed clearing is not expected to introduce plant diseases into the area if hygiene and machinery hygiene is maintained during the clearing process.
Low risk of significant impacts:	<ul style="list-style-type: none"> ▪ Actions that do not affect black cockatoo habitat or individuals. 	This section does not apply as the site contain known black cockatoo habitat in the form of roosting and foraging trees.

Guideline		Comment
referral may not be required	<ul style="list-style-type: none">▪ Actions whose impacts occur outside the modelled distribution of the three black cockatoos.	

5.6 Assessment Against Clearing Principles

An assessment of information obtained during the 2021 survey has been made against the Western Australian clearing principles. It is suggested that the clearing application is not likely to be at variance to any of the ten clearing principles (Table 11).

5.7 Recommendations

Natural Area has the following recommendations:

- where possible pruning of vegetation is to occur over the removal of a potential habitat trees
- clearing operations should be conducted in accordance with Dieback and weed hygiene requirements. Vehicles, machinery and equipment should be cleaned and free of weeds and soil prior to entering the site
- clearing should be undertaken in dry conditions to minimise effects on hydrological flows and reduce potential for pathogen introduction (e.g., Dieback)
- clearing should be undertaken in a one directional manner (e.g., west to east) to allow any fauna present to disperse into adjacent vegetation.

Table 11: Assessment against clearing principles

Clearing Principle	Comment
<p>A Native vegetation should not be cleared if it comprises a high level of biological diversity.</p>	<p>The proposed area to be cleared is not likely to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ a total of 41 flora species were identified, including 22 (53.7%) native species and 19 (46.3%) introduced species, this shows a low diversity for this vegetation type ▪ the survey site consists of thin strips of vegetation along the road reserve and consisting of trees over sparse native shrubs and herbs, and a high-density understorey of weedy grasses and herbs ▪ one vegetation type was determined within the survey site, namely Marri, Jarrah and Peppermint Woodland ▪ the majority of the site was in Completely Degraded condition (97%) with the remained in Degraded condition (3%) ▪ during the February 2021 survey by Natural Area, no conservation significant flora was identified within the proposed clearing area. The survey was conducted outside of the optimal time of year (spring) for the South West Botanical Region the potential presence of some conservation significant flora cannot be ruled out, although the presence of significant flora is considered unlikely, due to the degraded nature of the site, previous historic clearing for the construction of the road and other anthropological impacts.
<p>B Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.</p>	<p>The proposed area to be cleared is not likely to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ a total of 10 fauna species were recorded during the February 2021 survey, with one significant species the threatened Baudin's Cockatoo observed flying over the site ▪ Western Ringtail Possum habitat was recorded within the survey area although it was minimal consisting of 16 immature <i>Agonis flexuosa</i> (Peppermint) trees, no signs of individual possums, dreys (vegetative nests), scratches up trees or scats were recorded ▪ a total of 10 habitat trees were recorded within the site with a diameter at breast height (DBH) >500 mm, which are potential roosting habitat for threatened black cockatoos with no hollows suitable for use for nesting by black cockatoos were found within the site. No roosting or feeding by black cockatoos was recorded. ▪ Foraging habitat for black cockatoos is present within the site although the site contains less than 1 ha of good quality foraging habitat.

		Higher value habitat for both Western Ringtail Possums and black cockatoos is present in adjacent properties with more mature trees present with a more intact canopy providing more opportunities for foraging, roosting and nesting to occur.
C	Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	<p>The proposed area to be cleared is not likely to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ The flora and vegetation survey was conducted during February 2021 which is outside of the optimal time of year (spring) the potential presence of some conservation significant flora cannot be ruled out (e.g. orchid species); however, due to the high degradation of the site and the fact that majority has been previously cleared or is currently cleared, it is highly unlikely that these species will occur.
D	Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.	<p>The proposed area to be cleared is not considered to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ No threatened or priority ecological communities were identified during the 2021 survey due to the lack of native species diversity within the survey area and low vegetation condition.
E	Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.	<p>The proposed area to be cleared is not likely to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ The site has previously been subjected to clearing for the existing road and within the current road reserve with larger areas of remnant vegetation occurring the north and south of the road.
F	Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	<p>The proposed area to be cleared is not likely to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ both ends of the survey area are situated within a multiple use wetland including approximately the first 100 m to the north-west of the site and 37 m at the south-east of the site although the site does not contain any defined surface water features ▪ no evidence of surface water or water courses was observed during the February 2021 survey and due to the timing of the survey surface water or water courses were unlikely to be observed due to the season and limited rainfall during the summer months. ▪ Based on vegetation types assessed on site during the 2021 survey, vegetation present is not consistent with Groundwater Dependant Ecosystems (GDE) and not classified as riparian vegetation.

G	Native Vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	<p>The proposed area to be cleared is not likely to be at variance with this principle as it is not expected to cause further land degradation with the area already subjected to previous clearing for the alignment of the existing road and road reserve, and previous anthropological activities such as agriculture in the area.</p> <ul style="list-style-type: none"> ▪ According to NationalMap DPIRD data (DPIRD 2021a): <ul style="list-style-type: none"> – Flood Risk for the site occurs within two categories, 10-30% of the map unit has a moderate to high flood risk (M1) and <3% of the map unit has a moderate to high flood risk (lowest rating) – Waterlogging risk for the site occurs within two categories, <3% of map unit has a moderate to very high waterlogging risk (lowest rating) and >70% of map unit has a moderate to very high waterlogging risk (H2) – Wind Erosion risk for the site occurs within two categories, 50-70% of map unit has a high to extreme wind erosion risk (highest rating) and <3% of map unit has a high to extreme wind erosion risk (lowest rating) – Water Erosion and Land Instability for the survey area has not been classified within any of the categories for Water Erosion Risk or Land Instability Risk – Salinity Risk for the site occurs within two categories, 50-70% of map unit has a moderate to high salinity risk or is presently saline (highest rating) and <3% of map unit has a moderate to high salinity risk or is presently saline (lowest rating). ▪ Due to the proposed clearing occurring with the existing road reserve and the inclusion of management measures such as drainage and features in the design of the road the proposed clearing is not considered to cause land degradation.
H	Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	<p>The proposed area to be cleared is not likely to be at variance with this principle as it is not expected to have an impact on adjacent environmental values or nearby conservation reserve.</p> <ul style="list-style-type: none"> ▪ Land use surrounding the site consists of agricultural land which has been previously parkland cleared and light industrial development. ▪ Two reserves, Lot: 5545 and Lot 5544 occur approximately 340 m to the west and south west of the survey area according to the City of Bunbury's Intramaps (City of Bunbury 2021).
I	Native vegetation should not be cleared if the clearing of the	The area to be cleared is not likely to be at variance with this principle as it is not expected to cause deterioration in water quality of surface or groundwater due the limited amount of existing vegetation within the road reserve.

	vegetation is likely to cause deterioration in the quality of surface or underground water.	<ul style="list-style-type: none"> ▪ No surface water was present during the 2021 survey. ▪ The site occurs within an area which is classified as marginal quality for groundwater salinity (Department of Water and Environment and Regulation 2021b). Clearing works should be undertaken in such a way that no disturbance to groundwater occurs with all works to be undertaken above ground. ▪ The site also occurs within a Moderate to Low risk category for Acid Sulphate Soils (ASS) (Department of Water and Environment and Regulation (2021a). Clearing works should be undertaken in such a way that no soil disturbance occurs to mitigate the potential impacts from ASS.
J	Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	<p>The area to be cleared is not likely to be at variance with this principle:</p> <ul style="list-style-type: none"> ▪ The area proposed to be cleared is located within the existing road reserve and is not expected to change or exacerbate the incidence of flooding ▪ road design should mitigate the potential for flooding.

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Appendix 1: NatureMap Report (10 km buffer)

Harris NatureMap Species Report

Created By Guest user on 05/02/2021

Current Names Only Yes
Core Datasets Only Yes
Method 'By Circle'
Centre 115° 44' 32" E, 33° 21' 37" S
Buffer 10km
Group By Species Group

Species Group	Species	Records
Alga	2	2
Amphibian	10	284
Bird	171	6675
Bryopsid (Moss)	12	18
Dicotyledon	481	1168
Fish	5	12
Fungus	9	27
Gymnosperm	2	3
Hepatic (Liverwort)	2	2
Invertebrate	68	213
Lichen	15	23
Mammal	23	1772
Monocotyledon	319	827
Pteridophyte (Fern)	5	7
Reptile	25	232
TOTAL	1149	11265

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
Alga				
1.	13146 <i>Acetabularia peniculus</i>			
2.	35262 <i>Ulva intestinalis</i>			
Amphibian				
3.	25398 <i>Crinia georgiana</i> (Quacking Frog)			
4.	25399 <i>Crinia glauerti</i> (Clicking Frog)			
5.	25400 <i>Crinia insignifera</i> (Squelching Froglet)			
6.	25401 <i>Crinia pseudinsignifera</i> (Bleating Froglet)			
7.	25404 <i>Geocrinia leai</i> (Ticking Frog)			
8.	25410 <i>Heleioporus eyrei</i> (Moaning Frog)			
9.	25411 <i>Heleioporus inornatus</i> (Whooping Frog)			
10.	25415 <i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
11.	25378 <i>Litoria adelaidensis</i> (Slender Tree Frog)			
12.	25388 <i>Litoria moorei</i> (Motorbike Frog)			
Bird				
13.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
14.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
15.	24262 <i>Acanthiza inornata</i> (Western Thornbill)			
16.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
17.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
18.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
19.	25755 <i>Acrocephalus australis</i> (Australian Reed Warbler)			
20.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
21.	24310 <i>Anas castanea</i> (Chestnut Teal)			
22.	24312 <i>Anas gracilis</i> (Grey Teal)			
23.	24313 <i>Anas platyrhynchos</i> (Mallard)			
24.	<i>Anas platyrhynchos</i> subsp. <i>domesticus</i>			
25.	24315 <i>Anas rhynchotis</i> (Australasian Shoveler)			
26.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
27.	47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)			
28.	24506 <i>Anous tenuirostris</i> subsp. <i>melanops</i> (Australian Lesser Noddy)		T	
29.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
30.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
31.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
32.	25558 <i>Ardea ibis</i> (Cattle Egret)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
33.	41324	<i>Ardea modesta</i> (great egret, white egret)			
34.	24340	<i>Ardea novaehollandiae</i> (White-faced Heron)			
35.	24341	<i>Ardea pacifica</i> (White-necked Heron)			
36.	41326	<i>Ardenna carneipes</i> (Flesh-footed Shearwater, Fleshy-footed Shearwater)		T	
37.	25736	<i>Arenaria interpres</i> (Ruddy Turnstone)		IA	
38.	25566	<i>Artamus cinereus</i> (Black-faced Woodswallow)			
39.	24353	<i>Artamus cyanopterus</i> (Dusky Woodswallow)			
40.	24318	<i>Aythya australis</i> (Hardhead)			
41.		<i>Barnardius zonarius</i>			
42.	24319	<i>Biziura lobata</i> (Musk Duck)			
43.	25714	<i>Cacatua pastinator</i> (Western Long-billed Corella)			
44.	25716	<i>Cacatua sanguinea</i> (Little Corella)			
45.	25598	<i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
46.	42307	<i>Cacomantis pallidus</i> (Pallid Cuckoo)			
47.	24779	<i>Calidris acuminata</i> (Sharp-tailed Sandpiper)		IA	
48.	25738	<i>Calidris canutus</i> (Red Knot, knot)		IA	
49.	24784	<i>Calidris ferruginea</i> (Curlew Sandpiper)		T	
50.	24788	<i>Calidris ruficollis</i> (Red-necked Stint)		IA	
51.	24790	<i>Calidris tenuirostris</i> (Great Knot)		T	
52.	25717	<i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
53.	24731	<i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)		T	
54.	24733	<i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo)		T	
55.	24734	<i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
56.	48400	<i>Calyptorhynchus</i> sp. (white-tailed black cockatoo)		T	
57.	25575	<i>Charadrius leschenaultii</i> (Greater Sand Plover)		T	
58.	24377	<i>Charadrius ruficapillus</i> (Red-capped Plover)			
59.	24321	<i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
60.		<i>Chroicocephalus novaehollandiae</i>			
61.	24432	<i>Chrysococcyx lucidus</i> subsp. <i>plagosus</i> (Shining Bronze Cuckoo)			
62.	24288	<i>Circus approximans</i> (Swamp Harrier)			
63.	24774	<i>Cladorhynchus leucocephalus</i> (Banded Stilt)			
64.	25675	<i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
65.	24399	<i>Columba livia</i> (Domestic Pigeon)	Y		
66.	25568	<i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
67.	25592	<i>Corvus coronoides</i> (Australian Raven)			
68.		<i>Corvus splendens</i> subsp. <i>protegatus</i>			
69.	24420	<i>Cracticus nigrogularis</i> (Pied Butcherbird)			
70.	25595	<i>Cracticus tibicen</i> (Australian Magpie)			
71.	25596	<i>Cracticus torquatus</i> (Grey Butcherbird)			
72.	24322	<i>Cygnus atratus</i> (Black Swan)			
73.	30901	<i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
74.	25673	<i>Daphoenositta chrysoptera</i> (Varied Sittella)			
75.	24470	<i>Dromaius novaehollandiae</i> (Emu)			
76.		<i>Egretta garzetta</i>			
77.		<i>Egretta novaehollandiae</i>			
78.		<i>Elanus axillaris</i>			
79.	47937	<i>Euseiornis melanops</i> (Black-fronted Dotterel)			
80.		<i>Eolophus roseicapillus</i>			
81.	24652	<i>Eopsaltria georgiana</i> (White-breasted Robin)			
82.	24567	<i>Epthianura albiglans</i> (White-fronted Chat)			
83.	25621	<i>Falco berigora</i> (Brown Falcon)			
84.	25622	<i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
85.	25623	<i>Falco longipennis</i> (Australian Hobby)			
86.	25624	<i>Falco peregrinus</i> (Peregrine Falcon)		S	
87.	25727	<i>Fulica atra</i> (Eurasian Coot)			
88.	24761	<i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
89.	25729	<i>Gallinula tenebrosa</i> (Dusky Moorhen)			
90.	24763	<i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
91.	25730	<i>Gallirallus philippensis</i> (Buff-banded Rail)			
92.	24765	<i>Gallirallus philippensis</i> subsp. <i>mellori</i> (Buff-banded Rail)			
93.	25530	<i>Gerygone fusca</i> (Western Gerygone)			
94.	24443	<i>Grallina cyanoleuca</i> (Magpie-lark)			
95.	24487	<i>Haematopus longirostris</i> (Pied Oystercatcher)			
96.	24293	<i>Haliaeetus leucogaster</i> (White-bellied Sea-Eagle)			
97.	24295	<i>Haliastur spheurnus</i> (Whistling Kite)			
98.	47965	<i>Hieraaetus morphnoides</i> (Little Eagle)			
99.	25734	<i>Himantopus himantopus</i> (Black-winged Stilt)			
100.	24491	<i>Hirundo neoxena</i> (Welcome Swallow)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
101.	48587	<i>Hydroprogne caspia</i> (Caspian Tern)		IA	
102.	24511	<i>Larus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Silver Gull)			
103.	25638	<i>Larus pacificus</i> (Pacific Gull)			
104.	25661	<i>Lichmera indistincta</i> (Brown Honeyeater)			
105.	30932	<i>Limosa lapponica</i> (Bar-tailed Godwit)		IA	
106.	25741	<i>Limosa limosa</i> (Black-tailed Godwit)		IA	
107.	24690	<i>Macronectes giganteus</i> (Southern Giant Petrel)		IA	
108.	24326	<i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
109.	25650	<i>Malurus elegans</i> (Red-winged Fairy-wren)			
110.	25654	<i>Malurus splendens</i> (Splendid Fairy-wren)			
111.	25758	<i>Megalurus gramineus</i> (Little Grassbird)			
112.	25663	<i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
113.	24598	<i>Merops ornatus</i> (Rainbow Bee-eater)			
114.		<i>Microcarbo melanoleucos</i>			
115.	48008	<i>Morus serrator</i> (Australasian Gannet)			
116.	24738	<i>Neophema elegans</i> (Elegant Parrot)			
117.	24798	<i>Numenius madagascariensis</i> (Eastern Curlew)		T	
118.	25742	<i>Numenius phaeopus</i> (Whimbrel)		IA	
119.	25564	<i>Nycticorax caledonicus</i> (Rufous Night Heron)			
120.	24497	<i>Oceanites oceanicus</i> (Wilson's Storm-petrel)		IA	
121.	24407	<i>Ocyphaps lophotes</i> (Crested Pigeon)			
122.	24328	<i>Oxyura australis</i> (Blue-billed Duck)		P4	
123.	25680	<i>Pachycephala rufiventris</i> (Rufous Whistler)			
124.	48591	<i>Pandion cristatus</i> (Osprey, Eastern Osprey)		IA	
125.	25681	<i>Pardalotus punctatus</i> (Spotted Pardalote)			
126.	25682	<i>Pardalotus striatus</i> (Striated Pardalote)			
127.	24648	<i>Pelecanus conspicillatus</i> (Australian Pelican)			
128.	48061	<i>Petrochelidon nigricans</i> (Tree Martin)			
129.	48066	<i>Petroica boodang</i> (Scarlet Robin)			
130.	25697	<i>Phalacrocorax carbo</i> (Great Cormorant)			
131.	24665	<i>Phalacrocorax fuscescens</i> (Black-faced Cormorant)			
132.	25698	<i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
133.	24667	<i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
134.	25699	<i>Phalacrocorax varius</i> (Pied Cormorant)			
135.	24668	<i>Phalacrocorax varius</i> subsp. <i>hypoleucos</i> (Pied Cormorant)			
136.	24409	<i>Phaps chalcoptera</i> (Common Bronzewing)			
137.	48071	<i>Phylidonyris niger</i> (White-cheeked Honeyeater)			
138.	24596	<i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
139.	24841	<i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
140.	24842	<i>Platalea regia</i> (Royal Spoonbill)			
141.	25720	<i>Platycercus icterotis</i> (Western Rosella)			
142.	24745	<i>Platycercus icterotis</i> subsp. <i>icterotis</i> (Western Rosella)			
143.	25721	<i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
144.	24843	<i>Plegadis falcinellus</i> (Glossy Ibis)		IA	
145.	24382	<i>Pluvialis fulva</i> (Pacific Golden Plover)		IA	
146.	24383	<i>Pluvialis squatarola</i> (Grey Plover)		IA	
147.	25704	<i>Podiceps cristatus</i> (Great Crested Grebe)			
148.	24681	<i>Poliiocephalus poliocephalus</i> (Hoary-headed Grebe)			
149.	25722	<i>Polytelis anthopeplus</i> (Regent Parrot)			
150.	25731	<i>Porphyrio porphyrio</i> (Purple Swamphen)			
151.	24767	<i>Porphyrio porphyrio</i> subsp. <i>bellus</i> (Purple Swamphen)			
152.	24771	<i>Porzana tabuensis</i> (Spotless Crake)			
153.	24388	<i>Psophodes nigrogularis</i> subsp. <i>nigrogularis</i> (Western Whipbird (western heath))		T	
154.		<i>Purpureicephalus spurius</i>			
155.	24776	<i>Recurvirostra novaehollandiae</i> (Red-necked Avocet)			
156.	48096	<i>Rhipidura albiscapa</i> (Grey Fantail)			
157.	25614	<i>Rhipidura leucophrys</i> (Willie Wagtail)			
158.	25616	<i>Rhipidura rufiventris</i> (Northern Fantail)			
159.	25534	<i>Sericornis frontalis</i> (White-browed Scrubwren)			
160.	30948	<i>Smicornis brevirostris</i> (Weebill)			
161.	25642	<i>Sterna hirundo</i> (Common Tern)		IA	
162.	48594	<i>Sternula nereis</i> (Fairy Tern)			
163.	24329	<i>Stictonetta naevosa</i> (Freckled Duck)			
164.	25597	<i>Strepera versicolor</i> (Grey Currawong)			
165.	25589	<i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
166.	25590	<i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
167.	25705	<i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
168.	24682	<i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
169.	24331	<i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
170.	48597	<i>Thalasseus bergii</i> (Crested Tern)		IA	
171.	48135	<i>Thinornis rubricollis</i> (Hooded Plover, Hooded Dotterel)		P4	
172.	24845	<i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
173.	25549	<i>Todiramphus sanctus</i> (Sacred Kingfisher)			
174.	24309	<i>Todiramphus sanctus</i> subsp. <i>sanctus</i> (Sacred Kingfisher)			
175.	24803	<i>Tringa brevipes</i> (Grey-tailed Tattler)		P4	
176.	24806	<i>Tringa glareola</i> (Wood Sandpiper)		IA	
177.	24808	<i>Tringa nebularia</i> (Common Greenshank, greenshank)		IA	
178.	24809	<i>Tringa stagnatilis</i> (Marsh Sandpiper, little greenshank)		IA	
179.	48147	<i>Turnix varius</i> (Painted Button-quail)			
180.	25577	<i>Vanellus miles</i> (Masked Lapwing)			
181.	24386	<i>Vanellus tricolor</i> (Banded Lapwing)			
182.	41351	<i>Xenus cinereus</i> (Terek Sandpiper)		IA	
183.	25765	<i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

Bryopsid (Moss)

184.	32315	<i>Barbula calycina</i>			
185.	32338	<i>Campylopus introflexus</i>	Y		
186.	32345	<i>Didymodon australasiae</i>			
187.	32346	<i>Didymodon torquatus</i>			
188.	32367	<i>Fissidens megalotis</i>			
189.	32369	<i>Fissidens tenellus</i>			
190.	32380	<i>Gemmabryum pachythecum</i>			
191.	32480	<i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>			
192.	32424	<i>Rosulabryum albolimbatum</i>			
193.	44608	<i>Rosulabryum billardieri</i>			
194.	32437	<i>Syntrichia antarctica</i>			
195.	32486	<i>Thuidium sparsum</i> var. <i>hastatum</i>			

Dicotyledon

196.	3207	<i>Acacia alata</i> (Winged Wattle)			
197.	15466	<i>Acacia applanata</i>			
198.	18285	<i>Acacia baileyana</i>	Y		
199.	3282	<i>Acacia cyclops</i> (Coastal Wattle)			
200.	16975	<i>Acacia decurrens</i>	Y		
201.	3331	<i>Acacia extensa</i> (Wiry Wattle)			
202.	3339	<i>Acacia flagelliformis</i>		P4	
203.	3374	<i>Acacia huegelii</i>			
204.	3383	<i>Acacia incurva</i>			
205.	3410	<i>Acacia lateriticola</i>			
206.	17861	<i>Acacia longifolia</i>	Y		
207.	17464	<i>Acacia longifolia</i> subsp. <i>longifolia</i>	Y		
208.	17958	<i>Acacia mearnsii</i>	Y		
209.	3442	<i>Acacia microbotrya</i> (Manna Wattle, Kalyang)			
210.	3454	<i>Acacia nervosa</i> (Rib Wattle)			
211.	17860	<i>Acacia podalyriifolia</i>	Y		
212.	3496	<i>Acacia preissiana</i>			
213.	3502	<i>Acacia pulchella</i> (Prickly Moses)			
214.	15481	<i>Acacia pulchella</i> var. <i>glaberrima</i>			
215.	15483	<i>Acacia pulchella</i> var. <i>pulchella</i>			
216.	3527	<i>Acacia saligna</i> (Orange Wattle, Kudjong)			
217.	30036	<i>Acacia saligna</i> subsp. <i>stolonifera</i>			
218.	3537	<i>Acacia semitrullata</i>		P4	
219.	3557	<i>Acacia stenoptera</i> (Narrow Winged Wattle)			
220.	3574	<i>Acacia teretifolia</i>			
221.	3576	<i>Acacia tetragonocarpa</i>			
222.	3591	<i>Acacia urophylla</i>			
223.	15487	<i>Acacia varia</i> var. <i>varia</i>			
224.	3602	<i>Acacia willdenowiana</i> (Grass Wattle)			
225.	6203	<i>Actinotus glomeratus</i>			
226.	43201	<i>Adelphacme minima</i>		P3	
227.	1790	<i>Adenanthos meisneri</i>			
228.	1791	<i>Adenanthos obovatus</i> (Basket Flower)			
229.	28281	<i>Adenanthos</i> sp. <i>Whicher Range</i> (G.J. Keighery 9736)			
230.	5316	<i>Agonis flexuosa</i> (Peppermint, Wonil)			
231.	1732	<i>Allocasuarina humilis</i> (Dwarf Sheoak)			
232.	1739	<i>Allocasuarina thuyoides</i> (Horned Sheoak)			
233.	2655	<i>Amaranthus albus</i> (Tumbleweed)	Y		
234.	4585	<i>Amperea ericoides</i>			
235.	6306	<i>Andersonia caerulea</i> (Foxtails)			
236.	6311	<i>Andersonia heterophylla</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
237.	6312 <i>Andersonia involucrata</i>			
238.	6314 <i>Andersonia lehmanniana</i>			
239.	7829 <i>Angianthus drummondii</i>		P3	
240.	7833 <i>Angianthus preissianus</i>			
241.	12724 <i>Anthotium junciforme</i>			
242.	3688 <i>Aotus gracillima</i>			
243.	3692 <i>Aotus procumbens</i>			
244.	6210 <i>Apium annuum</i>			
245.	12040 <i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>prostratum</i> (Sea Celery)			
246.	7838 <i>Arctotheca calendula</i> (Cape Weed, African Marigold)	Y		
247.	20350 <i>Astartea affinis</i> (West-coast <i>Astartea</i>)			
248.	45213 <i>Astartea pulchella</i>			
249.	20283 <i>Astartea scoparia</i> (Common <i>Astartea</i>)			
250.	42801 <i>Astartea zephyra</i>			
251.	7851 <i>Asteridea pulverulenta</i> (Common Bristle Daisy)			
252.	6323 <i>Astroloma ciliatum</i> (Candle Cranberry)			
253.	6334 <i>Astroloma pallidum</i> (Kick Bush)			
254.	2452 <i>Atriplex cinerea</i> (Grey Saltbush)			
255.	6828 <i>Avicennia marina</i> (White Mangrove)			
256.	14555 <i>Avicennia marina</i> subsp. <i>marina</i>			
257.	1800 <i>Banksia attenuata</i> (Slender <i>Banksia</i> , <i>Piara</i>)			
258.	32580 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>dallanneyi</i>			
259.	1819 <i>Banksia grandis</i> (Bull <i>Banksia</i> , <i>Pulgarla</i>)			
260.	1822 <i>Banksia ilicifolia</i> (Holly-leaved <i>Banksia</i>)			
261.	1830 <i>Banksia littoralis</i> (Swamp <i>Banksia</i> , <i>Pungura</i>)			
262.	32202 <i>Banksia nivea</i> (Honey-pot <i>Dryandra</i> , <i>Pudjarn</i>)			
263.	7046 <i>Bellardia trixago</i> (<i>Bellardia</i>)	Y		
264.	48868 <i>Bellardia viscosa</i>	Y		
265.	3165 <i>Billardiera variifolia</i>			
266.	4417 <i>Boronia dichotoma</i>			
267.	4420 <i>Boronia fastigiata</i> (Bushy <i>Boronia</i>)			
268.	4438 <i>Boronia ramosa</i>			
269.	4441 <i>Boronia spathulata</i> (<i>Boronia</i>)			
270.	17804 <i>Boronia tetragona</i>		P3	
271.	48782 <i>Bossiaea angustifolia</i>			
272.	3710 <i>Bossiaea eriocarpa</i> (Common Brown Pea)			
273.	4717 <i>Callitriche stagnalis</i> (Common Starwort)	Y		
274.	5415 <i>Calothamnus lateralis</i>			
275.	35797 <i>Calothamnus lateralis</i> var. <i>lateralis</i>			
276.	5429 <i>Calothamnus sanguineus</i> (Silky-leaved Blood flower, <i>Pindak</i>)			
277.	5430 <i>Calothamnus schaueri</i>			
278.	5458 <i>Calytrix flavescens</i> (Summer Starflower)			
279.	5465 <i>Calytrix leschenaultii</i>			
280.	11501 <i>Cassytha glabella</i> forma <i>casuarinae</i>			
281.	2956 <i>Cassytha pomiformis</i> (Dodder Laurel)			
282.	2957 <i>Cassytha racemosa</i> (Dodder Laurel)			
283.	11799 <i>Cassytha racemosa</i> forma <i>racemosa</i>			
284.	1742 <i>Casuarina obesa</i> (Swamp Sheoak, <i>Kuli</i>)			
285.	6539 <i>Centaureum erythraea</i> (Common Centaury)	Y		
286.	7366 <i>Centranthus macrosiphon</i>	Y		
287.	35657 <i>Chamelaucium</i> sp. <i>Yongarillup</i> (G.J. Keighery 3635)		P4	
288.	2483 <i>Chenopodium album</i> (Fat Hen)	Y		
289.	8971 <i>Chorizema cordatum</i>			
290.	6543 <i>Cicendia filiformis</i> (Slender <i>Cicendia</i>)	Y		
291.	4554 <i>Comesperma flavum</i>			
292.	4559 <i>Comesperma polygaloides</i> (Small Milkwort)			
293.	4564 <i>Comesperma virgatum</i> (Milkwort)			
294.	4566 <i>Comesperma volubile</i> (Love Creeper)			
295.	1863 <i>Conospermum capitatum</i>			
296.	6348 <i>Conostephium pendulum</i> (Pearl Flower)			
297.	7939 <i>Conyza bonariensis</i> (Flaxleaf Fleabane)	Y		
298.	20074 <i>Conyza sumatrensis</i>	Y		
299.	17104 <i>Corymbia calophylla</i> (<i>Marri</i>)			
300.	17105 <i>Corymbia haematoxylon</i> (Mountain <i>Marri</i>)			
301.	7946 <i>Cotula cotuloides</i> (Smooth <i>Cotula</i>)			
302.	7947 <i>Cotula turbinata</i> (Funnel Weed)	Y		
303.	42008 <i>Craspedia</i> sp. <i>Waterloo</i> (G.J. Keighery 13724)		P2	
304.	13354 <i>Craspedia variabilis</i>			
305.	3137 <i>Crassula colorata</i> (Dense Stonecrop)			
306.	11563 <i>Crassula colorata</i> var. <i>colorata</i>			

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307.	29054	<i>Crepis foetida</i> subsp. <i>foetida</i> (Stinking Hawksbeard)	Y		
308.	7420	<i>Dampiera alata</i> (Winged-stem Dampiera)			
309.	7428	<i>Dampiera coronata</i> (Wedge-leaved Dampiera)			
310.	7454	<i>Dampiera linearis</i> (Common Dampiera)			
311.	7462	<i>Dampiera pedunculata</i>			
312.	7484	<i>Dampiera trigona</i> (Angled-stem Dampiera)			
313.	5508	<i>Darwinia citriodora</i> (Lemon-scented Darwinia)			
314.	5533	<i>Darwinia vestita</i> (Pom-pom Darwinia)			
315.	3793	<i>Daviesia angulata</i>			
316.	19747	<i>Daviesia decurrens</i> subsp. <i>decurrens</i>			
317.	11879	<i>Daviesia hakeoides</i> subsp. <i>hakeoides</i>			
318.	3832	<i>Daviesia physodes</i>			
319.	3834	<i>Daviesia polyphylla</i>			
320.	3835	<i>Daviesia preissii</i>			
321.	3867	<i>Dipogon lignosus</i> (Dolichos Pea)	Y		
322.	3091	<i>Drosera bulbigena</i> (Midget Sundew)			
323.	48751	<i>Drosera drummondii</i>			
324.	3095	<i>Drosera erythrorhiza</i> (Red Ink Sundew)			
325.	3097	<i>Drosera gigantea</i> (Giant Sundew)			
326.	3098	<i>Drosera glanduligera</i> (Pimpernel Sundew)			
327.	48769	<i>Drosera indumenta</i>			
328.	19256	<i>Drosera intricata</i>			
329.	3106	<i>Drosera macrantha</i> (Bridal Rainbow)			
330.	3108	<i>Drosera marchantii</i>			
331.	3109	<i>Drosera menziesii</i> (Pink Rainbow)			
332.	48710	<i>Drosera micrantha</i>			
333.	3118	<i>Drosera pallida</i> (Pale Rainbow)			
334.	3123	<i>Drosera platystigma</i> (Black-eyed Sundew)			
335.	8911	<i>Drosera rosulata</i>			
336.	49090	<i>Drosera</i> sp. <i>Branched styles</i> (S.C. Coffey 193)			
337.	13385	<i>Drosera stelliflora</i>			
338.	3131	<i>Drosera stolonifera</i> (Leafy Sundew)			
339.	13205	<i>Drosera tubaestylis</i>			
340.	33500	<i>Dysphania ambrosioides</i> (Mexican Tea)	Y		
341.	13949	<i>Eremaea asterocarpa</i>			
342.	17175	<i>Eremophila glabra</i> subsp. <i>albicans</i>			
343.	4332	<i>Erodium botrys</i> (Long Storksbill)	Y		
344.	4336	<i>Erodium moschatum</i> (Musky Crowfoot)	Y		
345.	5659	<i>Eucalyptus gomphocephala</i> (Tuart, Duart)			
346.	5708	<i>Eucalyptus marginata</i> (Jarrah, Djara)			
347.	5763	<i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
348.	13512	<i>Eucalyptus rudis</i> subsp. <i>cratyantha</i>		P4	
349.	13511	<i>Eucalyptus rudis</i> subsp. <i>rudis</i>			
350.	13032	<i>Eucalyptus vegrandis</i>			
351.	12906	<i>Eucalyptus wandoo</i> subsp. <i>wandoo</i>			
352.	3872	<i>Euchilopsis linearis</i> (Swamp Pea)			
353.	15137	<i>Euchiton sphaericus</i>			
354.	4636	<i>Euphorbia paralias</i> (Sea Spurge)	Y		
355.	3880	<i>Eutaxia virgata</i>			
356.	10765	<i>Exocarpos sparteus</i> (Broom Ballart, Djuk)			
357.	1747	<i>Ficus carica</i> (Common Fig)	Y		
358.	2969	<i>Fumaria capreolata</i> (Whiteflower Fumitory)	Y		
359.	7321	<i>Galium divaricatum</i>	Y		
360.	3891	<i>Gastrolobium bilobum</i> (Heart Leaf Poison)			
361.	20475	<i>Gastrolobium capitatum</i>			
362.	19190	<i>Gastrolobium cuneatum</i>			
363.	20473	<i>Gastrolobium ebracteolatum</i>			
364.	20512	<i>Gastrolobium praemorsum</i>			
365.	30453	<i>Gastrolobium</i> sp. <i>Yoongarillup</i> (S.Dilkes s.n. 1/9/1969)		P1	
366.	20474	<i>Gastrolobium whicherense</i>		P2	
367.	4337	<i>Geranium dissectum</i> (Cutleaf Cranesbill)	Y		
368.	7060	<i>Glossostigma diandrum</i>			
369.	6587	<i>Gomphocarpus fruticosus</i> (Narrowleaf Cottonbush)	Y		
370.	3948	<i>Gompholobium capitatum</i>			
371.	3950	<i>Gompholobium knightianum</i>			
372.	3951	<i>Gompholobium marginatum</i>			
373.	3954	<i>Gompholobium polymorphum</i>			
374.	3956	<i>Gompholobium shuttleworthii</i>			
375.	3957	<i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
376.	7505	<i>Goodenia eatoniana</i>			

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377.	7517 <i>Goodenia incana</i> (Hoary Goodenia)			
378.	12551 <i>Goodenia micrantha</i>			
379.	19286 <i>Goodenia pulchella</i> subsp. Coastal Plain A (M. Hislop 634)			
380.	19284 <i>Goodenia pulchella</i> subsp. Coastal Plain B (L.W. Sage 2336)			
381.	7394 <i>Grammatotheca bergiana</i>	Y		
382.	37500 <i>Grammatotheca bergiana</i> var. <i>bergiana</i>	Y		
383.	14282 <i>Gratiola pubescens</i>			
384.	1964 <i>Grevillea bipinnatifida</i> (Fuchsia Grevillea)			
385.	19628 <i>Grevillea bipinnatifida</i> subsp. <i>bipinnatifida</i>			
386.	13427 <i>Grevillea manglesioides</i> subsp. <i>manglesioides</i>			
387.	2078 <i>Grevillea pulchella</i> (Beautiful Grevillea)			
388.	2080 <i>Grevillea quercifolia</i> (Oak-leaf Grevillea)			
389.	2084 <i>Grevillea rosieri</i>		P2	
390.	2128 <i>Hakea amplexicaulis</i> (Prickly Hakea)			
391.	2137 <i>Hakea ceratophylla</i> (Horned Leaf Hakea)			
392.	2152 <i>Hakea cyclocarpa</i> (Ramshorn)			
393.	2175 <i>Hakea lissocarpha</i> (Honey Bush)			
394.	2206 <i>Hakea stenocarpa</i> (Narrow-fruited Hakea)			
395.	2212 <i>Hakea sulcata</i> (Furrowed Hakea)			
396.	2216 <i>Hakea varia</i> (Variable-leaved Hakea)			
397.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
398.	6710 <i>Heliotropium europaeum</i> (Common Heliotrope)	Y		
399.	6839 <i>Hemiandra pungens</i> (Snakebush)			
400.	6855 <i>Hemigenia humilis</i>			
401.	6856 <i>Hemigenia incana</i> (Silky Hemigenia)			
402.	5108 <i>Hibbertia acerosa</i> (Needle Leaved Guinea Flower)			
403.	5109 <i>Hibbertia amplexicaulis</i>			
404.	5114 <i>Hibbertia commutata</i>			
405.	5117 <i>Hibbertia cuneiformis</i> (Cutleaf Hibbertia)			
406.	20051 <i>Hibbertia diamesogenos</i>			
407.	5134 <i>Hibbertia huegelii</i>			
408.	5135 <i>Hibbertia hypericoides</i> (Yellow Buttercups)			
409.	45534 <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>			
410.	5154 <i>Hibbertia perfoliata</i>			
411.	5162 <i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
412.	5170 <i>Hibbertia silvestris</i>			
413.	5172 <i>Hibbertia stellaris</i> (Orange Stars)			
414.	48381 <i>Hibbertia striata</i>			
415.	5173 <i>Hibbertia subvaginata</i>			
416.	5176 <i>Hibbertia vaginata</i>			
417.	6222 <i>Homalosciadium homalocarpum</i>			
418.	5816 <i>Homalospermum firmum</i>			
419.	3968 <i>Hovea trisperma</i> (Common Hovea)			
420.	12907 <i>Hovea trisperma</i> var. <i>grandiflora</i>			
421.	12859 <i>Hovea trisperma</i> var. <i>trisperma</i>			
422.	12741 <i>Hyalosperma cotula</i>			
423.	12717 <i>Hyalosperma pusillum</i>			
424.	5221 <i>Hybanthus floribundus</i>			
425.	12007 <i>Hybanthus floribundus</i> subsp. <i>floribundus</i>			
426.	6223 <i>Hydrocotyle alata</i>			
427.	6225 <i>Hydrocotyle bonariensis</i>	Y		
428.	5817 <i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
429.	35070 <i>Hypocalymma angustifolium</i> subsp. Swan Coastal Plain (G.J. Keighery 16777)			
430.	5825 <i>Hypocalymma robustum</i> (Swan River Myrtle)			
431.	8086 <i>Hypochoeris glabra</i> (Smooth Catsear)	Y		
432.	2222 <i>Isopogon attenuatus</i>			
433.	2237 <i>Isopogon sphaerocephalus</i> (Drumstick Isopogon)			
434.	7396 <i>Isotoma hypocrateriformis</i> (Woodbridge Poison)			
435.	3992 <i>Isotropis cuneifolia</i> (Granny Bonnets)			
436.	4012 <i>Jacksonia furcellata</i> (Grey Stinkwood)			
437.	4017 <i>Jacksonia horrida</i>			
438.	4018 <i>Jacksonia lehmannii</i>			
439.	4028 <i>Jacksonia spinosa</i>			
440.	4037 <i>Kennedia coccinea</i> (Coral Vine)			
441.	4044 <i>Kennedia prostrata</i> (Scarlet Runner)			
442.	5832 <i>Kunzea ericifolia</i> (Spearwood, Pondil)			
443.	15498 <i>Kunzea glabrescens</i> (Spearwood)			
444.	5835 <i>Kunzea micrantha</i>			
445.	17461 <i>Kunzea micrantha</i> subsp. <i>micrantha</i>			
446.	5841 <i>Kunzea recurva</i>			

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447.	14776	<i>Kunzea rostrata</i>			
448.	14646	<i>Lagunaria patersonia</i>	Y		
449.	2249	<i>Lambertia multiflora</i> (Many-flowered Honeysuckle)			
450.	6733	<i>Lantana camara</i> (Common Lantana)	Y		
451.	5038	<i>Lasiopetalum membranaceum</i>		P3	
452.	4052	<i>Latrobea tenella</i>			
453.	38323	<i>Lavandula stoechas</i> subsp. <i>stoechas</i>	Y		
454.	4949	<i>Lavatera trimestris</i>	Y		Y
455.	4958	<i>Lawrenzia spicata</i>			
456.	7568	<i>Lechenaultia biloba</i> (Blue Leschenaultia)			
457.	7572	<i>Lechenaultia expansa</i>			
458.	7574	<i>Lechenaultia floribunda</i> (Free-flowering Leschenaultia)			
459.	2342	<i>Leptomeria cunninghamii</i>			
460.	2344	<i>Leptomeria empetriformis</i>			
461.	17702	<i>Leptomeria furtiva</i>		P2	
462.	2353	<i>Leptomeria scrobiculata</i>			
463.	6360	<i>Leucopogon australis</i> (Spiked Beard-heath)			
464.	6374	<i>Leucopogon conostephioides</i>			
465.	6396	<i>Leucopogon glabellus</i>			
466.	6436	<i>Leucopogon propinquus</i>			
467.	6439	<i>Leucopogon pulchellus</i> (Beard-heath)			
468.	6440	<i>Leucopogon racemosus</i>			
469.	29492	<i>Leucopogon</i> sp. <i>Busselton</i> (D. Cooper 243)		P2	
470.	7676	<i>Levenhookia pusilla</i> (Midget Stylewort)			
471.	7677	<i>Levenhookia stipitata</i> (Common Stylewort)			
472.	4363	<i>Linum trigynum</i> (French Flax)	Y		
473.	36160	<i>Liparophyllum capitatum</i>			
474.	36180	<i>Liparophyllum latifolium</i>			
475.	9289	<i>Lobelia anceps</i> (Angled Lobelia)			
476.	7405	<i>Lobelia rarifolia</i>			
477.	7406	<i>Lobelia rhombifolia</i> (Tufted Lobelia)			
478.	7408	<i>Lobelia tenuior</i> (Slender Lobelia)			
479.	7365	<i>Lonicera japonica</i> (Japanese Honeysuckle)	Y		
480.	4059	<i>Lotus angustissimus</i> (Narrowleaf Trefoil)	Y		
481.	8564	<i>Lotus subbiflorus</i>	Y		
482.	4065	<i>Lupinus angustifolius</i> (Narrowleaf Lupin)	Y		
483.	4067	<i>Lupinus luteus</i> (Yellow Lupin)	Y		
484.	36375	<i>Lysimachia arvensis</i> (Pimpernel)	Y		
485.	6456	<i>Lysinema ciliatum</i> (Curry Flower)			
486.	34736	<i>Lysinema pentapetalum</i>			
487.	5281	<i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
488.	4079	<i>Medicago polymorpha</i> (Burr Medic)	Y		
489.	5926	<i>Melaleuca lateritia</i> (Robin Redbreast Bush)			
490.	20297	<i>Melaleuca osullivanii</i>			
491.	5946	<i>Melaleuca pauciflora</i>			
492.	5952	<i>Melaleuca preissiana</i> (Moonah)			
493.	48990	<i>Melaleuca quinquenervia</i>	Y		
494.	5959	<i>Melaleuca raphiophylla</i> (Swamp Paperbark)			
495.	18598	<i>Melaleuca systema</i>			
496.	5978	<i>Melaleuca teretifolia</i> (Banbar)			
497.	5980	<i>Melaleuca thymoides</i>			
498.	5987	<i>Melaleuca viminea</i> (Mohan)			
499.	4785	<i>Melianthus major</i>	Y		
500.	4085	<i>Melilotus indicus</i>	Y		
501.	19827	<i>Melilotus siculus</i>	Y		
502.	6885	<i>Mentha suaveolens</i> (Apple Mint)	Y		
503.	8105	<i>Millotia myosotidifolia</i>			
504.	8106	<i>Millotia tenuifolia</i> (Soft Millotia)			
505.	37440	<i>Monopsis debilis</i> var. <i>depressa</i>	Y		
506.	4666	<i>Monotaxis occidentalis</i>			
507.	7289	<i>Myoporum caprarioides</i> (Slender Myoporum)			
508.	8117	<i>Myriocephalus helichrysoides</i>			
509.	6189	<i>Myriophyllum crispatum</i>			
510.	2401	<i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
511.	6140	<i>Oenothera mollissima</i>	Y		
512.	2365	<i>Olex benthamiana</i>			
513.	8133	<i>Olearia elaeophila</i>			
514.	18254	<i>Opercularia apiciflora</i>			
515.	18255	<i>Opercularia vaginata</i> (Dog Weed)			
516.	46316	<i>Orianthera serpyllifolia</i> subsp. <i>angustifolia</i>			

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517.	36181	<i>Ornduffia parnassifolia</i>			
518.	36200	<i>Ornduffia submersa</i>		P4	
519.	4113	<i>Ornithopus compressus</i> (Yellow Serradella)	Y		
520.	4115	<i>Ornithopus sativus</i> (French Serradella)	Y		
521.	4348	<i>Oxalis caprina</i>	Y		
522.	4352	<i>Oxalis glabra</i>	Y		
523.	20101	<i>Paragonis grandiflora</i>			
524.	34481	<i>Parthenocissus quinquefolia</i>	Y		
525.	4346	<i>Pelargonium littorale</i>			
526.	11139	<i>Pelargonium x domesticum</i>	Y		
527.	6006	<i>Pericalymma ellipticum</i> (Swamp Teatree)			
528.	16477	<i>Pericalymma ellipticum</i> var. <i>ellipticum</i>			
529.	16478	<i>Pericalymma ellipticum</i> var. <i>floridum</i>			
530.	11052	<i>Persicaria prostrata</i>			
531.	2267	<i>Persoonia longifolia</i> (Snottygobble)			
532.	2273	<i>Persoonia saccata</i> (Snottygobble)			
533.	2299	<i>Petrophile linearis</i> (Pixie Mops)			
534.	2312	<i>Petrophile striata</i>			
535.	19825	<i>Petrorhagia dubia</i>	Y		
536.	18529	<i>Philotheca spicata</i> (Pepper and Salt)			
537.	16825	<i>Phyllangium divergens</i>			
538.	2408	<i>Pilosyles hamiltonii</i>			
539.	11928	<i>Pimelea ciliata</i> subsp. <i>ciliata</i>			
540.	11402	<i>Pimelea imbricata</i> var. <i>piligera</i>			
541.	5252	<i>Pimelea lanata</i>			
542.	5255	<i>Pimelea longiflora</i>			
543.	5259	<i>Pimelea preissii</i>			
544.	18117	<i>Pimelea rosea</i> subsp. <i>rosea</i>			
545.	12041	<i>Pimelea suaveolens</i> subsp. <i>suaveolens</i>			
546.	5268	<i>Pimelea sulphurea</i> (Yellow Banjine)			
547.	8163	<i>Pithocarpa corymbulosa</i> (Corymbose Pithocarpa)		P3	
548.	18352	<i>Pithocarpa pulchella</i> var. <i>melanostigma</i>			
549.	16322	<i>Pittosporum undulatum</i>	Y		
550.	6249	<i>Platysace compressa</i> (Tapeworm Plant)			
551.	6253	<i>Platysace filiformis</i>			
552.	11132	<i>Platysace ramosissima</i>		P3	
553.	6259	<i>Platysace tenuissima</i>			
554.	4524	<i>Platytheca galioides</i>			
555.	8175	<i>Podolepis gracilis</i> (Slender Podolepis)			
556.	8177	<i>Podolepis lessonii</i>			
557.	8179	<i>Podolepis nutans</i> (Nodding Podolepis)			
558.	8188	<i>Pogonolepis stricta</i>			
559.	2905	<i>Polycarpon tetraphyllum</i> (Fourleaf Allseed)	Y		
560.	2419	<i>Polygonum aviculare</i> (Wireweed)	Y		
561.	2718	<i>Ptilotus drummondii</i> (Narrowleaf Mulla Mulla)			
562.	15856	<i>Ptilotus sericostachyus</i> subsp. <i>sericostachyus</i>			
563.	4180	<i>Pultenaea radiata</i>			
564.	4183	<i>Pultenaea skinneri</i> (Skinner's Pea)		P4	
565.	8195	<i>Quinetia urvillei</i>			
566.	2933	<i>Ranunculus muricatus</i> (Sharp Buttercup)	Y		
567.	3061	<i>Raphanus raphanistrum</i> (Wild Radish)	Y		
568.	19183	<i>Retama raetam</i>	Y		
569.	13300	<i>Rhodanthe citrina</i>			
570.	13312	<i>Rhodanthe pyrethrum</i>			
571.	10931	<i>Rosa chinensis</i> x <i>moschata</i>	Y		
572.	3187	<i>Rosa rubiginosa</i> (Sweet Briar)	Y		
573.	2429	<i>Rumex acetosella</i> (Sorrel)	Y		
574.	2435	<i>Rumex drummondii</i>		P4	
575.	6483	<i>Samolus junceus</i>			
576.	6484	<i>Samolus repens</i> (Creeping Brookweed)			
577.	14107	<i>Samolus repens</i> var. <i>paucifolius</i>			
578.	7602	<i>Scaevola calliptera</i>			
579.	7613	<i>Scaevola glandulifera</i> (Viscid Hand-flower)			
580.	7619	<i>Scaevola lanceolata</i> (Long-leaved Scaevola)			
581.	48834	<i>Schinus terebinthifolia</i>	Y		
582.	6263	<i>Schoenolaena juncea</i>			
583.	6033	<i>Scholtzia involucrata</i> (Spiked Scholtzia)			
584.	20663	<i>Senecio multicaulis</i> subsp. <i>multicaulis</i>			
585.	20161	<i>Senecio pinnatifolius</i>			
586.	8220	<i>Senecio vulgaris</i> (Common Groundsel)	Y		

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587.	9097	<i>Sida rhombifolia</i> (Paddy's Lucerne)	Y		
588.	8225	<i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
589.	14583	<i>Siloxerus multiflorus</i>			
590.	8227	<i>Silybum marianum</i> (Variegated Thistle)	Y		
591.	7022	<i>Solanum nigrum</i> (Black Berry Nightshade)	Y		
592.	9367	<i>Sonchus hydrophilus</i> (Native Sowthistle)			
593.	8231	<i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
594.	2912	<i>Spergula arvensis</i> (Corn Spurry)	Y		
595.	4205	<i>Sphaerolobium linophyllum</i>			
596.	4207	<i>Sphaerolobium medium</i>			
597.	31931	<i>Sphenotoma capitata</i>			
598.	6930	<i>Stachys arvensis</i> (Staggerweed)	Y		
599.	4716	<i>Stachystemon vermicularis</i>			
600.	4733	<i>Stackhousia monogyna</i>			
601.	2918	<i>Stellaria media</i> (Chickweed)	Y		
602.	19403	<i>Stenopetalum gracile</i>			
603.	2316	<i>Stirlingia latifolia</i> (Blueboy)			
604.	7684	<i>Stylidium amoenum</i> (Lovely Triggerplant)			
605.	30278	<i>Stylidium androsaceum</i>			
606.	25831	<i>Stylidium araeophyllum</i> (Stilt Walker)			
607.	7693	<i>Stylidium brunonianum</i> (Pink Fountain Triggerplant)			
608.	7696	<i>Stylidium calcaratum</i> (Book Triggerplant)			
609.	7699	<i>Stylidium carnosum</i> (Fleshy-leaved Triggerplant)			
610.	7713	<i>Stylidium dichotomum</i> (Pins-and-needles)			
611.	7719	<i>Stylidium ecome</i> (Foot Triggerplant)			
612.	25801	<i>Stylidium hesperium</i>			
613.	7742	<i>Stylidium inundatum</i> (Hundreds and Thousands)			
614.	7745	<i>Stylidium junceum</i> (Reed Triggerplant)			
615.	7756	<i>Stylidium longitubum</i> (Jumping Jacks)		P4	
616.	25829	<i>Stylidium neurophyllum</i> (Coastal Plain Triggerplant)			
617.	25800	<i>Stylidium paludicola</i>		P3	
618.	33381	<i>Stylidium perplexum</i>		P1	
619.	7774	<i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
620.	7785	<i>Stylidium repens</i> (Matted Triggerplant)			
621.	7798	<i>Stylidium schoenoides</i> (Cow Kicks)			
622.		<i>Stylidium</i> sp.			
623.	23511	<i>Stylidium thesioides</i> (Delicate Triggerplant)			
624.	7806	<i>Stylidium utricularioides</i> (Pink Fan Triggerplant)			
625.	7808	<i>Stylidium violaceum</i> (Violet Triggerplant)			
626.	2639	<i>Suaeda australis</i> (Seablite)			
627.	25902	<i>Symphytotrichum squamatum</i> (Bushy Starwort)	Y		
628.	15529	<i>Synaphea floribunda</i>			
629.	2323	<i>Synaphea gracillima</i>			
630.	16769	<i>Synaphea hians</i>		P3	
631.	16865	<i>Synaphea odocoleops</i>		P1	
632.	2324	<i>Synaphea petiolaris</i> (Synaphea)			
633.	16864	<i>Synaphea petiolaris</i> subsp. <i>petiolaris</i>			
634.	16863	<i>Synaphea petiolaris</i> subsp. <i>triloba</i>			
635.	31767	<i>Synaphea polypodioides</i>		P3	
636.	18590	<i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)		T	
637.	15532	<i>Synaphea spinulosa</i> subsp. <i>spinulosa</i>			
638.	20133	<i>Taxandria parviceps</i>			
639.	33236	<i>Tecticornia halocnemoides</i> (Shrubby Samphire)			
640.	33319	<i>Tecticornia indica</i> subsp. <i>bidens</i>			
641.	4535	<i>Tetradlea hirsuta</i> (Black Eyed Susan)			
642.	48341	<i>Tetradlea hirsuta</i> subsp. <i>viminea</i>			
643.	5084	<i>Thomasia grandiflora</i> (Large Flowered Thomasia)			
644.	6280	<i>Trachymene pilosa</i> (Native Parsnip)			
645.	8251	<i>Trichocline spathulata</i> (Native Gerbera)			
646.	4291	<i>Trifolium arvense</i> (Hare's Foot Clover)	Y		
647.	17763	<i>Trifolium campestre</i> var. <i>campestre</i> (Hop Clover)	Y		
648.	4295	<i>Trifolium dubium</i> (Suckling Clover)	Y		
649.	4302	<i>Trifolium ligusticum</i> (Ligurian Clover)	Y		
650.	17788	<i>Trifolium pratense</i> var. <i>sativum</i>	Y		
651.		<i>Trifolium</i> sp.			
652.	4313	<i>Trifolium subterraneum</i> (Subterranean Clover)	Y		
653.	4737	<i>Tripterococcus brunonis</i> (Winged Stackhousia)			
654.	1139	<i>Trithuria bibracteata</i>			
655.	1141	<i>Trithuria submersa</i>			
656.	8255	<i>Ursinia anthemoides</i> (Ursinia)	Y		

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657.	38388	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Y		
658.	7145	<i>Utricularia menziesii</i> (Redcoats)			
659.	7148	<i>Utricularia multifida</i>			
660.	8257	<i>Vellereophyton dealbatum</i> (White Cudweed)	Y		
661.	20120	<i>Verbena litoralis</i>	Y		Y
662.	7108	<i>Veronica arvensis</i> (Wall Speedwell)	Y		
663.	12392	<i>Verticordia attenuata</i>		P3	
664.	4319	<i>Vicia benghalensis</i> (Purple Vetch)	Y		
665.	4320	<i>Vicia hirsuta</i> (Hairy Vetch)	Y		
666.	11474	<i>Vicia sativa</i> subsp. <i>nigra</i>	Y		
667.	4325	<i>Viminaria juncea</i> (Swishbush, Koweda)			
668.	6575	<i>Vinca major</i> (Blue Periwinkle)	Y		
669.	7384	<i>Wahlenbergia capensis</i> (Cape Bluebell)	Y		
670.	7389	<i>Wahlenbergia preissii</i>			
671.	6659	<i>Wilsonia humilis</i> (Silky Wilsonia)			
672.	6283	<i>Xanthosia atkinsoniana</i>			
673.	6284	<i>Xanthosia candida</i>			
674.	6289	<i>Xanthosia huegelii</i>			
675.	19330	<i>Xanthosia tasmanica</i>			
676.	2331	<i>Xylomelum occidentale</i> (Woody Pear, Djandin)			

Fish

677.	34028	<i>Galaxias occidentalis</i> (Western Minnow)			
678.	34030	<i>Geotria australis</i> (Pouched Lamprey)		P3	
679.		<i>Macroramphosus scolopax</i>			
680.		<i>Nannoperca vittata</i>			
681.		<i>Ophisurus serpens</i>			

Fungus

682.		<i>Agaricus</i> sp.			
683.		<i>Hygrocybe polychroma</i>			
684.	31280	<i>Lichenomphalia chromacea</i>			
685.		<i>Phytophthora cinnamomi</i>			
686.	48974	<i>Pisolithus marmoratus</i>			
687.		<i>Poronia erici</i>			
688.	48835	<i>Pycnoporus coccineus</i>			
689.	48909	<i>Russula clelandii</i>			
690.	38840	<i>Stereum hirsutum</i>			

Gymnosperm

691.	36520	<i>Callitris acuminata</i> (Dwarf Cypress)			
692.	85	<i>Macrozamia riedlei</i> (<i>Zamia</i> , Djiridji)			

Hepatic (Liverwort)

693.		<i>Cephaloziella exiliflora</i>			
694.		<i>Riccia</i> sp.			

Invertebrate

695.		<i>Acariformes</i> sp.			
696.		<i>Allothreua maculata</i>			
697.		<i>Aname mainae</i>			
698.		<i>Aname tepperi</i>			
699.		<i>Ancylidae</i> sp.			
700.		<i>Arachnura higginsi</i>			
701.		<i>Argiope protensa</i>			
702.		<i>Arkys walckenaeri</i>			
703.		<i>Artoria linnaei</i>			
704.		<i>Artoriopsis expolita</i>			
705.		<i>Austracantha minax</i>			
706.		<i>Backobourkia brounii</i>			
707.		<i>Backobourkia heroine</i>			
708.		<i>Badumna insignis</i>			
709.		<i>Baetidae</i> sp.			
710.		<i>Baiami volucripes</i>			
711.		<i>Caenidae</i> sp.			
712.		<i>Carabidae</i> sp.			
713.		<i>Cercophonius sulcatus</i>			
714.	33939	<i>Cherax cainii</i> (Marron)			
715.		<i>Cherax quinquecarinatus</i>			
716.		<i>Chironominae</i> sp.			
717.		<i>Corduliidae</i> sp.			
718.		<i>Corixidae</i> sp.			
719.		<i>Cormocephalus aurantiipes</i>			

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720.	<i>Cormocephalus hartmeyer</i>			
721.	<i>Cryptoerithus quobba</i>			
722.	<i>Cyclosa trilobata</i>			
723.	<i>Dytiscidae</i> sp.			
724.	<i>Ecnomidae</i> sp.			
725.	<i>Erigone prominens</i>			
726.	<i>Eriophora biapicata</i>			
727.	<i>Gripopterygidae</i> sp.			
728.	<i>Gyrinidae</i> sp.			
729.	<i>Hydrophilidae</i> sp.			
730.	<i>Hydropsychidae</i> sp.			
731.	48935 <i>Idiosoma sigillatum</i> (Swan Coastal Plain shield-backed trapdoor spider)		P3	
732.	<i>Isopoda leishmanni</i>			
733.	<i>Lampona cylindrata</i>			
734.	<i>Lampona punctigera</i>			
735.	<i>Latrodectus hasseltii</i>			
736.	<i>Leptoceridae</i> sp.			
737.	<i>Leptophlebiidae</i> sp.			
738.	<i>Missulena granulosa</i>			
739.	<i>Missulena hoggi</i>			
740.	<i>Missulena occatoria</i>			
741.	<i>Mituliodon tarantulinus</i>			
742.	<i>Mitzoruga insularis</i>			
743.	<i>Nephila edulis</i>			
744.	<i>Nicodamus mainae</i>			
745.	<i>Oligochaeta</i> sp.			
746.	<i>Orthocladinae</i> sp.			
747.	<i>Palaemonidae</i> sp.			
748.	<i>Parastacidae</i> sp.			
749.	<i>Pholcus phalangioides</i>			
750.	<i>Platorish gelorup</i>			
751.	<i>Simuliidae</i> sp.			
752.	<i>Staphylinidae</i> sp.			
753.	<i>Steatoda grossa</i>			
754.	<i>Tanypodinae</i> sp.			
755.	<i>Tasmanicosa leuckartii</i>			
756.	<i>Telephlebiidae</i> sp.			
757.	<i>Tipulidae</i> sp.			
758.	<i>Urodacus novaehollandiae</i>			
759.	<i>Veliidae</i> sp.			
760.	<i>Venator immansueta</i>			
761.	<i>Venatrix pullastra</i>			
762.	34113 <i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
Lichen				
763.	27628 <i>Caloplaca erythrosticta</i>			
764.	27645 <i>Candelariella xanthostigmoides</i>			
765.	27744 <i>Flavoparmelia ferax</i>			
766.	27748 <i>Flavoparmelia rutidota</i>			
767.	41286 <i>Flavoparmelia virensica</i>			
768.	27775 <i>Heterodermia japonica</i>			
769.	45299 <i>Jackelixia elixii</i>			
770.	30458 <i>Parmotrema reticulatum</i>			
771.	27968 <i>Physcia albicans</i>			
772.	27975 <i>Physcia stellaris</i>			
773.	28223 <i>Ramalina celastri</i> subsp. <i>ovalis</i>			
774.	28224 <i>Ramalina inflata</i> subsp. <i>australis</i>			
775.	28065 <i>Teloschistes chrysophthalmus</i>			
776.	<i>Trapeliopsis flexuosa</i>			
777.	28087 <i>Usnea inermis</i>			
Mammal				
778.	24208 <i>Arctocephalus forsteri</i> (New Zealand Fur Seal, long-nosed fur-seal)		S	
779.	24044 <i>Balaenoptera acutorostrata</i> (Dwarf Minke Whale)			
780.	24251 <i>Bos taurus</i> (European Cattle)	Y		
781.	24086 <i>Cercartetus concinnus</i> (Western Pygmy-possum, Mundarda)			
782.	24092 <i>Dasyurus geoffroii</i> (Chuditch, Western Quoll)		T	
783.	24041 <i>Felis catus</i> (Cat)	Y		
784.	24215 <i>Hydromys chrysogaster</i> (Water-rat, Rakali)		P4	
785.	48588 <i>Isodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4	
786.	24132 <i>Macropus fuliginosus</i> (Western Grey Kangaroo)			

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787.	24223	<i>Mus musculus</i> (House Mouse)	Y		
788.	24210	<i>Neophoca cinerea</i> (Australian Sea-lion)		T	
789.	48022	<i>Notamacropus irma</i> (Western Brush Wallaby)		P4	
790.	24085	<i>Oryctolagus cuniculus</i> (Rabbit)	Y		
791.	25508	<i>Phascogale tapoatafa</i> (Brush-tailed Phascogale)		S	
792.	48070	<i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> (South-western Brush-tailed Phascogale, Wambenger)		S	
793.	24166	<i>Pseudocheirus occidentalis</i> (Western Ringtail Possum, ngwayir)		T	
794.	24245	<i>Rattus rattus</i> (Black Rat)	Y		
795.	24259	<i>Sus scrofa</i> (Pig)	Y		
796.	25521	<i>Trichosurus vulpecula</i> (Common Brushtail Possum)			
797.	24158	<i>Trichosurus vulpecula</i> subsp. <i>vulpecula</i> (Common Brushtail Possum)			
798.	30954	<i>Tursiops aduncus</i> (Indo-Pacific Bottlenose Dolphin)			
799.	24069	<i>Tursiops truncatus</i> (Bottlenose Dolphin)			
800.	24040	<i>Vulpes vulpes</i> (Red Fox)	Y		

Monocotyledon

801.	23474	<i>Agrostocrinum hirsutum</i>			
802.	1261	<i>Agrostocrinum scabrum</i> (Blue Grass Lily)			
803.	23501	<i>Agrostocrinum scabrum</i> subsp. <i>scabrum</i>			
804.	184	<i>Aira caryophylla</i> (Silvery Hairgrass)	Y		
805.	186	<i>Aira elegantissima</i>	Y		
806.	1378	<i>Allium triquetrum</i> (Three-cornered Garlic)	Y		
807.	13380	<i>Amphibromus nervosus</i>			
808.	194	<i>Amphipogon amphipogonoides</i>			
809.	200	<i>Amphipogon turbinatus</i>			
810.	1060	<i>Anarthria laevis</i>			
811.	1062	<i>Anarthria prolifera</i>			
812.	1063	<i>Anarthria scabra</i>			
813.	1409	<i>Anigozanthos humilis</i> (Catspaw)			
814.	11434	<i>Anigozanthos humilis</i> subsp. <i>humilis</i>			
815.	1411	<i>Anigozanthos manglesii</i> (Mangles Kangaroo Paw, Kurulbrang)			
816.	11261	<i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>			
817.	29487	<i>Anigozanthos manglesii</i> var. <i>x angustifolius</i>			
818.	1416	<i>Anigozanthos viridis</i> (Green Kangaroo Paw, Kurulbardang)			
819.	11566	<i>Anigozanthos viridis</i> subsp. <i>viridis</i>			
820.	202	<i>Anthoxanthum odoratum</i> (Sweet Vernal Grass)	Y		
821.	1117	<i>Aphelia cyperoides</i>			
822.	141	<i>Aponogeton hexatepalus</i> (Stalked Water Ribbons)		P4	
823.	8779	<i>Asparagus asparagoides</i> (Bridal Creeper)	Y		
824.	16945	<i>Asparagus plumosus</i>	Y		
825.	38480	<i>Austrostipa bronwenae</i>		T	
826.	17233	<i>Austrostipa campylachne</i>			
827.	17234	<i>Austrostipa compressa</i>			
828.	38481	<i>Austrostipa jacobsoniana</i>		T	
829.	17250	<i>Austrostipa pycnostachya</i>			
830.	17253	<i>Austrostipa semibarbata</i>			
831.	231	<i>Avellinia michelii</i>	Y		
832.	233	<i>Avena barbata</i> (Bearded Oat)	Y		
833.	234	<i>Avena fatua</i> (Wild Oat)	Y		
834.	18279	<i>Babiana angustifolia</i>	Y		
835.	740	<i>Baumea arthropophylla</i>			
836.	743	<i>Baumea juncea</i> (Bare Twigrush)			
837.	744	<i>Baumea laxa</i>			
838.	747	<i>Baumea rubiginosa</i>			
839.	1272	<i>Borya scirpoidea</i>			
840.	1273	<i>Borya sphaerocephala</i> (Pincushions)			
841.	244	<i>Briza maxima</i> (Blowfly Grass)	Y		
842.	245	<i>Briza minor</i> (Shivery Grass)	Y		
843.	248	<i>Bromus catharticus</i> (Prairie Grass)	Y		
844.	249	<i>Bromus diandrus</i> (Great Brome)	Y		
845.	250	<i>Bromus hordeaceus</i> (Soft Brome)	Y		
846.	12770	<i>Burchardia congesta</i>			
847.	1385	<i>Burchardia multiflora</i> (Dwarf Burchardia)			
848.	1276	<i>Caesia micrantha</i> (Pale Grass Lily)			
849.	1277	<i>Caesia occidentalis</i>			
850.	15332	<i>Caladenia attingens</i> subsp. <i>attingens</i>			
851.	15579	<i>Caladenia chapmanii</i>			
852.	1586	<i>Caladenia discoidea</i> (Dancing Orchid)			
853.	1592	<i>Caladenia flava</i> (Cowslip Orchid)			
854.	15348	<i>Caladenia flava</i> subsp. <i>flava</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
855.	15352 <i>Caladenia georgei</i>			
856.	1599 <i>Caladenia latifolia</i> (Pink Fairy Orchid)			
857.	13859 <i>Caladenia longicauda</i> subsp. <i>clivicola</i>			
858.	15365 <i>Caladenia longicauda</i> subsp. <i>longicauda</i>			
859.	15371 <i>Caladenia nana</i> subsp. <i>nana</i>			
860.	17760 <i>Caladenia nobilis</i>			
861.	15503 <i>Caladenia paludosa</i>			
862.	18026 <i>Caladenia pendens</i> subsp. <i>pendens</i>			
863.	15377 <i>Caladenia reptans</i> subsp. <i>reptans</i>			
864.	13862 <i>Caladenia speciosa</i>		P4	
865.	15380 <i>Caladenia splendens</i>			
866.	18019 <i>Caladenia vulgata</i>			
867.	19309 <i>Calectasia narragara</i>			
868.	13488 <i>Canna x generalis</i>	Y		
869.	759 <i>Carex tereticaulis</i>		P3	
870.	1162 <i>Cartonema phylloides</i>			
871.	262 <i>Cenchrus longispinus</i> (Spiny Burrgrass)	Y		
872.	41570 <i>Cenchrus spinifex</i> (Spiny Burrgrass)	Y		
873.	1121 <i>Centrolepis aristata</i> (Pointed Centrolepis)			
874.	1125 <i>Centrolepis drummondiana</i>			
875.	1131 <i>Centrolepis inconspicua</i>			
876.	1132 <i>Centrolepis mutica</i>			
877.	1134 <i>Centrolepis polygyna</i> (Wiry Centrolepis)			
878.	1280 <i>Chamaescilla corymbosa</i> (Blue Squill)			
879.	19338 <i>Chamaescilla gibsonii</i>		P3	
880.	1513 <i>Chasmanthe floribunda</i> (African Cornflag)	Y		
881.	763 <i>Chorizandra enodis</i> (Black Bristlerush)			
882.	1418 <i>Conostylis aculeata</i> (Prickly Conostylis)			
883.	11826 <i>Conostylis aculeata</i> subsp. <i>aculeata</i>			
884.	12118 <i>Conostylis aculeata</i> subsp. <i>gracilis</i>			
885.	1436 <i>Conostylis juncea</i>			
886.	1453 <i>Conostylis serrulata</i>			
887.	48259 <i>Cortaderia selloana</i> subsp. <i>selloana</i>	Y		
888.	11283 <i>Corynotheca micrantha</i> var. <i>micrantha</i>			
889.	15114 <i>Cyanicula gemmata</i>			
890.	15404 <i>Cyanicula sericea</i>			
891.	768 <i>Cyathochaeta avenacea</i>			
892.	283 <i>Cynodon dactylon</i> (Couch)	Y		
893.	285 <i>Cynosurus echinatus</i> (Rough Dogstail)	Y		
894.	792 <i>Cyperus eragrostis</i> (Umbrella Sedge)	Y		
895.	18318 <i>Cyperus involucratus</i>	Y		
896.	815 <i>Cyperus tenellus</i> (Tiny Flatsedge)	Y		
897.	816 <i>Cyperus tenuiflorus</i> (Scaly Sedge)	Y		
898.	287 <i>Dactylis glomerata</i> (Cocksfoot)	Y		
899.	1218 <i>Dasypogon bromeliifolius</i> (Pineapple Bush)			
900.	1219 <i>Dasypogon hookeri</i> (Pineapple Bush)			
901.	17691 <i>Desmocladius fasciculatus</i>			
902.	16595 <i>Desmocladius flexuosus</i>			
903.	16455 <i>Desmocladius virgatus</i>			
904.	299 <i>Deyeuxia quadriseta</i> (Reed Bentgrass)			
905.	306 <i>Dichelachne crinita</i> (Longhair Plumegrass)			
906.	1287 <i>Dichopogon capillipes</i>			
907.	19649 <i>Disa bracteata</i>	Y		
908.	10796 <i>Diuris drummondii</i> (Tall Donkey Orchid)		T	
909.	1634 <i>Diuris laxiflora</i> (Bee Orchid)			
910.	48253 <i>Diuris porphyrochila</i>			
911.	11156 <i>Drakaea livida</i>			
912.	13635 <i>Drakaea micrantha</i>		T	
913.	347 <i>Ehrharta calycina</i> (Perennial Veldt Grass)	Y		
914.	349 <i>Ehrharta longiflora</i> (Annual Veldt Grass)	Y		
915.	822 <i>Eleocharis acuta</i> (Common Spikerush)			
916.	17605 <i>Eleocharis keigheryi</i>		T	
917.	353 <i>Eleusine indica</i> (Crowsfoot Grass)	Y		
918.	1643 <i>Elythranthera brunonis</i> (Purple Enamel Orchid)			
919.	1644 <i>Elythranthera emarginata</i> (Pink Enamel Orchid)			
920.	376 <i>Eragrostis curvula</i> (African Lovegrass)	Y		
921.	379 <i>Eragrostis elongata</i> (Clustered Lovegrass)			
922.	17610 <i>Eragrostis tenuifolia</i>	Y		
923.	1646 <i>Eriochilus dilatatus</i> (White Bunny Orchid)			
924.	15410 <i>Eriochilus dilatatus</i> subsp. <i>dilatatus</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
925.	15412	<i>Eriochilus dilatatus</i> subsp. <i>multiflorus</i>			
926.	835	<i>Evandra pauciflora</i>			
927.	20216	<i>Ficinia nodosa</i> (Knotted Club Rush)			
928.	894	<i>Fimbristylis velata</i>			
929.	18392	<i>Freesia alba</i> x <i>leichtlinii</i>	Y		
930.	907	<i>Gahnia trifida</i> (Coast Saw-sedge)			
931.	1520	<i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Y		
932.	1524	<i>Gladiolus undulatus</i> (Wild Gladiolus)	Y		
933.	17043	<i>Glyceria declinata</i>	Y		
934.	1468	<i>Haemodorum laxum</i>			
935.	1470	<i>Haemodorum paniculatum</i> (Mardja)			
936.	1472	<i>Haemodorum simplex</i>			
937.	1474	<i>Haemodorum sparsiflorum</i>			
938.	444	<i>Holcus lanatus</i> (Yorkshire Fog)	Y		
939.	450	<i>Hordeum marinum</i>	Y		
940.	1070	<i>Hypolaena exsulca</i>			
941.	1071	<i>Hypolaena fastigiata</i>			
942.	17841	<i>Hypolaena pubescens</i>			
943.	20200	<i>Isolepis cernua</i> var. <i>setiformis</i>			
944.	912	<i>Isolepis cyperoides</i>			
945.	917	<i>Isolepis marginata</i> (Coarse Club-rush)			
946.	919	<i>Isolepis oldfieldiana</i>			
947.	10831	<i>Isolepis prolifera</i> (Budding Club-rush)	Y		
948.	1295	<i>Johnsonia acaulis</i>			
949.	1297	<i>Johnsonia lupulina</i> (Hooded Lily)			
950.	1178	<i>Juncus bufonius</i> (Toad Rush)	Y		
951.	1179	<i>Juncus caespiticius</i> (Grassy Rush)			
952.	1180	<i>Juncus capitatus</i> (Capitate Rush)	Y		
953.	1184	<i>Juncus holoschoenus</i> (Jointleaf Rush)			
954.	20668	<i>Juncus hybridus</i>	Y		
955.	11922	<i>Juncus kraussii</i> subsp. <i>australiensis</i>			
956.	1186	<i>Juncus microcephalus</i>	Y		
957.	1188	<i>Juncus pallidus</i> (Pale Rush)			
958.	1195	<i>Juncus subsecundus</i> (Finger Rush)			
959.	1221	<i>Kingia australis</i> (Kingia, Pulonok)			
960.	19955	<i>Lachnagrostis plebeia</i>			
961.	11464	<i>Laxmannia sessiliflora</i> subsp. <i>australis</i>			
962.	925	<i>Lepidosperma angustatum</i>			
963.	930	<i>Lepidosperma costale</i>			
964.	937	<i>Lepidosperma longitudinale</i> (Pithy Sword-sedge)			
965.	940	<i>Lepidosperma pubisquameum</i>			
966.		<i>Lepidosperma</i> sp.			
967.	20398	<i>Lepidosperma</i> sp. Blackwood (R. Davis 7696)			
968.	29150	<i>Lepidosperma</i> sp. Margaret River (B.J. Lepschi 1841)			
969.	945	<i>Lepidosperma squamatum</i>			
970.	946	<i>Lepidosperma striatum</i>			
971.	1653	<i>Leporella fimbriata</i> (Hare Orchid)			
972.	1077	<i>Leptocarpus canus</i> (Hoary Twine-rush)			
973.	1078	<i>Leptocarpus coangustatus</i>			
974.	46375	<i>Leptocarpus decipiens</i>			
975.	19833	<i>Leptocarpus laxus</i>			
976.	46382	<i>Leptocarpus roycei</i>			
977.	1080	<i>Leptocarpus scariosus</i>			
978.	1082	<i>Leptocarpus tenax</i> (Slender Twine Rush)			
979.	46379	<i>Leptocarpus thysananthus</i>			
980.	1085	<i>Lepyrodia glauca</i>			
981.	1087	<i>Lepyrodia hermaphrodita</i>			
982.	1088	<i>Lepyrodia macra</i> (Large Scale Rush)			
983.	1090	<i>Lepyrodia muirii</i>			
984.	476	<i>Lolium perenne</i> (Perennial Ryegrass)	Y		
985.	478	<i>Lolium rigidum</i> (Wimmera Ryegrass)	Y		
986.		<i>Lolium</i> sp.			
987.	1222	<i>Lomandra brittanii</i>			
988.	1223	<i>Lomandra caespitosa</i> (Tufted Mat Rush)			
989.	1228	<i>Lomandra hermaphrodita</i>			
990.	1232	<i>Lomandra micrantha</i> (Small-flower Mat-rush)			
991.	1234	<i>Lomandra nigricans</i>			
992.	1235	<i>Lomandra nutans</i>			
993.	1236	<i>Lomandra odora</i> (Tiered Matrush)			
994.	1239	<i>Lomandra preissii</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
995.	1240 <i>Lomandra purpurea</i> (Purple Mat Rush)			
996.	1243 <i>Lomandra sericea</i> (Silky Mat Rush)			
997.	1245 <i>Lomandra spartea</i>			
998.	1246 <i>Lomandra suaveolens</i>			
999.	33298 <i>Lomandra whicherensis</i>		P3	
1000.	1198 <i>Luzula meridionalis</i> (Field Woodrush)			
1001.	1097 <i>Lyginia barbata</i>			
1002.	18049 <i>Lyginia imberbis</i>			
1003.	14985 <i>Melinis repens</i>	Y		
1004.	953 <i>Mesomelaena graciliceps</i>			
1005.	957 <i>Mesomelaena tetragona</i> (Semaphore Sedge)			
1006.	485 <i>Microlaena stipoides</i> (Weeping Grass)			
1007.	10954 <i>Microtis media</i> (Tall Mignonette Orchid)			
1008.	15419 <i>Microtis media</i> subsp. <i>media</i>			
1009.	19179 <i>Moraea flaccida</i> (One-leaf Cape Tulip)	Y		
1010.	19178 <i>Moraea lewisiae</i>	Y		
1011.	19180 <i>Moraea miniata</i> (Two-leaf Cape Tulip)	Y		
1012.	492 <i>Neurachne alopecuroides</i> (Foxtail Mulga Grass)			
1013.	1381 <i>Nothoscordum gracile</i>	Y		
1014.	168 <i>Ottelia ovalifolia</i> (Swamp Lily)			
1015.	14531 <i>Ottelia ovalifolia</i> subsp. <i>ovalifolia</i>			
1016.	1667 <i>Paracaleana nigrita</i> (Flying Duck Orchid)			
1017.	527 <i>Paspalum dilatatum</i>	Y		
1018.	1542 <i>Patersonia babianoides</i>			
1019.	1546 <i>Patersonia juncea</i> (Rush Leaved Patersonia)			
1020.	1548 <i>Patersonia limbata</i>			
1021.	1550 <i>Patersonia occidentalis</i> (Purple Flag, Koma)			
1022.	30472 <i>Patersonia occidentalis</i> var. <i>occidentalis</i>			
1023.	11550 <i>Patersonia umbrosa</i> var. <i>xanthina</i> (Yellow Flags)			
1024.	43762 <i>Pauridia occidentalis</i> var. <i>quadriloba</i>			
1025.	1173 <i>Philydrella pygmaea</i> (Butterfly Flowers)			
1026.	14306 <i>Philydrella pygmaea</i> subsp. <i>pygmaea</i>			
1027.	1478 <i>Phlebocarya ciliata</i>			
1028.	571 <i>Poa annua</i> (Winter Grass)	Y		
1029.	577 <i>Poa poliformis</i> (Coastal Poa)			
1030.	583 <i>Polypogon tenellus</i>			
1031.	110 <i>Potamogeton drummondii</i>			
1032.	15424 <i>Praecoxanthus aphyllus</i>			
1033.	1676 <i>Prasophyllum hians</i> (Yawning Leek Orchid)			
1034.	10853 <i>Prasophyllum plumiforme</i>			
1035.	44084 <i>Prasophyllum</i> sp. <i>early</i> (G. Brockman GBB 1626)			
1036.	1685 <i>Pterostylis angusta</i>			
1037.	15426 <i>Pterostylis aspera</i>			
1038.	11118 <i>Pterostylis pyramidalis</i> (Snail Orchid)			
1039.	1693 <i>Pterostylis recurva</i> (Jug Orchid)			
1040.	1694 <i>Pterostylis rogersii</i> (Curled-tongue Shell Orchid)			
1041.	18655 <i>Pterostylis</i> sp. <i>crinkled leaf</i> (G.J. Keighery 13426)			
1042.	1698 <i>Pterostylis vittata</i> (Banded Greenhood)			
1043.	31673 <i>Puccinellia vassica</i>		P1	
1044.	16367 <i>Pyrorchis nigricans</i> (Red beaks, Elephants ears)			
1045.	1555 <i>Romulea obscura</i>	Y		
1046.	1556 <i>Romulea rosea</i> (Guildford Grass)	Y		
1047.	11544 <i>Romulea rosea</i> var. <i>australis</i> (Guildford Grass)	Y		
1048.	14924 <i>Romulea rosea</i> var. <i>communis</i>	Y		
1049.	40425 <i>Rytidosperma caespitosum</i>			
1050.	40426 <i>Rytidosperma occidentale</i>			
1051.	40430 <i>Rytidosperma pilosum</i>			
1052.	40427 <i>Rytidosperma setaceum</i>			
1053.	968 <i>Schoenoplectus pungens</i> (Sharpleaf Rush)			
1054.	973 <i>Schoenus asperocarpus</i> (Poison Sedge)			
1055.	974 <i>Schoenus benthamii</i>		P3	
1056.	975 <i>Schoenus bifidus</i>			
1057.	980 <i>Schoenus capillifolius</i>		P3	
1058.	984 <i>Schoenus curvifolius</i>			
1059.	986 <i>Schoenus efoliatus</i>			
1060.	996 <i>Schoenus laevigatus</i>			
1061.	999 <i>Schoenus loliaceus</i>		P2	
1062.	1006 <i>Schoenus odontocarpus</i>			
1063.	17614 <i>Schoenus plumosus</i>			
1064.	1011 <i>Schoenus rigens</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1065.	1013 <i>Schoenus sculptus</i> (Gimlet Bog-rush)			
1066.	44487 <i>Schoenus</i> sp. Little black fruit (A.C. Beauglehole ACB 12538)			
1067.	1020 <i>Schoenus sublateralis</i>			
1068.	1023 <i>Schoenus tenellus</i>			
1069.	17409 <i>Schoenus variicellae</i>			
1070.	609 <i>Setaria palmifolia</i> (Palm Grass)	Y		
1071.	1312 <i>Sowerbaea laxiflora</i> (Purple Tassels)			
1072.	1558 <i>Sparaxis bulbifera</i>	Y		
1073.	636 <i>Stenotaphrum secundatum</i> (Buffalo Grass)	Y		
1074.	1034 <i>Tetraria capillaris</i> (Hair Sedge)			
1075.	1036 <i>Tetraria octandra</i>			
1076.	667 <i>Tetrarrhena laevis</i> (Forest Ricegrass)			
1077.	<i>Thelymitra</i> aff. <i>pauciflora</i>			
1078.	<i>Thelymitra</i> aff. <i>pauciflora</i> scps			
1079.	1701 <i>Thelymitra antennifera</i> (Vanilla Orchid)			
1080.	1705 <i>Thelymitra crinita</i> (Blue Lady Orchid)			
1081.	1707 <i>Thelymitra flexuosa</i> (Twisted Sun Orchid)			
1082.	11143 <i>Thelymitra graminea</i>			
1083.	11053 <i>Thelymitra macrophylla</i>			
1084.	20730 <i>Thelymitra paludosa</i>			
1085.	1717 <i>Thelymitra variegata</i> (Queen of Sheba)		P2	
1086.	20731 <i>Thelymitra vulgaris</i>			
1087.	1318 <i>Thysanotus arbuscula</i>			
1088.	1319 <i>Thysanotus arenarius</i>			
1089.	1339 <i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
1090.	1343 <i>Thysanotus patersonii</i>			
1091.	1345 <i>Thysanotus pseudojuncus</i>			
1092.	1351 <i>Thysanotus sparteus</i>			
1093.	1354 <i>Thysanotus tenellus</i>			
1094.	1357 <i>Thysanotus thyrsoides</i>			
1095.	1368 <i>Trachyandra divaricata</i>	Y		
1096.	1481 <i>Tribonanthes australis</i> (Southern Tiurmdin)			
1097.	1482 <i>Tribonanthes brachypetala</i> (Nodding Tiurmdin)			
1098.	1483 <i>Tribonanthes longipetala</i> (Branching Tiurmdin)			
1099.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
1100.	1362 <i>Tricoryne humilis</i>			
1101.	1363 <i>Tricoryne tenella</i>			
1102.	147 <i>Triglochin mucronata</i>			
1103.	18587 <i>Triglochin nana</i>			
1104.	38401 <i>Tritonia gladiolaris</i> (Lined Tritonia)	Y		
1105.	722 <i>Vulpia bromoides</i> (Squirrel Tail Fescue)	Y		
1106.	724 <i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
1107.	13103 <i>Watsonia borbonica</i>	Y		
1108.	18375 <i>Watsonia knysnana</i>	Y		
1109.	1566 <i>Watsonia marginata</i>	Y		
1110.	1567 <i>Watsonia meriana</i> (Bulbil Watsonia)	Y		
1111.	18108 <i>Watsonia meriana</i> var. <i>bulbillifera</i>	Y		
1112.	18118 <i>Watsonia meriana</i> var. <i>meriana</i>	Y		
1113.	1569 <i>Watsonia versfeldii</i>	Y		
1114.	12072 <i>Wurmbea dioica</i> subsp. <i>alba</i>			
1115.	1249 <i>Xanthorrhoea acanthostachya</i>			
1116.	1251 <i>Xanthorrhoea brunonis</i>			
1117.	14545 <i>Xanthorrhoea brunonis</i> subsp. <i>semibarbata</i>			
1118.	1253 <i>Xanthorrhoea gracilis</i> (Graceful Grass Tree, Mimidi)			
1119.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			

Pteridophyte (Fern)

1120.	17737 <i>Azolla pinnata</i>			
1121.	59 <i>Lindsaea linearis</i> (Screw Fern)			
1122.	78 <i>Pilularia novae-hollandiae</i> (Austral Pillwort)			
1123.	41651 <i>Pteridium esculentum</i> subsp. <i>esculentum</i>			
1124.	6 <i>Selaginella gracillima</i> (Tiny Clubmoss)			

Reptile

1125.	42368 <i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
1126.	43380 <i>Chelodina colliei</i> (South-western Snake-necked Turtle)			
1127.	24980 <i>Christinus marmoratus</i> (Marbled Gecko)			
1128.	30893 <i>Cryptoblepharus buechananii</i>			
1129.	25039 <i>Ctenotus fallens</i>			
1130.	25047 <i>Ctenotus impar</i>			
1131.	25049 <i>Ctenotus labillardieri</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
1132.	41641	<i>Ctenotus ora</i> (Coastal Plains Skink)		P3	
1133.	25096	<i>Egernia kingii</i> (King's Skink)			
1134.	25100	<i>Egernia napoleonis</i>			
1135.	25250	<i>Elapognathus coronatus</i> (Crowned Snake)			
1136.	25119	<i>Hemiergis quadrilineata</i>			
1137.	43384	<i>Hydrophis platurus</i> (Yellow-bellied Seasnake)			
1138.	25131	<i>Lerista distinguenda</i>			
1139.	25133	<i>Lerista elegans</i>			
1140.	25005	<i>Lialis burtonis</i>			
1141.	25184	<i>Menetia greyii</i>			
1142.	25191	<i>Morethia lineocellata</i>			
1143.	25252	<i>Notechis scutatus</i> (Tiger Snake)			
1144.	25253	<i>Parasuta gouldii</i>			
1145.	25510	<i>Pogona minor</i> (Dwarf Bearded Dragon)			
1146.	24907	<i>Pogona minor subsp. minor</i> (Dwarf Bearded Dragon)			
1147.	25259	<i>Pseudonaja affinis subsp. affinis</i> (Dugite)			
1148.	25266	<i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
1149.	25519	<i>Tiliqua rugosa</i>			

Conservation Codes

T - Rare or likely to become extinct
X - Presumed extinct
IA - Protected under international agreement
S - Other specially protected fauna
1 - Priority 1
2 - Priority 2
3 - Priority 3
4 - Priority 4
5 - Priority 5

¹ For NatureMap's purposes, species flagged as endemic are those whose records are wholly contained within the search area. Note that only those records complying with the search criterion are included in the calculation. For example, if you limit records to those from a specific datasource, only records from that datasource are used to determine if a species is restricted to the query area.

Appendix 2: Protected Matters Search Tool Report (10 km buffer)



EPBC Act Protected Matters Report

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

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

Information is available about [Environment Assessments](#) and the EPBC Act including significance guidelines, forms and application process details.

Report created: 04/02/21 15:37:42

[Summary](#)

[Details](#)

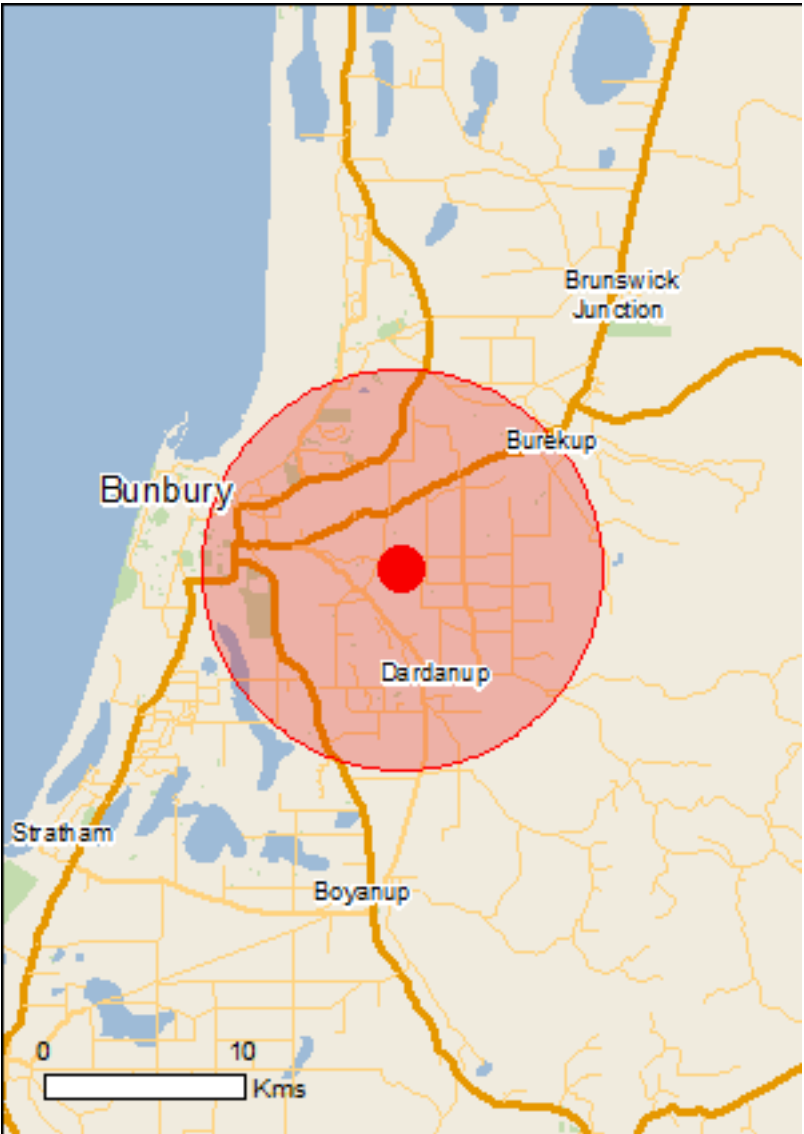
[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



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[Coordinates](#)

[Buffer: 10.0Km](#)



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	5
Listed Threatened Species:	61
Listed Migratory Species:	43

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	2
Commonwealth Heritage Places:	None
Listed Marine Species:	65
Whales and Other Cetaceans:	13
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	8
Regional Forest Agreements:	1
Invasive Species:	29
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities

[Resource Information]

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

Name	Status	Type of Presence
Banksia Woodlands of the Swan Coastal Plain ecological community	Endangered	Community likely to occur within area
Clay Pans of the Swan Coastal Plain	Critically Endangered	Community likely to occur within area
Corymbia calophylla - Xanthorrhoea preissii woodlands and shrublands of the Swan Coastal Plain	Endangered	Community known to occur within area
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area
Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community	Critically Endangered	Community likely to occur within area

Listed Threatened Species

[Resource Information]

Name	Status	Type of Presence
Birds		
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
Calyptorhynchus baudinii Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Endangered	Breeding known to occur within area
Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species

Name	Status	Type of Presence
		habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Fish		
Nannatherina balstoni Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat likely to occur within area
Mammals		

Name	Status	Type of Presence
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Bettongia penicillata ogilbyi Woylie [66844]	Endangered	Species or species habitat may occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat known to occur within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat likely to occur within area
Other		
Westralunio carteri Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat known to occur within area
Plants		
Andersonia gracilis Slender Andersonia [14470]	Endangered	Species or species habitat may occur within area
Austrostipa bronwenae [87808]	Endangered	Species or species habitat known to occur within area
Austrostipa jacobiana [87809]	Critically Endangered	Species or species habitat likely to occur within area
Banksia nivea subsp. uliginosa Swamp Honeypot [82766]	Endangered	Species or species habitat may occur within area
Banksia squarrosa subsp. argillacea Whicher Range Dryandra [82769]	Vulnerable	Species or species habitat may occur within area
Brachyscias verecundus Ironstone Brachyscias [81321]	Critically Endangered	Species or species habitat may occur within area
Caladenia huegelii King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
Chamelaucium sp. S coastal plain (R.D.Royce 4872) Royce's Waxflower [87814]	Vulnerable	Species or species habitat may occur within area
Diuris drummondii Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat known to occur within area

Name	Status	Type of Presence
Diuris micrantha Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
Diuris purdiei Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat may occur within area
Drakaea elastica Glossy-leafed Hammer Orchid, Glossy-leaved Hammer Orchid, Warty Hammer Orchid [16753]	Endangered	Species or species habitat likely to occur within area
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat known to occur within area
Eleocharis keigheryi Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat known to occur within area
Lambertia echinata subsp. occidentalis Western Prickly Honeysuckle [64528]	Endangered	Species or species habitat may occur within area
Synaphea sp. Fairbridge Farm (D. Papenfus 696) Selena's Synaphea [82881]	Critically Endangered	Species or species habitat known to occur within area
Synaphea sp. Pinjarra Plain (A.S. George 17182) [86878]	Endangered	Species or species habitat may occur within area
Synaphea sp. Serpentine (G.R. Brand 103) [86879]	Critically Endangered	Species or species habitat may occur within area
Synaphea stenoloba Dwellingup Synaphea [66311]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Sharks		
Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat known to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence

Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Species or species habitat likely to occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Breeding known to occur within area

Name	Threatened	Type of Presence
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

Other Matters Protected by the EPBC Act

Commonwealth Land	[Resource Information]
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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 - Defence - BUNBURY TRAINING DEPOT

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

Name	Threatened	Type of Presence
Birds		

Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Anous stolidus Common Noddy [825]		Species or species habitat may occur within area
Anous tenuirostris melanops Australian Lesser Noddy [26000]	Vulnerable	Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species

Name	Threatened	Type of Presence
		habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area
Diomedea amsterdamensis Amsterdam Albatross [64405]	Endangered	Species or species habitat may occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat known to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Phoebetria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat may occur within

Name	Threatened	Type of Presence
Puffinus assimilis Little Shearwater [59363]		area Foraging, feeding or related behaviour known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Species or species habitat likely to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Sterna anaethetus Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area
Sterna caspia Caspian Tern [59467]		Foraging, feeding or related behaviour known to occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area
Fish		
Acentronura australe Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus angustus Western Spiny Seahorse, Narrow-bellied Seahorse [66234]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Hippocampus subelongatus West Australian Seahorse [66722]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within

Name	Threatened	Type of Presence
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		area Species or species habitat may occur within area
Lissocampus fatiloquus Prophet's Pipefish [66250]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Mitotichthys meraculus Western Crested Pipefish [66259]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat may occur within

Name	Threatened	Type of Presence area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Foraging, feeding or related behaviour known to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Natator depressus Flatback Turtle [59257]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Stenella attenuata Spotted Dolphin, Pantropical Spotted Dolphin [51]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
Dardanup	WA
Leschenault Peninsula	WA
Morangarel	WA
NTWA Bushland covenant (0022)	WA
NTWA Bushland covenant (0146)	WA
NTWA Bushland covenant (0150)	WA
Unnamed WA40552	WA
Unnamed WA46108	WA

Regional Forest Agreements	[Resource Information]
Note that all areas with completed RFAs have been included.	
Name	State
South West WA RFA	Western Australia

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]		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 habitat likely to occur within area
Passer montanus Eurasian Tree Sparrow [406]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Streptopelia senegalensis Laughing Turtle-dove, Laughing Dove [781]		Species or species habitat likely to occur within area
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur

Name	Status	Type of Presence
		within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
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
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus declinatus Bridal Veil, Bridal Veil Creeper, Pale Berry Asparagus Fern, Asparagus Fern, South African Creeper [66908]		Species or species habitat likely to occur within area
Asparagus plumosus Climbing Asparagus-fern [48993]		Species or species habitat likely to occur within area
Brachiaria mutica Para Grass [5879]		Species or species habitat may occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may occur within area
Chrysanthemoides monilifera Bitou Bush, Boneseed [18983]		Species or species habitat may occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Olea europaea Olive, Common Olive [9160]		Species or species habitat may occur within

Name	Status	Type of Presence
Pinus radiata		area
Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate		
Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii		
Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
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

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

-33.36039 115.7421

Acknowledgements

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

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

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

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

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Appendix 3: Significant Flora Guide




Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <p><i>Acacia flagelliformis</i></p> <p>Photos: S.D. Hopper</p>		Rush-like, erect or sprawling shrub, 0.3-0.75(-1.6) m high. Fl. yellow	May to Sep	Sandy soils. Winter-wet areas.	P4	Y	Habitat may be suitable
 <p><i>Acacia semitrullata</i></p> <p>Photos: S.D. Hopper</p>		Slender, erect, pungent shrub, (0.1-)0.2-0.7(-1.5) m high. Fl. cream-white	May to Oct.	White/grey sand, sometimes over laterite, clay. Sandplains, swampy areas.	P4	Y	Habitat may be suitable
<i>Adelphacme minima</i>					P3		Unable to assess
 <p><i>Andersonia gracilis</i></p> <p>Photos: K. Atkin & M. Bishop</p>		Slender erect or open straggly shrub, 0.1-0.5(-1) m high. Fl. white-pink-purple	Sep to Nov	White/grey sand, sandy clay, gravelly loam. Winter-wet areas, near swamps.	EN		Habitat may be suitable




Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
<i>Angianthus drummondii</i>		Erect annual, herb, to 0.1 m high. Fl. yellow	Oct to Dec	Grey or brown clay soils, ironstone. Seasonally wet flats.	P3	N	
 <i>Aponogeton hexatepalus</i> <small>Photos: J.L. Robson & A.P. Brown</small>	Stalked Water Ribbons	Rhizomatous or cormous, aquatic perennial, herb, leaves floating. Fl. green-white	Jul to Oct	Mud. Freshwater: ponds, rivers, claypans.	P4	N	
<i>Austrostipa bronwenae</i>					T / EN		Unable to assess
<i>Austrostipa jacobiana</i>					T / CR		Unable to assess
 <i>Banksia nivea</i> subsp. <i>uliginosa</i> <small>Photos: J.A. Cochrane & M. Pieren</small>		Dense, erect, non-lignotuberous shrub, 0.2-1.5 m high. Fl. yellow-brown	Aug to Sep	Sandy clay, gravel.	EN	N	

Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <i>Banksia squarrosa</i> subsp. <i>argillacea</i> <small>Photos: M. Pinner</small>		Erect, open, non-lignotuberos shrub, 1.2-4 m high. Fl. yellow	Jun to Nov	White/grey sand, gravelly clay or loam. Winter-wet flats, clay flats.	VU	Y	Habitat may be suitable
<i>Boronia tetragona</i>		Perennial, herb, 0.3-0.7 m high, leaves sessile, entire, with papillate margins, branches quadrangular, sepals ciliate. Fl. pink & red	Oct to Dec	Black/white sand, laterite, brown sandy loam. Winter-wet flats, swamps, open woodland.	P3	Y	Habitat may be suitable
<i>Brachyscias verecundus</i>		Annual (or ephemeral), herb, 0.012-0.022 m high, entirely glabrous. Fl. white/cream.		In a moss sward. On a granite outcrop.	CR	N	
 <i>Caladenia speciosa</i> <small>Photos: A.P. Brown</small>		Tuberous, perennial, herb, 0.35-0.6 m high. Fl. white-pink	Sep to Oct	White, grey or black sand.	P4	Y	Habitat may be suitable



Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <p><i>Caladenia huegelii</i> Photos: I. & M. Greave & J.L. Robson</p>	Grand Spider Orchid	Tuberous, perennial, herb, 0.25-0.6 m high. Fl. green & cream & red	Sep to Oct	Grey or brown sand, clay loam.	EN	Y	Habitat may be suitable
<i>Carex tereticaulis</i>		Monoecious, rhizomatous, tufted perennial, grass-like or herb (sedge), 0.7 m high. Fl. brown	Sep to Oct	Black peaty sand.	P3	N	
<i>Chamaescilla gibsonii</i>		Clumped tuberous, herb. Fl. blue	Sep	Clay to sandy clay. Winter-wet flats, shallow water-filled claypans.	P3	N	
Chamelaucium roycei	(Syn. Chamelaucium sp. S coastal plain)				VU		Unable to assess
<i>Chamelaucium erythrochlorum</i>	(syn. Chamelaucium sp. Yoongarillup)				P4		Unable to assess




Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <p><i>Diuris drummondii</i> Photos: A. P. Brown and I & M Greeve</p>	Tall Donkey Orchid	Tuberous, perennial, herb, 0.5-1.05 m high. Fl. yellow	Nov to Dec or Jan	Low-lying depressions, swamps.	T / VU	N	
 <p><i>Diuris micrantha</i> Photos: A.P. Brown, I. & M. Greeve & B. Jackson</p>		Tuberous, perennial, herb, 0.3-0.6 m high. Fl. yellow & brown	Sep to Oct	Brown loamy clay. Winter-wet swamps, in shallow water.	VU	N	
 <p><i>Diuris purdiei</i> Photos: I. & M. Greeve & S.D. Hopper</p>	Purdie's Donkey Orchid	Tuberous, perennial, herb, 0.15-0.35 m high. Fl. yellow	Sep to Oct	Grey-black sand, moist. Winter-wet swamps.	EN	Y	Habitat may be suitable




Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <p><i>Drakaea elastica</i> Photos: A. Brown & S.D. Hopper</p>	Glossy-leaved Hammer Orchid	Tuberous, perennial, herb, 0.12-0.3 m high. Fl. red & green & yellow	Oct to Nov	White or grey sand. Low-lying situations adjoining winter-wet swamps.	EN	Y	Habitat may be suitable
 <p><i>Drakaea micrantha</i> Photos: S.D. Hopper, A.P. Brown & I. & M. Greave</p>		Tuberous, perennial, herb, 0.15-0.3 m high. Fl. red & yellow	Sep to Oct	White-grey sand.	T / VU	Y	Habitat may be suitable
 <p><i>Eleocharis keighervii</i> Photo: G.J. Keighery</p>		Rhizomatous, clumped perennial, grass-like or herb (sedge), to 0.4 m high. Fl. green	Aug to Nov	Clay, sandy loam. Emergent in freshwater: creeks, claypans.	T / VU	N	
<i>Eucalyptus rudis subsp. cratyantha</i>	Large-flowered Flooded Gum	Tree, 5-20 m high, bark rough, box-type. Fl. white	Jul to Sep	Loam. Flats, hillsides.	P4	N	


Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
<i>Gastrolobium</i> sp. <i>Yoongarillup</i>					P1		Unable to assess
 <i>Gastrolobium whicherense</i> Photos: A.D. Crawford		Slender, open shrub, to 1.6 m high. Fl. orange/yellow/red	Oct	Red-grey sandy clay over quartzite. Steep westerly slopes.	P2	N	
 <i>Grevillea rosieri</i> Photos: S.J. Patrick		Shrub. Fl. red,	Jul or Sep.	Sandy soils.	P2	Y	Habitat may be suitable
 <i>Lambertia echinata</i> subsp. <i>occidentalis</i> Photos: A.P. Brown & J.A. Cochran		Prickly, much-branched, non-lignotuberos shrub, to 3 m high. Fl. yellow	Feb or Apr or Dec.	White sandy soils over laterite, orange/brown-red clay over ironstone. Flats to foothills, winter-wet sites.	EN	N	
<i>Lasiopetalum membranaceum</i>		Multi-stemmed shrub, 0.2-1 m high. Fl. pink-blue-purple	Sep to Dec	Sand over limestone.	P3	Y	Habitat may be suitable

Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
<i>Leptomeria furtiva</i>		Lax, sprawling shrub, 0.2-0.45 m high. Fl. orange-brown	Aug to Oct	Grey or black peaty sand. Winter-wet flats.	P2	N	
<i>Leucopogon sp. Busselton</i>					P2		Unable to assess
<i>Ornduffia submersa</i>					P4		Unable to assess
<i>Pithocarpa corymbulosa</i>					P3		Unable to assess
<i>Platysace filiformis</i>					P3		Unable to assess
<i>Puccinellia vassica</i>		Caespitose annual or perennial, grass-like or herb, 0.41-0.55 m high.		Saline soils. On the outer margins of coastal saltmarshes.	P1	N	
<i>Pultenaea skinneri</i>	Skinner's Pea	Slender shrub, 1-2 m high. Fl. yellow/orange & red	Jul to Sep	Sandy or clayey soils. Winter-wet depressions.	P4	N	
<i>Schoenus benthamii</i>		Tufted perennial, grass-like or herb (sedge), 0.15-0.45 m high. Fl. brown	Oct to Nov	White, grey sand, sandy clay. Winter-wet flats, swamps.	P3	Y	Habitat may be suitable
<i>Schoenus capillifolius</i>		Semi-aquatic tufted annual, grass-like or herb (sedge), 0.05 m high. Fl. green	Oct to Nov	Brown mud. Claypans.	P3	N	
<i>Schoenus loliaceus</i>		Annual, grass-like or herb (sedge), 0.03-0.06 m high.	Aug to Nov	Sandy soils. Winter-wet depressions.	P2	Y	Habitat may be suitable

Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <i>Stylidium longitubum</i> <small>Photos: M. Hislop and P.G. Armstrong</small>	Jumping Jacks	Erect annual (ephemeral), herb, 0.05-0.12 m high. Fl. pink	Oct to Dec	Sandy clay, clay. Seasonal wetlands.	P4	N	
<i>Stylidium paludicola</i>		Reed-like perennial, herb, 0.35-1 m high, Leaves tufted, linear or subulate or narrowly oblanceolate, 0.5-4 cm long, 0.5-1.5 mm wide, apex acute, margin entire, glabrous. Scape mostly glabrous, inflorescence axis glandular. Inflorescence racemose. Fl. pink	Oct to Dec	Peaty sand over clay. Winter wet habitats. Marri and Melaleuca woodland, Melaleuca shrubland.	P3	N	
<i>Stylidium perplexum</i>					P1		Unable to assess
 <i>Synaphea hians</i> <small>Photos: R. Butcher</small>		Prostrate or decumbent shrub, 0.15-0.6 m high, to 1 m wide. Fl. yellow	Jul or Sep to Nov.	Sandy soils. Rises.	P3	Y	Habitat may be suitable

Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <i>Synaphea odocoleops</i> Photos: R. Butcher		Tufted, compact shrub, 0.2-0.5 m high. Fl. yellow	Aug to Oct	Brown-orange loam & sandy clay, granite. Swamps, winter-wet areas.	P1	N	
 <i>Synaphea polypodioides</i> Photos: R. Butcher		Clumped shrub (sunshrub), 0.35-0.4 m high.		Light brown loam, red-brown sandy loam, gravelly, brown sandy clay over laterite. In undulating areas.	P3	N	
 <i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696) Photos: R. Butcher		Dense, clumped shrub, to 0.3 m high, to 0.4 m wide. Fl. yellow	Oct	Sandy with lateritic pebbles. Near winter-wet flats, in low woodland with weedy grasses.	CR	N	

Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <small>Synaphea sp. Pinjarra Plain (A.S. George 17182) Photos: R. Butcher</small>		Erect, clumped shrub (sub-shrub), to 0.8 m high. Fl. yellow	Sep to Nov	Grey sandy loam or clay, grey-brown clayey sand, brown clayey loam, laterite. Flats, seasonally wet areas, railroad reserves often with wet depressions or drains.	EN	N	
 <small>Synaphea sp. Serpentine (G.R. Brand 103) Photos: R. Butcher</small>					CR		Unable to assess
 <small>Synaphea stenoloba Photos: J. Koch</small>		Caespitose shrub, 0.3-0.45 m high. Fl. yellow	Aug to Oct	Sandy or sandy clay soils. Winter-wet flats, granite.	EN	Y	Habitat may be suitable

Picture	Common Name	Description	Flowering Period	Habitat Type	Cons Code	Likelihood (Y/N)	Comments
 <p><i>Thelymitra variegata</i></p> <p>Photos: S.D. Hopper & G. Brundage</p>	Queen of Sheba	Tuberous, perennial, herb, 0.1-0.35 m high. Fl. orange & red & purple & pink	Jun to Sep	Sandy clay, sand, laterite.	P2	N	
<i>Verticordia attenuata</i>		Shrub, 0.4-1 m high. Fl. pink	Dec or Jan to May	White or grey sand. Winter-wet depressions.	P3	Y	Habitat may be suitable

Appendix 4: Conservation Codes

Conservation codes are used to describe the status of species and ecological communities that are no longer common and under threat of extinction. Species and communities can be listed under state legislation and/or commonwealth legislation.

Western Australia

Conservation Code	Name	Description
T	Threatened	Flora or fauna that is rare or likely to become extinct, ranked according to their level of threat using IUCN Red List criteria (Schedules 1-3 of the Wildlife Conservation (Specially Protected Fauna) Notice or the Wildlife Conservation (Rare Flora) Notice)
CR	Critically endangered	Species considered to be facing an extremely high risk of extinction within the wild in the immediate future
EN	Endangered	Species considered to be facing a very high risk of extinction in the wild in the near future
VU	Vulnerable	Species considered to be facing a high risk of extinction in the wild in the medium-term future
EX	Extinct Species	Species where 'there is no reasonable doubt that the last member of the species has died (Schedule 4 of the Wildlife Conservation (Specially Protected Fauna) Notice or the Wildlife Conservation (Rare Flora) Notice)
EW	Extinct in the Wild	Species that are known to only survive in cultivation, in captivity, or as a naturalised population well outside its past range; and it has not been recorded in its known or expected habitat at appropriate seasons anywhere in its past range, despite surveys over a timeframe appropriate to its life cycle and form
MI	Migratory Species	Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth (Schedule 5 of the Wildlife Conservation (Specially Protected Fauna) Notice)
CD	Conservation Dependent	Species of special conservation interest (conservation dependent fauna), being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened (Schedule 6 of the Wildlife Conservation (Specially Protected Fauna) Notice)
OS	Specially Protected	Fauna otherwise in need of special protection to ensure their conservation

Conservation Code	Name	Description
		(Schedule 7 of the Wildlife Conservation (Specially Protected Fauna) Notice)
P	Priority Species	Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora. Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.
P1	Priority One	Poorly known species – Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either very small or on lands not managed for conservation, such as road verges, urban areas, farmland, active mineral lease and under threat of habitat destruction or degradation.
2	Priority Two	Poorly known species – Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, such as national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves and similar.
3	Priority Three	Poorly known species – Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat
4	Priority Four	Rare or near threatened and other species in need of monitoring.

(Source: Department of Biodiversity, Conservation and Attractions, 2019)

Commonwealth

Category	Description
Critically Endangered	Species facing an extremely high risk of extinction in the wild in the immediate future
Endangered	Species facing a very high risk of extinction in the wild in the near future
Vulnerable	Species facing a high risk of extinction in the wild in the medium term

(Source: Department of Agriculture, Water, and the Environment, 2020a)

Appendix 5: Species List

Below is the complete list of flora species recorded during the 2021 survey of Harris Road, with species north and south of the road indicated. The list is sorted by species name with weed listed first then natives species.

Family	Species Name	Common Name	South road reserve	North road reserve
Fabaceae	<i>*Acacia iteaphylla</i>	Flinders Range Wattle	x	
Poaceae	<i>*Avena barbata</i>	Bearded Oat	x	x
Poaceae	<i>*Briza maxima</i>	Blowfly Grass		x
Poaceae	<i>*Bromus diandrus</i>	Great Brome	x	x
Poaceae	<i>*Cenchrus clandestinus</i>	Kikuyu	x	x
Poaceae	<i>*Cynodon dactylon</i>	Couch	x	x
Poaceae	<i>*Eragrostis curvula</i>	African Lovegrass	x	x
Poaceae	<i>*Ehrharta calycina</i>	Perennial Veldt Grass	x	x
Euphorbiaceae	<i>*Euphorbia maculata</i>		x	
Poaceae	<i>*Lagurus ovatus</i>	Hare's Tail Grass		x
Fabaceae	<i>*Lathyrus tingitanus</i>	Tangier Pea	x	
Fabaceae	<i>*Lupinus sp.</i>	Lupin	x	
Plantaginaceae	<i>*Plantago lanceolata</i>	Ribwort Plantain		x
Brassicaceae	<i>*Raphanus raphanistrum</i>	Wild Radish	x	
Iridaceae	<i>*Romulea rosea</i>	Guilford Grass		x
Solanaceae	<i>*Solanum nigrum</i>	Black Berry Nightshade	x	
Asteraceae	<i>*Sonchus oleraceus</i>	Common Sowthistle	x	x

Family	Species Name	Common Name	South road reserve	North road reserve
Fabaceae	<i>*Trifolium campestre</i>	Hop Clover		x
Iridaceae	<i>*Watsonia meriana</i> var. <i>bulbillifera</i>	Bugle Lily	x	x
Fabaceae	<i>Acacia pulchella</i>	Prickly Moses		x
Fabaceae	<i>Acacia saligna</i>	Orange Wattle	x	
Proteaceae	<i>Adenanthos meisneri</i>			x
Myrtaceae	<i>Agonis flexuosa</i>	Peppermint	x	x
Casuarinaceae	<i>Allocasuarina humilis</i>	Dwarf Sheoak		x
Myrtaceae	<i>Corymbia calophylla</i>	Marri	x	x
Hemerocallidaceae	<i>Corynotheca micrantha</i>	Sand Lily		x
Goodeniaceae	<i>Dampiera linearis</i>	Common Dampiera		x
Dasypogonaceae	<i>Dasypogon bromeliifolius</i>	Pineapple Bush		x
Fabaceae	<i>Daviesia preissii</i>		x	
Myrtaceae	<i>Eucalyptus marginata</i>	Jarrah	x	
Dilleniaceae	<i>Hibbertia hypericoides</i>	Yellow Buttercups	x	x
Restionaceae	<i>Hypolaena exsulca</i>			x
Fabaceae	<i>Jacksonia furcellata</i>	Grey Stinkwood		x
Cyperaceae	<i>Lepidosperma longitudinale</i>	Pithy Sword-sedge	x	x
Asparagaceae	<i>Lomandra hermaphrodita</i>			x
Asparagaceae	<i>Lomandra suaveolens</i>			x
Zamiaceae	<i>Macrozamia riedlei</i>	Zamia	x	x

Family	Species Name	Common Name	South road reserve	North road reserve
Loranthaceae	<i>Nuytsia floribunda</i>	Christmas Tree	x	
Haemodoraceae	<i>Phlebocarya ciliata</i>			x
Xanthorrhoeaceae	<i>Xanthorrhoea brunonis</i>			x
Proteaceae	<i>Xylomelum occidentale</i>	Woody pear		x

* denotes introduced species

Appendix 6: Habitat Trees

Black cockatoo Habitat Trees (Figure 10)

Species	Habitat Tree No.	Eastings	Northings
<i>Corymbia calophylla</i>	M1	380083.291	6308642.273
<i>Corymbia calophylla</i>	M2	380102.332	6308626.546
<i>Corymbia calophylla</i>	M3	380132.034	6308583.808
<i>Corymbia calophylla</i>	M4	380139.973	6308575.179
<i>Eucalyptus marginata</i>	J1	380177.865	6308533.753
<i>Corymbia calophylla</i>	M5	380178.869	6308530.722
<i>Eucalyptus marginata</i>	J2	380299.04	6308463.947
<i>Corymbia calophylla</i> with small hollows	M6	380343.67	6308447.883
<i>Corymbia calophylla</i>	M7	380377.56	6308442.401
<i>Corymbia calophylla</i>	M8	380379.91	6308444.076

Western Ringtail Possum Habitat Trees (Figure 11)

Species	Habitat Tree No.	Eastings	Northings
<i>Agonis flexuosa</i>	Af1	380371.405	6308443.039
<i>Agonis flexuosa</i>	Af2	380341.052	6308460.211
<i>Agonis flexuosa</i>	Af3	380265.941	6308482.677
<i>Agonis flexuosa</i>	Af4	380255.647	6308489.248
<i>Agonis flexuosa</i>	Af5	380249.296	6308492.752
<i>Agonis flexuosa</i>	Af6	380235.333	6308501.075
<i>Agonis flexuosa</i>	Af7	380223.67	6308508.357
<i>Agonis flexuosa</i>	Af8	380211.624	6308515.53
<i>Agonis flexuosa</i>	Af9	380203.74	6308520.568
<i>Agonis flexuosa</i>	Af10	380166.725	6308544.879
<i>Agonis flexuosa</i>	Af11	380155.97	6308583.483
<i>Agonis flexuosa</i>	Af12	380155.336	6308555.611
<i>Agonis flexuosa</i>	Af13	380131.156	6308589.232
<i>Agonis flexuosa</i>	Af14	380124.262	6308599.209
<i>Agonis flexuosa</i>	Af15	380117.293	6308607.632
<i>Agonis flexuosa</i>	Af16	380098.896	6308626.845