



# **Public Transport Authority**

## Kenwick Biological Survey

November 2020

# Executive summary

The Public Transport Authority (PTA) has recognised the requirement to identify the environmental constraints of an area associated with the proposed Kenwick Rail Freight Facility. The survey area is 0.52 hectares (ha) and is located adjacent to Roe Highway, south of the Orrong Road overpass in Beckenham, City of Gosnells.

GHD Pty Ltd (GHD) was commissioned by PTA to undertake an ecological assessment of the survey area. The purpose of the survey was to delineate key flora, vegetation and fauna values within the survey area. The results will be used to identify and assess the ecological impacts of the project and inform the environmental assessment approvals process.

This report is subject to, and must be read in conjunction with, the limitations set out in section 1.6 and the assumptions and qualifications contained throughout this report.

## Key findings

### Vegetation and flora

- The survey area comprises of highly modified vegetation with a mix of planted and introduced species and some natural regeneration. The vegetation consists predominantly of a mixed shrubland of *Melaleuca* species, *Acacia saligna*, young *Eucalyptus rudis*, *Calothamnus rupestris* and \**Schinus terebinthifolius*<sup>1</sup> over an understorey completely dominated by weeds. The vegetation along the edge of railway and vehicle access track is completely dominated by the introduced grass \**Hyparrhenia hirta*
- The vegetation remaining in the survey area is considered to be in Completely Degraded condition (0.412 ha) with extensive weed invasion occurring throughout the site. A total of 0.107 ha of the survey area is cleared (tracks, railway)
- No conservation significant ecological communities were identified within the survey area
- A total of 33 flora taxa (including subspecies and varieties) was recorded from the survey area during the field survey. This total comprised eight native taxa and 25 introduced (including naturalised) flora taxa
- Extensive weed invasion, which has replaced the entire ground layer, has occurred throughout the survey area. Of the 25 introduced taxa recorded within the survey area, one species, \**Gomphocarpus fruticosus* (Narrowleaf Cottonbush), is listed as a Declared Pest under the *Biosecurity and Management Act 2007*
- No threatened flora listed under the EPBC Act and/or BC Act or Priority flora listed by the DBCA was recorded in the survey area.

### Fauna

- The survey area comprises of two main habitat types consisting of open shrubland over grassland and open water (Woodlupine drain)
- During the field survey twelve fauna species were recorded within the survey area. No introduced fauna species were recorded
- One conservation significant fauna species, Forest Red-tailed Cockatoo (*Calyptorhynchus banksii naso*), was recorded during the field survey, flying over the survey area

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<sup>1</sup> Use of \* denotes weed species

- No suitable foraging, breeding or roosting habitat for Black Cockatoo was present within the survey area.

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# 1. Introduction

## 1.1 Background

The Public Transport Authority (PTA) has recognised the requirement to identify the environmental constraints of an area associated with the proposed Kenwick Rail Freight Facility. The survey area is 0.52 hectares (ha) and is located adjacent to Roe Highway, south of the Orrong Road overpass in Beckenham, City of Gosnells (Figure 1, Appendix A).

## 1.2 Purpose of the report

GHD Pty Ltd (GHD) was commissioned by PTA to undertake an ecological assessment of the survey area. The purpose of the survey was to delineate key flora, vegetation and fauna values within the survey area. The results will be used to identify and assess the ecological impacts of the project and inform the environmental assessment approvals process.

## 1.3 Scope of works

GHD understands the scope of works is to include:

- A review of existing information relevant to the survey area
- Identification and mapping of vegetation community types present in the survey area, including the potential presence of Threatened or Priority Ecological Communities
- Identification and mapping of the vegetation condition within the survey area, including the location of any Weeds of National Significance or Declared Weeds
- Identification and mapping of black cockatoo breeding and foraging habitat and trees
- Targeted searches for significant flora and fauna
- A technical report (this document) that details the methods and results of the field survey
- Provision of relevant spatial data obtained during the survey.

## 1.4 Relevant legislation, conservation codes and background information

In Western Australia (WA) significant communities, and flora and fauna are protected under both Federal and State Government legislation. In addition, regulatory bodies also provide a range of guidance and information on expected standards and protocols for environmental surveys.

An overview of key legislation and guidelines, conservation codes and background information relevant to this project and provided in Appendix B.

## 1.5 Limitations and assumptions

This report has been prepared by GHD for PTA and may only be used and relied on by PTA for the purpose agreed between GHD and the PTA as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than PTA arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible. The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by PTA and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Site conditions may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

This report has assessed the values within the survey area, as shown in Figure 1, Appendix A. Should the survey area change or be refined, further assessment may be required.



## 2. Methodology

### 2.1 Desktop assessment

Prior to the commencement of the field survey, a desktop assessment was undertaken to identify relevant ecological information pertaining to the survey area and to assist in survey design. The assessment included viewing GIS spatial files available from Government of Western Australia (GoWA 2020) and reviewing relevant reports and publicly available government managed databases. This included a review of:

- The Department of Agriculture, Water and the Environment (DAWE) Protected Matters Search Tool (PMST) to identify communities and species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) potentially occurring within the survey area (Appendix C)
- The DBCA *NatureMap* database for flora and fauna species previously recorded within a 5 km buffer of the survey area (Appendix C)
- Existing datasets including previous pre-European vegetation mapping of the survey area (Beard 1979 and Heddle et al. 1980), aerial photography, geology/soils and hydrology information to provide background information on the variability of the environment, likely vegetation units and fauna habitats and to identify areas that potentially contain Threatened Ecological Communities (TECs) and Priority Ecological Communities (PECs).
- Identification of Environmentally Sensitive Areas (ESA), Bush Forever sites and Department of Biodiversity Conservation and Attractions (DBCA) - managed conservation estates and reserves.

### 2.2 Field survey

#### 2.2.1 Flora and vegetation

GHD senior ecologist Erin Lynch (flora licence no. FB62000081-2) completed a reconnaissance flora and vegetation survey of the survey area on 19 August 2020. The field survey was undertaken to identify and describe the dominant vegetation units, assess vegetation condition, and search for significant flora taxa.

The survey methodology employed by GHD was undertaken with reference to the Environmental Protection Authority (EPA) Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016).

#### *Data collection*

Field survey methods involved traversing the survey area by foot to characterise the dominant vegetation and record flora species (native and exotic) present in the survey area at the time of survey. A combination of photo points and opportunistic sampling were undertaken.

#### *Vegetation units*

Vegetation units were identified and boundaries delineated using a combination of aerial photography, topographical features and field data/observations. Vegetation units were described based on structure, dominant taxa and cover characteristics as defined by field observations.



### **Vegetation condition**

The vegetation condition of the survey area was assessed and mapped in accordance with the vegetation condition rating scale for the South West and Interzone Botanical Provinces (EPA 2016). This scale recognises the intactness of vegetation, which is defined by the following:

- Completeness of structural levels
- Extent of weed invasion
- Historical disturbance from tracks and other clearing or dumping of rubbish
- The potential for natural or assisted regeneration.

The scale consists of six rating levels as outlined in Appendix B.

### **Targeted flora searches**

Significant flora identified in the desktop assessment were targeted during the field survey. Potential habitats were searched by opportunistic sampling. If individuals were identified, the location and number of plants present were to be recorded using a handheld GPS.

### **Flora identification and nomenclature**

Species well known to the senior ecologist were identified in the field; all other species were collected and assigned a unique collection number to facilitate tracking. Specimens collected during the field assessment were identified by the use of taxonomic literature, electronic keys and online electronic databases.

The conservation status of all recorded flora was compared against the current lists available on *FloraBase* (WA Herbarium 1998–) and the EPBC Act Threatened species database provided by DAWE (2020).

Nomenclature used in this report follows that used by the Western Australian Herbarium as reported on *FloraBase* (WA Herbarium 1998–).

## **2.2.2 Black cockatoo and significant fauna**

A black cockatoo habitat assessment of the survey area was undertaken concurrently with the vegetation and flora survey. The survey area was traversed on foot to identify and map suitable black cockatoo habitat. An assessment of the likelihood of occurrence of significant fauna was also undertaken based on database search results and previous local studies in consideration of fauna habitats occurring within the survey area.

The survey methodology employed by GHD was undertaken with reference to the EPA Technical Guidance – Terrestrial Fauna Surveys (EPA 2020).

### **Black cockatoo habitat assessment**

The black cockatoo habitat assessment was undertaken in accordance with the EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's Cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's Cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest Red Tailed Black Cockatoo (vulnerable) *Calyptorhynchus banksii naso* (Department of Sustainability, Environment, Water, Populations and Communities (DSEWPaC) 2012). The assessment included:

- The identification and recording (via GPS) of the locations of potential and actual breeding habitat within the survey area (relevant tree species with a diameter at breast height (DBH) of >500 millimetres (mm) for Jarrah, Marri and Tuart or DBH of >300 mm for Wandoo or Salmon Gum)

- Identifying, describing and recording the size of existing tree hollows and any evidence of use by black cockatoos within the survey area
- Identifying, recording and describing the locations of potential night roosting habitat
- Identifying, recording and describing the locations of potential foraging habitat.

The survey distinguished between actual and potential breeding habitat as per the following:

- Actual nest trees: Evidenced as currently being used or have been used in the past
- Potential breeding habitat: trees with available hollows that do not show evidence of use now or in the past. Trees with hollows that do not show evidence of use now or in the past where the hollow is not available (e.g. hollows are occupied by bees or galahs); and those trees without hollows but which have the potential to develop hollows in the future, and which have DBH >500 mm or 300 mm for different species. This was a ground based assessment using binoculars to identify potential and/or actual breeding hollows.

### ***Fauna species identification***

Identification of fauna species was made in the field using available field guides and electronic guides. Nomenclature used in this report follows that used by the WA Museum and the DBCA NatureMap (DBCA 2007–) with the exception of birds, where by Christidis and Boles (2008) was used.

## **2.3 Limitations**

### **2.3.1 Desktop limitations**

Desktop investigations use a variety of online resources such as the WA Museum and DBCA *NatureMap* database, and the EPBC Act PMST (Appendix C). The EPBC Act PMST is based on bioclimatic modelling for the potential presence of species. As such, this does not represent actual records of the species within the area. The records from the DBCA *NatureMap* searches of threatened fauna provide more accurate information for the general area. However, some records of collections, sightings or trappings cannot be dated and often misrepresent the current range of threatened species

### **2.3.2 Survey limitations**

The EPA (2016, 2020) Technical Guide states flora and vegetation and fauna survey reports for environmental impact assessment in WA should contain a section describing the limitations of the survey methods used. The limitations and constraints associated with this field survey are discussed in Table 1. Based on this assessment, the present survey effort has not been subject to any constraints which affect the thoroughness of the assessment or the conclusions that have been formed.

**Table 1 Field survey limitations**

Aspect	Constraint	Comment
Sources of information and availability of contextual information	Nil	Adequate information is available for the project area: <ul style="list-style-type: none"> <li>Broad scale (1:250,000) mapping by Beard (1979) and digitised by Shepherd et al. (2002)</li> </ul>
Scope (what life forms were sampled etc.)	Nil	Vascular flora and terrestrial vertebrate fauna were sampled during the survey. Non-vascular flora, invertebrate and aquatic fauna were not surveyed.
Proportion of flora collected and identified (based on sampling, timing and intensity)	Minor	The vegetation and flora survey was undertaken in late winter 2020. The vegetation survey was a broad scale and targeted assessment, undertaken to identify and describe the dominant vegetation units and map conservation significant flora. As with any biological survey, ephemeral species such as orchids are not always present in each year/season or at the particular time a single botanical survey is conducted. A full flora species list is provided in Appendix D.
Proportion of fauna identified, recorded and/or collected		The black cockatoo habitat assessment was undertaken in conjunction with the flora and vegetation survey. The assessment was limited to identifying habitat types for black cockatoos and other significant fauna utilising the survey area. No sampling for invertebrates or aquatic species occurred.
Flora determination	Nil	Flora determination was undertaken by the GHD senior ecologist in the field. Species were identified to species level where possible. Some species, particularly grasses and herbs, may have been overlooked due to lack of material. None of these species were considered to be potential conservation significant flora. The taxonomy and conservation status of the WA flora is dynamic. This report was prepared with reliance on taxonomy and conservation status current at the time report development, but it should be noted this may change in response to ongoing research and review of International Union for Conservation Nature criteria.
Completeness and further work which might be needed (e.g. was the relevant area fully surveyed)	Nil	The entire survey area was accessible on foot.
Mapping reliability	Minor	The vegetation was mapped using high-resolution ESRI aerial imagery obtained from Landgate, topographical features, previous broad scale mapping (Beard 1979) and field data. Data was recorded in the field using hand-held GPS tools (e.g. Samsung Galaxy Tablet S2). Certain atmospheric factors and other sources of error can affect the accuracy of GPS receivers. The GPS units used for this survey are accurate to within ±5 metres on average. Therefore the data points consisting of coordinates recorded from the GPS may contain inaccuracies.
Timing/weather/season/cycle	Minor	The field survey was conducted in late winter 2020. The timing of the flora and vegetation survey is not considered the most optimal time to complete surveys on the Swan Coastal Plain (SWA) (optimal time is during spring) however should be considered acceptable given the highly degraded nature of the site with little to no native understorey remaining.

Aspect	Constraint	Comment
		The weather conditions recorded during the survey are considered unlikely to have impacted upon the survey.
Disturbances (e.g. fire, flood, accidental human intervention)	Nil	Much of the project area has been subjected to historical disturbance events (e.g. clearing, drainage, vehicle tracks); however, these disturbances did not impact the survey.
Resources	Nil	Adequate resources were employed during the field survey.
Access restrictions	Nil	The entirety of the project area was accessible at the time of the survey.
Experience levels	Nil	The senior ecologist who executed the survey are practitioners suitably qualified and experienced in their respective fields. Erin Lynch (senior ecologist) has over 12 years' experience undertaking flora and fauna surveys within WA and on the SWA.

## 3. Desktop assessment

### 3.1 Regional biogeography

The survey area is situated in the South West Botanical Province of Western Australia (Beard 1990) within the SWA bioregion and Perth sub-region described by the Interim Biogeographic Regionalisation of Australia (IBRA).

The SWA bioregion is a low lying coastal plain, mainly covered with woodlands. The Perth sub-region is characterised by colluvial and aeolian sands, alluvial river flats and coastal limestone. Heath and/or Tuart woodlands occur on limestone, Banksia and Jarrah- Banksia woodlands on Quaternary marine dunes of various ages, and Marri on colluvial and alluvials. The region also includes a complex series of seasonal wetlands (Mitchell *et al.* 2002).

### 3.2 Soils, geology and landforms

The SWA is comprised of five major geomorphological units, which lie more or less parallel to the coast. These geomorphological units are the Quindalup, Spearwood and Bassendean Dunes, the Pinjarra Plain and the Ridge Hill Shelf (McArthur and Bettenay 1960, Churchwood and McArthur 1980). The survey areas lies within the Pinjarra Plain which is an alluvial tract of unconsolidated clay and loams, with minor amounts of limestone, extending west from the Ridge Hill Shelf for 1.5 to 5 km. It consists of alluvial fans near the scarp and floodplains along the rivers.

Churchwood and McArthur (1980) identified the soils within the survey area as consisting of the Guildford soil unit which is described as flat plain with medium textured deposits; yellow duplex soils.

### 3.3 Surface Water

The Woodlupine Brook/Drain traverses through the survey area. The Woodlupine Brook/Drain is situated in the Yule Brook Catchment and flows south into Yule Brook Main Drain. The drain discharges into the Canning River upstream of Kent Weir.

### 3.4 Environmentally Sensitive Area

There are no Environmentally Sensitive Areas (ESA) located within or adjacent to the survey area. The closest known ESA is located approximately 450 m west and 600 m south of the survey area.

### 3.5 Conservation reserves and estates

There are no conservation reserves or estates located within or adjacent to the survey area. The closest known nature reserves are located approximately 1 to 2 km south and east of the survey area which form the Kenwick Wetlands.

### 3.6 Vegetation and flora

#### 3.6.1 Broad vegetation association

##### *Vegetation associations*

Broad scale (1:250,000) pre-European vegetation mapping of the study area has been completed by Beard (1979) at an association level. The mapping indicates the survey area intersects one vegetation association:

- Woodland southwest (association 968): Jarrah, marri and wandoo *Eucalyptus marginata*, *Corymbia calophylla*, *E. wandoo*.

The pre-European mapping has been adapted and digitised by Shepherd *et al.* (2002). The extent of the vegetation associations have been determined by the state-wide vegetation remaining extent calculations maintained by the DBCA (current as of March 2019 –Government of Australia (GoWA) 2019a). As shown in Table 2, the current extent of vegetation association 968 is less than 10 % of its pre-European extent at the IBRA bioregion, IBRA subregion and Local Government Authority (LGA) levels.

**Table 2 Extents of vegetation complexes on the SWA mapped within the survey area (GoWA 2019a)**

Vegetation association	Scale	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	% Current extent in all DBCA managed land (proportion of current extent)
968	State: Western Australia	296,977.84	95,048.82	32.02	18.45
	IBRA Bioregion: SWA	136,188.20	9,017.32	6.62	1.43
	IBRA Subregion: Perth	136,188.20	9,017.32	6.62	1.43
	LGA: City of Gosnells	3,643.73	339.99	9.33	2.44

### Vegetation complexes

Regional vegetation complex mapping has been completed by Heddle *et al.* (1980) with updates from Webb *et al.* (2016) based on major landform boundaries within the SWA and forested region of south-west Western Australia. The mapping indicates one vegetation complex is present within the survey area:

- Guildford Complex – A mixture of open forest to tall open forest of *Corymbia calophylla* (Marri) – *Eucalyptus wandoo* (Wandoo) – *Eucalyptus marginata* (Jarrah) and woodland of *Eucalyptus wandoo* (Wandoo) (with rare occurrences of *Eucalyptus lane-poolei* (Salmon White Gum). Minor components include *Eucalyptus rudis* (Flooded Gum) – *Melaleuca raphiophylla* (Swamp paperbark).

GoWA (2019b) has assessed the vegetation complexes mapped by Heddle *et al.* (1980) and Webb *et al.* (2016) against presumed pre-European extents within the SWA IBRA bioregion (Table 3) and LGA levels (Table 4). These tables show the current extent of the vegetation complex within the survey area is less than 10% of their pre-European extents remaining within the SWA IBRA bioregion and the City of Gosnells.

**Table 3 Extent of vegetation complexes on the SWA mapped within the survey area (GoWA 2019b)**

Vegetation complex	Pre-European extent (ha)	Current extent (ha)	Remaining (%)	% Current extent in all DBCA managed lands
Guildford Complex	90,513.13	4,607.91	5.09	0.33

**Table 4 Extent of vegetation complexes within the City of Gosnells for the survey area (GoWA 2019b)**

Vegetation complex	Pre-European extent (ha)	Current extent (ha)	% of pre-European extent	Proportion of the vegetation complex within the LGA %
Guildford Complex	1,966.15	162.44	8.26	2.17

### 3.6.2 Conservation significant ecological communities

The EPBC Act PMST (Appendix C) (DAWE 2020) identified the potential presence of four TEC's occurring within the survey area:

- Banksia Woodlands of the Swan Coastal Plain. Listed as Endangered under the EPBC Act
- Clay Pans of the Swan Coastal Plain. Listed as Critically Endangered under the EPBC Act
- *Corymbia calophylla* – *Kingia australis* woodlands on heavy soils of the Swan Coastal Plain. Listed as Endangered under the EPBC Act
- Tuart (*Eucalyptus gomphocephala*) Woodlands and Forests of the Swan Coastal Plain ecological community. Listed as Critically Endangered under the EPBC Act.

### 3.6.3 Flora diversity

The *NatureMap* database (Appendix C) identified 981 flora taxa, representing 112 families and 376 genera previously recorded within the survey area. This total comprised 785 native taxa and 196 naturalised (introduced) taxa. Dominant families recorded included Fabaceae (87 taxa), Myrtaceae (75 taxa), Cyperaceae (74 taxa) and Proteaceae (71 taxa).

### 3.6.4 Conservation significant flora

Searches of the EPBC Act PMST and *NatureMap* database (Appendix C) identified the presence/potential presence of 72 conservation significant flora taxa within a 5 km buffer of the survey area. The searches identified 30 Threatened taxa listed under the EPBC Act and/or BC Act and 42 Priority taxa listed by the DBCA.

The locations of conservation significant flora registered on the DBCA databases are mapped on Figure 2, Appendix A.

## 3.7 Fauna

### 3.7.1 Fauna diversity

The *NatureMap* database (Appendix C) identified 216 terrestrial vertebrate fauna species previously recorded within 5 km of the survey area. This total comprised 145 birds, 45 reptiles, 16 mammals and 10 amphibians. Of the 216 fauna species previously recorded 204 are native species and 12 are naturalised (introduced) species.

### 3.7.2 Conservation significant fauna

Searches of the EPBC Act PMST and *NatureMap* (Appendix C) database identified the presence/potential presence of 24 conservation significant fauna within a 5 km buffer of the survey area.

The desktop searches identified:

- 11 species listed as Threatened under the EPBC Act and/or BC Act



- Seven bird species listed as Migratory only (terrestrial and wetland) under the EPBC Act and/or as Migratory species under the BC Act
- One species listed as Other Specially Protected fauna under the BC Act
- Five species listed as Priority by DBCA.

# 4. Survey results

## 4.1 Flora and Vegetation

### 4.1.1 Vegetation types

The survey area comprises of highly modified vegetation with a mix of planted and introduced species and some natural regeneration. The vegetation consists of a mixed shrubland of *Melaleuca* species, *Acacia saligna*, young *Eucalyptus rudis*, *Calothamnus rupestris* and \**Schinus terebinthifolius*<sup>2</sup> over an understorey completely dominated by weeds. The vegetation along the edge of railway and vehicle access track is completely dominated by the introduced grass \**Hyparrhenia hirta*.

Three vegetation types, not including cleared areas, have been mapped and described across the survey area:

- *Typha* Open Sedgeland
- \**Hyparrhenia*<sup>2</sup> Closed Grassland
- Revegetation/Planted.

The vegetation types are described in further detail in Table 5 and mapped in Figure 2, Appendix A.

### 4.1.2 Vegetation condition

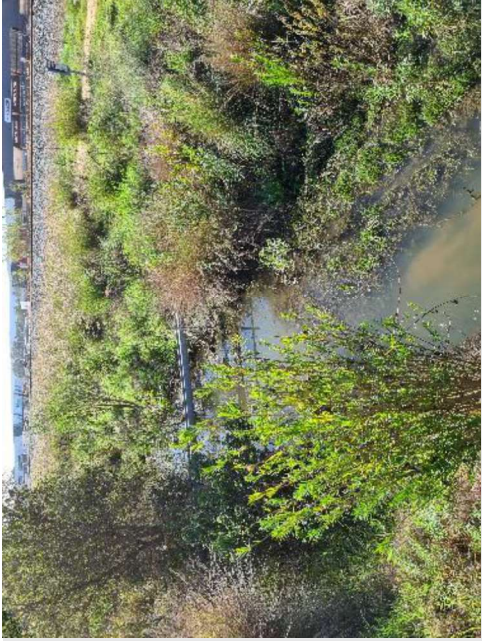

The vegetation remaining in the survey area is considered to be in Completely Degraded condition (0.412 ha) with extensive weed invasion occurring throughout the site. A total of 0.107 ha of the survey area is cleared (tracks, railway). Based on historical aerial imagery, the entire survey area has previously been cleared as part of works associated with Roe Highway. Parts of the survey area have since revegetated as a result of replanting and some natural regeneration.

The vegetation condition of the survey area is mapped on Figure 3, Appendix A.

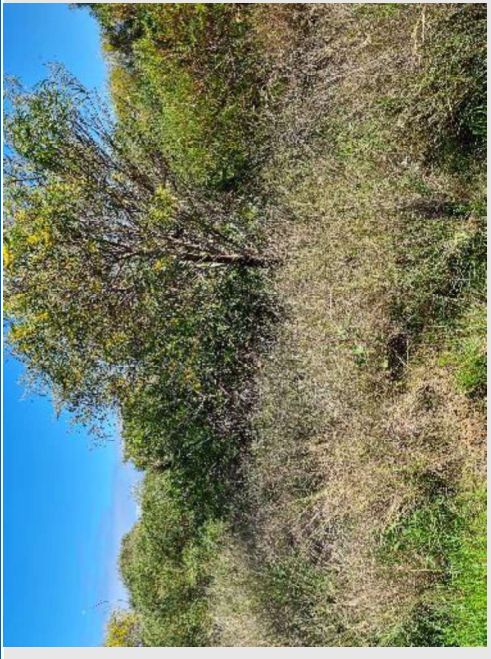

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<sup>2</sup> Use of \* denotes weed species

**Table 5 Vegetation types recorded within the survey area**

Vegetation Type	Vegetation description <sup>3</sup>	Total area (ha)	Representative Photograph
Typha Open Sedgeland	<p><i>Melaleuca viminalis</i> (naturalised) and                      *<i>Schinus terebinthifolius</i> scattered trees                      over *<i>Hibiscus diversifolius</i> and                      *<i>Gomphocarpus fruticosus</i> scattered                      shrubs over <i>Typha ?domingensis</i> and  <i>Juncus pallidus</i> open sedgeland over                      introduced grasses and herbs within and                      along the banks of a drain.</p>	0.06 ha	
* <i>Hyparrhenia</i> Closed Grassland	<p>*<i>Hyparrhenia hirta</i> closed grassland                      over scattered introduced herbs.</p>	0.208 ha	

<sup>3</sup> Use of \* denotes weed species

Vegetation Type	Vegetation description <sup>3</sup>	Total area (ha)	Representative Photograph
Revegetation/Planted	<p>Previously disturbed/cleared areas where a mixture of revegetation and natural regrowth has occurred. Mixture of locally native and non-native trees and shrubs scattered over an understorey completely dominated by introduced grasses and herbs. Dominant trees and shrubs include young <i>Eucalyptus rudis</i>, <i>Acacia saligna</i>, <i>Calothamnus quadrifidus</i>, <i>Melaleuca raphiophylla</i>, <i>Melaleuca sp.</i> and <i>Kunzea glabrescens</i>.</p>	0.145 ha	
Cleared	Completely cleared of vegetation (vehicle tracks and railway).	0.107	

### 4.1.3 Conservation significant ecological communities

Based on the results of the dominant species, landform features and field observations, no conservation significant ecological communities were identified within the survey area.

### 4.1.4 Flora diversity

A total of 33 flora taxa (including subspecies and varieties) representing 14 families and 29 genera were recorded from the survey area during the field survey. This total comprised eight native taxa and 25 introduced (including naturalised) flora taxa.

Dominant families recorded from the survey area included:

- Poaceae (8 taxa)
- Myrtaceae (6 taxa)
- Asteraceae (4 taxa)
- Fabaceae (4 taxa).

A full inventory of flora taxa identified within the survey area is provided in Appendix D.

### 4.1.5 Introduced flora

Extensive weed invasion, which has replaced the entire ground layer, has occurred throughout the survey area. Of the 25 introduced taxa recorded within the survey area, one species, *Gomphocarpus fruticosus* (Narrowleaf Cottonbush), is listed as a Declared Pest under the *Biosecurity and Management Act 2007* (BAM Act).

No Weeds of National Significance were identified within the survey area.

### 4.1.6 Conservation significant flora

No threatened flora listed under the EPBC Act and/or BC Act or Priority flora listed by the DBCA was recorded in the survey area.

One plant recorded in the survey area has been tentatively identified as *Melaleuca viminalis*. *Melaleuca viminalis* is listed Priority 2 by the DBCA. This slender tree/tall shrub, ranging from 2 to 3 m tall with weeping branches and red flowers was recorded scattered within and along the drain in the survey area. There is one record of this species occurring approximately 3 km north of the survey area, along Tonkin Highway (DBCA 2007-).

According to Craven et al. (2010) *Melaleuca viminalis* naturally occurs in the Kimberley region of Western Australia, in Queensland and in New South Wales. This species is one of the most commonly cultivated Melaleucas and is a common garden plant and street tree. The records of this species around the Perth region, including the survey area, are considered naturalised occurrences originating from cultivated plants.

No other conservation significant flora are considered likely to occur within the survey area based on the habitat requirements, efficacy and intensity of the survey, and flowering times of potential conservation significant flora known from the area.

## 4.2 Fauna

### 4.2.1 Fauna habitat

The survey area comprises of two main habitat types consisting of open shrubland over grassland and open water (Woodlupine drain). The small trees and shrubs provide good value fauna habitat, particularly for bird species, providing shelter and opportunistic food for some



species. The understorey throughout the survey area is completely dominated by introduced grasses and herbs which provides limited habitat value. Woodlupine brook/drain traverses the survey area and supports patches of *Typha* and other sedges, scattered Melaleucas (naturalised species) and a number of invasive weed species which dominate the ground cover. The water body would also be utilised by most fauna species as a water source and inhabited by species such as frogs.

#### **4.2.2 Fauna diversity**

During the field survey 12 fauna species were recorded within the survey area, including 11 birds and one amphibian species. No introduced fauna species were recorded.

A full list of fauna recorded during the survey is provided in Appendix D.

#### **4.2.3 Conservation significant fauna**

One conservation significant fauna species was recorded during the field survey: The Forest Red-tailed Cockatoo (*Calyptorhynchus banksii naso*) – listed as Vulnerable under the EPBC Act and BC Act. Three individuals were observed flying over the survey area.

No evidence of any conservation significant fauna species was recorded in the survey area during the survey. Given the condition and fragmented nature of the survey area, and its location between a main road and railway, it is not considered to contain significant habitat for threatened fauna.

#### **4.2.4 Targeted Black Cockatoo habitat assessment**

No suitable foraging, breeding or roosting habitat is present within the survey area.

## 5. Discussion

The survey area comprises of highly modified vegetation with a mix of planted and introduced species and some natural regeneration. Based on historical aerial imagery, the entire survey area has previously been cleared as part of works associated with Roe Highway. Parts of the survey area have since revegetated as a result of replanting and some natural re-generation. The vegetation remaining in the survey area is considered to be in Completely Degraded condition with extensive weed invasion occurring throughout the site. Based on the results of the dominant species, landform features and field observations, no conservation significant ecological communities were identified within the survey area.

Of the 33 flora taxa (including subspecies and varieties) recorded from the survey area, 25 are introduced, with one *Gomphocarpus fruticosus* (Narrowleaf Cottonbush), listed as a Declared Pest under the BAM Act. Apart from one plant, which has been tentatively identified as *Melaleuca viminalis* (Priority 2), no other conservation significant flora are considered likely to occur within the survey area.

The survey area comprises of two main habitat types consisting of open shrubland over grassland and open water. The small trees and shrubs provide good value fauna habitat, particularly for bird species, but the understory dominated by introduced grasses and herbs would provide limited habitat value. Woodlupine drain would be utilised by most fauna species as a water source and inhabited by species such as frogs.

Eleven native birds and one native amphibian was recorded during the survey. Although three Forest Red-tailed Cockatoos were observed flying over the survey area, no suitable foraging, breeding or roosting habitat is present within the survey area.



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# Appendices

# **Appendix A – Figures**

**Figure 1 Survey area**

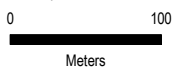
**Figure 2 Vegetation types**

**Figure 3 Vegetation condition**

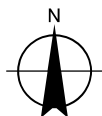




Paper Size ISO A3



Map Projection: Transverse Mercator  
Horizontal Datum: GDA 1994  
Grid: GDA 1994 MGA Zone 50



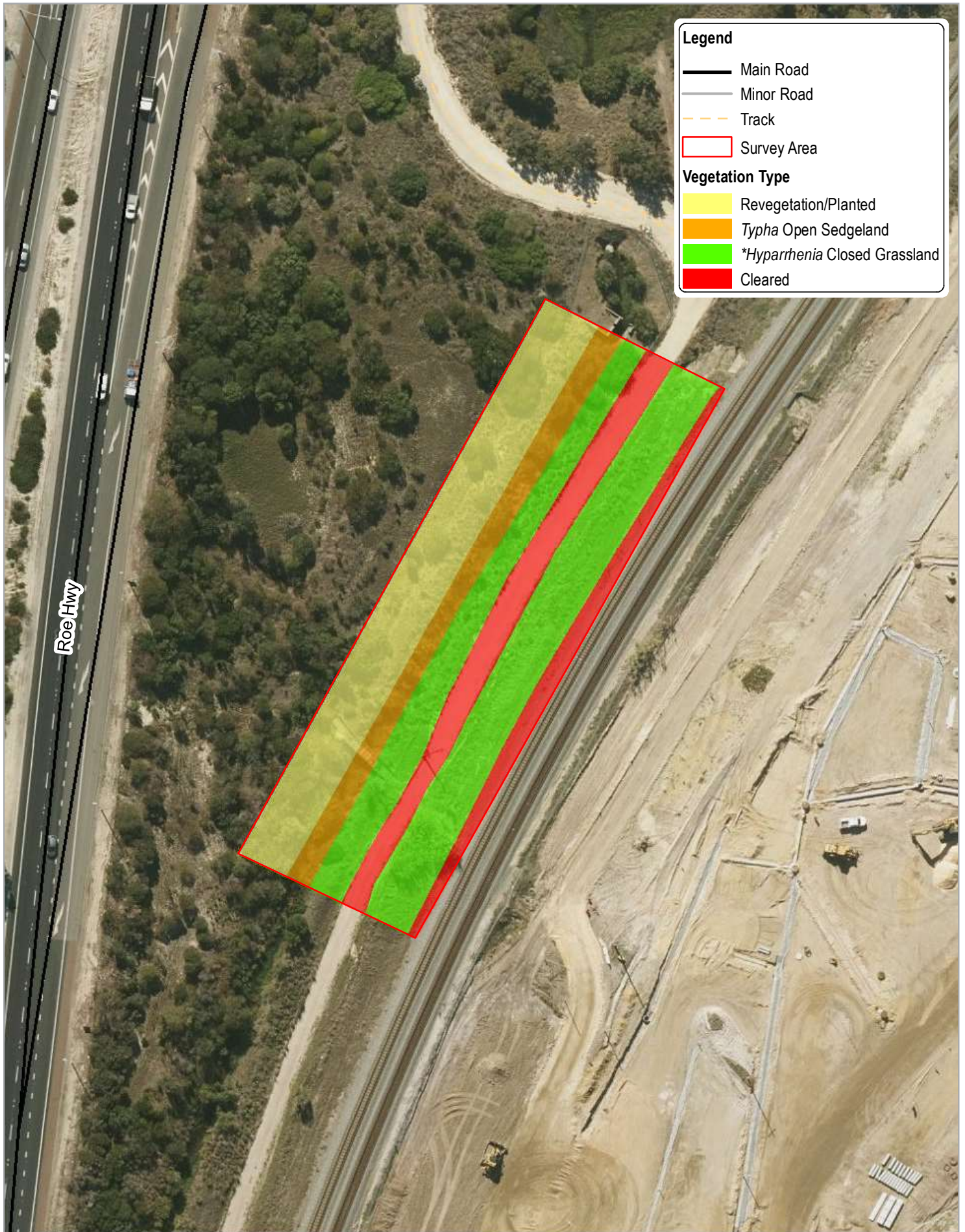
PTA  
Kenwick Biological Survey

Project No. 12534146  
Revision No. B  
Date 30/09/2020

Survey Area

FIGURE 1





**Legend**

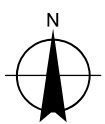
- Main Road
- Minor Road
- - - Track
- Survey Area

**Vegetation Type**

- Revegetation/Planted
- *Typha* Open Sedgeland
- *\*Hyparrhenia* Closed Grassland
- Cleared

Roe Hwy

Paper Size ISO A3  
 0 25  
 Meters  
 Map Projection: Transverse Mercator  
 Horizontal Datum: GDA 1994  
 Grid: GDA 1994 MGA Zone 50



PTA  
 Kenwick Biological Survey

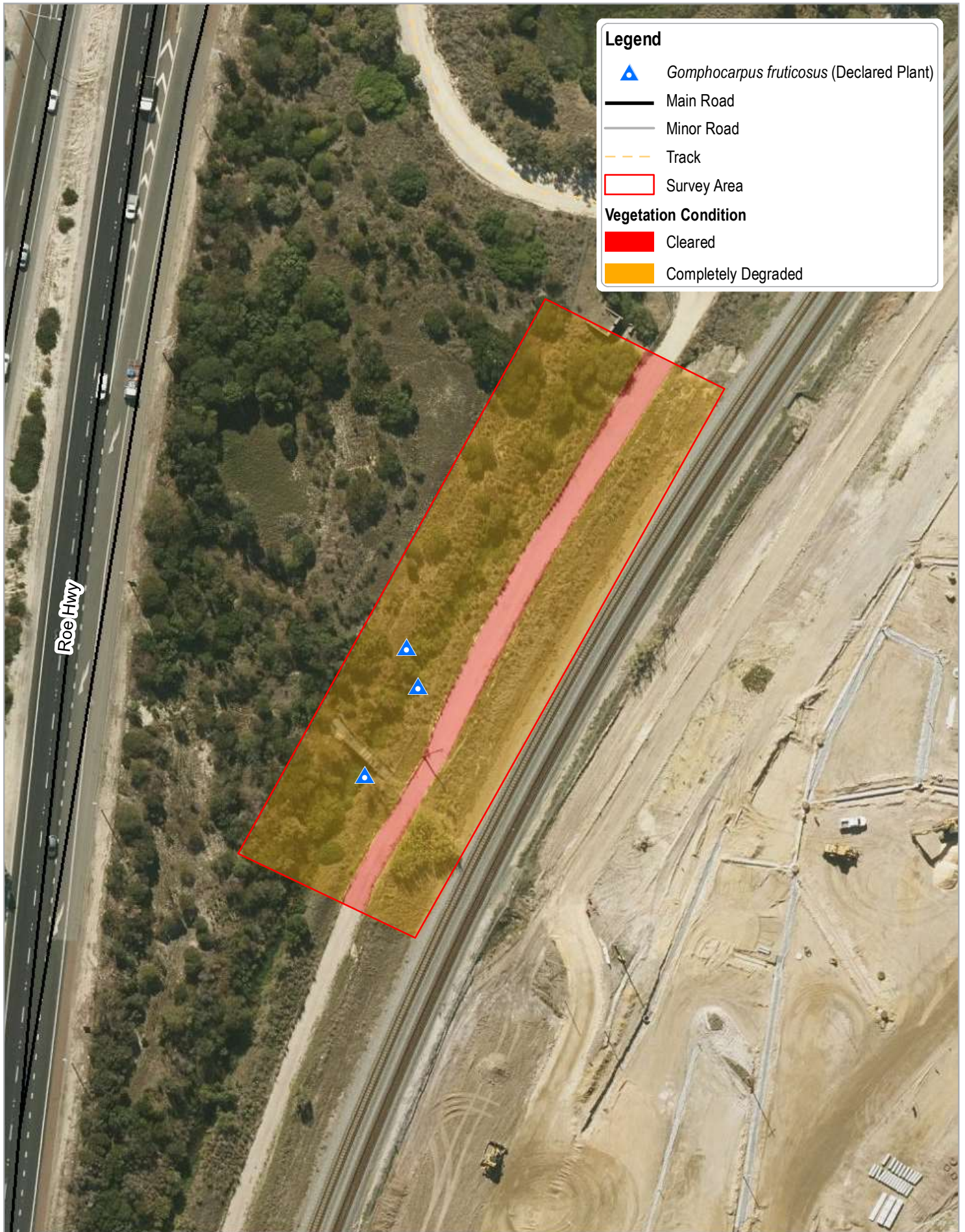
Project No. 12534146  
 Revision No. B  
 Date 19/10/2020

Vegetation Types

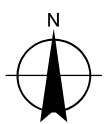
**FIGURE 2**

Data source: Landgate Subscription Imagery and Road Services 2020. Created by: bmorgan





Paper Size ISO A3  
 0 25  
 Meters  
 Map Projection: Transverse Mercator  
 Horizontal Datum: GDA 1994  
 Grid: GDA 1994 MGA Zone 50



PTA  
 Kenwick Biological Survey

Project No. 12534146  
 Revision No. B  
 Date 19/10/2020

Vegetation Condition

FIGURE 3

Data source: Landgate Subscription Imagery and Road Services 2020. Created by: bmorgan



## **Appendix B** – Relevant legislation, background information and conservation code

## Relevant legislation

### **Federal *Environment Protection and Biodiversity Conservation Act 1999***

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is the Federal Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, which are defined in the EPBC Act as Matters of National Environmental Significance (MNES).

The biological aspects listed as MNES include:

- Nationally threatened flora and fauna species and ecological communities
- Migratory species.

A person must not undertake an action that has, will have, or is likely to have a significant impact (direct or indirect) on MNES, without approval from the Federal Minister for the Environment.

The EPBC Act is administered by the Department of Agriculture, Water and the Environment (DAWE).

### **State *Environmental Protection Act 1986***

The *Environmental Protection Act 1986* (EP Act) is the primary legislative Act dealing with the protection of the environment in Western Australia. The Act allows the Environmental Protection Authority (EPA), to prevent, control and abate pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing. Part IV of the EP Act is administered by the EPA and makes provisions for the EPA to undertake environmental impact assessment of significant proposals, strategic proposals and land use planning schemes.

The Department of Water and Environment Regulation (DWER) is responsible for administering the clearing provisions of the EP Act (Part V). Clearing of native vegetation in Western Australia requires a permit from the DWER, unless exemptions apply. Applications for clearing permits are assessed by the Department and decisions are made to grant or refuse the application in accordance with the Act. When making a decision the assessment considers clearing against the ten clearing principles as specified in Schedule 5 of the EP Act:

- a) Native vegetation should not be cleared if it comprises a high level of biodiversity.
- b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a significance habitat for fauna indigenous to Western Australia.
- c) Native vegetation should not be cleared if it includes, or is necessary, for the continued existence of rare flora.
- d) Native vegetation should not be cleared if it comprises the whole or part of native vegetation in an area that has been extensively cleared.
- 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.
- f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- g) 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.
- h) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

- i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.

Exemptions for clearing include clearing that is a requirement of a written law or authorised under certain statutory processes (listed in Schedule 6 of the EP Act) and exemptions for prescribed low impact day-to-day activities (prescribed in the Environmental Protection (Clearing of Native Vegetation) Regulations 2004); these exemptions do not apply in environmentally sensitive areas (ESAs).

### **State Biodiversity and Conservation Act 2016**

The *Biodiversity Conservation Act 2016* (BC Act) provides for the conservation and protection of biodiversity and biodiversity components, as well as the promotion of the ecologically sustainable use of biodiversity components in Western Australia. The BC Act replaces both the repealed *Wildlife Conservation Act 1950* (WC Act) and the *Sandalwood Act 1929* (Sandalwood Act), as well as their associated regulations. To attain the objectives of the BC Act, principles of ecological sustainable development have been established:

- Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations
- If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- The present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
- The conservation of biodiversity and ecological integrity should be a fundamental consideration in decision-making
- Improved valuation, pricing and incentive mechanisms should be promoted.

The BC Act is administered by the Department of Biodiversity Conservation and Attractions (DBCA).

### **State Biosecurity and Agriculture Management Act 2007**

The *Biosecurity and Agriculture Management Act 2007* (BAM Act) and associated regulations are administered by the Department of Primary Industries and Regional Development (DPIRD) and replace the repealed *Agriculture and Related Resources Protection Act 1976*. The main purposes of the BAM Act and its regulations are to:

- Prevent new animal and plant pests (vermin and weeds) and diseases from entering WA
- Manage the impact and spread of those pests already present in the state
- Safely manage the use of agricultural and veterinary chemicals
- Increased control over the sale of agricultural products that contain violative chemical residues.

The Western Australian Organism List (WAOL) provides the status of organisms which have been categorised under the BAM Act. A Declared Pest is a prohibited organism or an organism for which a declaration under Section 22(2) of the Act is in force. Declared Pests may be assigned a control category including: C1 (exclusion), C2 (eradication) and C3 (management). The category may apply to the whole of the State, LGAs, districts, individual properties or even paddocks, and all landholders are obliged to comply with the specific category of control. Categories of control are defined below.

## DPIRD Categories for Declared Pests under the BAM Act

Control class code	Description
C1 (Exclusion)	Pests will be assigned to this category if they are not established in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State.
C2 (Eradication)	Pests will be assigned to this category if they are present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still a possibility.
C3 (Management)	Pests will be assigned to this category if they are established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest.

## Background information

### Environmentally Sensitive Areas

Environmentally Sensitive Areas (ESAs) are declared by the Minister for Environment under Section 51B of the EP Act. The Table below outlines the aspects of areas declared as ESA in the Environmental Protection (Environmentally Sensitive Areas) Notice 2005.

#### Aspects of ESAs

Aspects of Environmentally Sensitive Areas
A declared World Heritage property as defined in Section 13 of the EPBC Act.
An area that is included on the Register of the National Estate (RNE), because of its natural values, under the <i>Australian Heritage Commission Act 1975</i> of the Commonwealth (the RNE was closed in 2007 and is no longer a statutory list – all references to the RNE were removed from the EPBC Act on 19 February 2012).
A defined wetland and the area within 50 m of the wetland. Defined wetlands include Ramsar wetlands, conservation category wetlands and nationally important wetlands.
The area covered by vegetation within 50 m of rare flora, to the extent to which the vegetation is continuous with the vegetation in which the rare flora is located.
The area covered by a Threatened Ecological Community.
A Bush Forever Site listed in “Bush Forever” Volumes 1 and 2 (2000), published by the Western Australia Planning Commission, except to the extent to which the site is approved to be developed by the Western Australia Planning Commission.
The areas covered by the <i>Environmental Protection (Gnangara Mound Crown Land) Policy 1992</i> .
The areas covered by the <i>Environmental Protection (Western Swamp Tortoise Habitat) Policy 2002</i> .
The areas covered by the lakes to which the <i>Environmental Protection (Swan Coastal Plain Lakes) Policy 1992</i> (EPP Lakes) applies.
Protected wetlands as defined in the <i>Environmental Protection (South West Agricultural Zone Wetlands) Policy 1998</i> .

### Reserves and conservation areas

#### Department of Biodiversity, Conservation and Attractions managed lands and waters

DBCA manages lands and waters throughout Western Australia to conserve ecosystems and species, and to provide for recreation and appreciation of the natural environment. DBCA managed lands and waters include national parks, conservation parks and reserves, marine parks and reserves, regional parks, nature reserves, State forest and timber reserves. Access to, or through, some areas of DBCA managed lands may require a permit or could be restricted due to management activities. Proposed land use changes and development proposals that abut DBCA managed lands will generally be referred to DBCA throughout the assessment process.

#### Wetlands

Wetlands include not only lakes with open water, but areas of seasonally, intermittently or permanently waterlogged soil.

#### Ramsar Wetlands (Wetlands of International Importance)

The Convention of Wetlands of International Importance was signed in 1971 at the Iranian town of Ramsar. The Convention has since been referred to as the Ramsar Convention. Ramsar Listed wetlands are “sites containing representative, rare or unique wetlands, or wetlands that are important for conserving biological diversity ... because of their ecological, botanical, zoological, limnological or hydrological importance” (DAWE 2020b). Once a Ramsar Listed Wetland is designated, the country agrees to manage its conservation and ensure its wise use. Under the Convention, wise use is broadly defined as “maintaining the ecological character of a wetland” (DAWE 2020b).

### **Nationally important wetlands**

Wetlands of national significance are listed under the Directory of Important Wetlands in Australia. Nationally important wetlands are wetlands which meet at least one of the following criteria (DAWE 2020a):

- It is a good example of a wetland type occurring within a biogeographic region in Australia
- It is a wetland which plays an important ecological or hydrological role in the natural functioning of a major wetland system/complex
- It is a wetland which is important as the habitat for animal taxa at a vulnerable stage in their life cycles, or provides a refuge when adverse conditions such as drought prevail
- The wetland supports one percent or more of the national populations of any native plant or animal taxa
- The wetland supports native plant or animal taxa or communities which are considered endangered or vulnerable at the national level
- The wetland is of outstanding historical or cultural significance.

### **Vegetation extent and status**

The National Objectives and Targets for Biodiversity Conservation 2001–2005 (Commonwealth of Australia 2001) recognise that the retention of 30 percent or more of the pre-clearing extent of each ecological community is necessary if Australia’s biological diversity is to be protected. This is the threshold level below which species loss appears to accelerate exponentially and loss below this level should not be permitted. This level of recognition is in keeping with the targets recommended in the review of the National Strategy for the Conservation of Australia’s Biological Diversity (ANZECC 2000).

The extent of remnant native vegetation in WA has been assessed by Shepherd et al. (2002) and the GoWA (2019), based on broadscale vegetation association mapping by Beard (various publications). The GoWA produces Statewide Vegetation Statistics Reports that are used for a number of purposes including conservation planning, land use planning and when assessing development applications. The reports are updated every 2-3 years.

### **Vegetation condition**

The vegetation condition can be assessed in accordance with the vegetation condition rating scale for the South West and Interzone Botanical Provinces (EPA 2016a). The scale recognises the intactness of vegetation and consists of six rating levels as outlined below.

## Vegetation condition rating scale for the South West and Interzone Botanical Provinces

Condition	South West and Interzone Botanical Provinces description
Pristine	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Excellent	Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species. Damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.
Very Good	Vegetation structure altered, obvious signs of disturbance. Disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. Disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds at high density, partial clearing, dieback and grazing.
Completely Degraded	The structure of vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.



## Conservation codes

Species of significant flora, fauna and communities are protected under both Federal and State Acts. The Federal EPBC Act provides a legal framework to protect and manage nationally important flora and communities. The State BC Act is the primary wildlife conservation legislation in Western Australia. Information on the conservation codes is summarised in the following sections.

### Ecological communities

#### Significant communities

Ecological communities are defined as naturally occurring biological assemblages that occur in a particular type of habitat (English and Blyth 1997). Federally listed Threatened Ecological Communities (TECs) are protected under the EPBC Act. The BC Act provides for the Minister to list an ecological community as a TEC (section 27), or as a collapsed ecological community (section 31) statutory listing of State TECs by the Minister. The legislation also describes statutory processes for preparing recovery plans for TECs, the registration of their critical habitat, and penalties for unauthorised modification of TECs.

Possible TECs that do not meet survey criteria are added to the DBCA Priority Ecological Community (PEC) List under Priorities 1, 2 and 3. These are ecological communities that are adequately known; are rare but not threatened, or meet criteria for Near Threatened. PECs that have been recently removed from the threatened list are placed in Priority 4. These ecological communities require regular monitoring. Conservation dependent ecological communities are placed in Priority 5. PECs are not listed under any formal Federal or State legislation, however, may be listed as TECs under the EPBC Act.

#### Codes and definitions for TECs listed under the EPBC Act and/ or BC Act

Categories	Definition
<b>Federal Government Conservation Categories (EPBC Act)</b>	
Critically Endangered (CR)	An ecological community if, at that time, is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria (as outlined in Environment Protection and Biodiversity Conservation Regulations 2000)
Endangered (EN)	An ecological community if, at that time: <ul style="list-style-type: none"> <li>A) is not critically endangered; and</li> <li>B) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria (as outlined in Environment Protection and Biodiversity Conservation Regulations 2000)</li> </ul>
Vulnerable (VU)	An ecological community if, at that time: <ul style="list-style-type: none"> <li>A) is not critically endangered or endangered; and</li> <li>B) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria (as outlined in Environment Protection and Biodiversity Conservation Regulations 2000)</li> </ul>
<b>Western Australia Conservation Categories (BC Act)</b>	
<u>Threatened Ecological Communities</u>	
Critically Endangered (CR)	An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or that was originally of limited distribution and is facing severe modification or destruction throughout its range in the immediate future, or is already severely degraded throughout its range but capable of being substantially restored or rehabilitated.

Categories	Definition
Endangered (EN)	An ecological community that has been adequately surveyed and found to have been subject to a major contraction in area and/or was originally of limited distribution and is in danger of significant modification throughout its range or severe modification or destruction over most of its range in the near future.
Vulnerable (VU)	An ecological community that has been adequately surveyed and is found to be declining and/or has declined in distribution and/or condition and whose ultimate security has not yet been assured and/or a community that is still widespread but is believed likely to move into a category of higher threat in the near future if threatening processes continue or begin operating throughout its range.

#### Collapsed ecological communities

An ecological community is eligible for listing as a collapsed ecological community at a particular time if, at that time –

(a) there is no reasonable doubt that the last occurrence of the ecological community has collapsed); or

(b) the ecological community has been so extensively modified throughout its range that no occurrence of it is likely to recover –

(i) its species composition or structure; or

(ii) its species composition and structure.

Section 33 of the BC Act provides for a collapsed ecological community to be regarded as a threatened ecological community if it is discovered in a state that no longer makes it eligible for listing as a collapsed ecological community.

### Categories and definitions for PECS as listed by the DBCA

Category	Description
Priority 1	<p>Poorly known ecological communities.</p> <p>Ecological communities that are known from very few occurrences with a very restricted distribution (generally <math>\leq 5</math> occurrences or a total area of <math>\leq 100</math> ha). Occurrences are believed to be under threat either due to limited extent, or being on lands under immediate threat (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) or for which current threats exist. May include communities with occurrences on protected lands. Communities may be included if they are comparatively well-known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under immediate threat from known threatening processes across their range.</p>
Priority 2	<p>Poorly known ecological communities.</p> <p>Communities that are known from few occurrences with a restricted distribution (generally <math>\leq 10</math> occurrences or a total area of <math>\leq 200</math> ha). At least some occurrences are not believed to be under immediate threat of destruction or degradation. Communities may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements, and/or are not well defined, and appear to be under threat from known threatening processes.</p>

Category	Description
Priority 3	<p>Poorly known ecological communities.</p> <p>(i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or:</p> <p>(ii) communities known from a few widespread occurrences, which are either large or with significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or;</p> <p>(iii) communities made up of large, and/or widespread occurrences, that may or may not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes.</p> <p>Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them.</p>
Priority 4	<p>Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.</p> <p>(i) Rare. Ecological communities known from few occurrences that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These communities are usually represented on conservation lands.</p> <p>(ii) Near Threatened. Ecological communities that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.</p> <p>(iii) Ecological communities that have been removed from the list of threatened communities during the past five years.</p>
Priority 5	<p>Conservation Dependent ecological communities.</p> <p>Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.</p>

### Other significant vegetation

Vegetation may be significant for a range of reasons other than a statutory listing. The EPA (2016a, b) states that significant vegetation may include vegetation that includes the following:

- Restricted distribution
- Degree of historical impact from threatening processes
- A role as a refuge
- Providing an important function required to maintain ecological integrity of a significant ecosystem
- Local endemism in restricted habitats
- Novel combinations of taxa
- A role as a key habitat for Threatened species or large population representing a significant proportion of the local to regional total population of a species
- Being representative of a vegetation unit in 'pristine' condition in a highly cleared landscape, recently discovered range extensions, or isolated outliers of the main range.

This may apply at a number of levels, so the unit may be significant when considered at the fine-scale (intra-locality), intermediate-scale (locality or inter-locality) or broad-scale (local to region).

## Flora and fauna

### Significant flora and fauna

Species of significant flora are protected under both Federal and State legislation. Any activities that are deemed to have a significant impact on species that are recognised by the EPBC Act, and/or the BC Act can warrant referral to the DEE and/or the EPA.

The Federal conservation level of flora and fauna species and their significance status is assessed under the EPBC Act. The significance levels for flora and fauna used in the EPBC Act align with the International Union for Conservation of Nature (IUCN) Red List criteria, which are internationally recognised as providing best practice for assigning the conservation status of species. The EPBC Act also protects land and migratory species that are listed under International Agreements. The list of migratory species established under section 209 of the EPBC Act comprises:

- Migratory species which are native to Australia and are included in the appendices to the Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals Appendices I and II)
- Migratory species included in annexes established under the Japan-Australia Migratory Bird Agreement (JAMBA) and the China–Australia Migratory Bird Agreement (CAMBA)
- Native, migratory species identified in a list established under, or an instrument made under, an international agreement approved by the Minister, such as the Republic of Korea–Australia Migratory Bird Agreement (ROKAMBA)

The State conservation level of flora and fauna species and their significance status also follows the IUCN Red List criteria. Under the BC Act flora and fauna can be listed as Threatened, Extinct and as Specially Protected species.

Threatened species are those species which have been adequately searched for and are deemed to be, in the wild, either rare, under identifiable threat of extinction, or otherwise in need of special protection, and have been gazetted as such. The assessment of the conservation status of Threatened species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria. Specially protected species meet one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection. Species that are listed as Threatened or Extinct species under the BC Act cannot also be listed as Specially Protected 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 flora or fauna.

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.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

For the purposes of this assessment, all species listed under the EPBC Act, BC Act and DBCA Priority species are considered significant.

## Categories and definitions for EPBC Act and BC Act listed flora and fauna species

Conservation category	Definition
Threatened species	
Critically Endangered (CR)	<p>Threatened species considered to be “facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines”.</p> <p>Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.</p>
Endangered (EN)	<p>Threatened species considered to be “facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines”.</p> <p>Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines</p>
Vulnerable (VU)	<p>Threatened species considered to be “facing a high risk of extinction in the wild in the medium term future, as determined in accordance with criteria set out in the ministerial guidelines”.</p> <p>Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.</p>
Extinct species	
Extinct (EX)	Species where “there is no reasonable doubt that the last member of the species has died”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).
Extinct in the Wild (EW)	Species that “is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).
Specially protected species	
Migratory (MI)	<p>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; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).</p> <p>Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species</p>

Conservation category	Definition
Species of special conservation interest (conservation dependent fauna) (CD)	Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened.
Other specially protected fauna (OS)	Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

### Codes for DBCA listed Priority flora and fauna

Priority category	Definition
Priority 1	<p>Poorly-known taxa</p> <p>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, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.</p>
Priority 2	<p>Poorly-known taxa</p> <p>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, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.</p>
Priority 3	<p>Poorly-known taxa</p> <p>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. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.</p>
Priority 4	<p>Rare, Near Threatened and other taxa in need of monitoring</p> <p>A. Rare: Taxa that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.</p> <p>B. Near Threatened. Taxa that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable.</p> <p>C. Taxa that have been removed from the list of threatened taxa during the past five years for reasons other than taxonomy.</p>

### Other significant flora

Flora species, subspecies, varieties, hybrids and ecotypes may be significant for a range of reasons, other than a statutory listing. The EPA (2016a, b) states that significant flora may include taxa that have/are:

- A keystone role in a particular habitat for Threatened or Priority flora or fauna species, or large populations representing a considerable proportion of the local or regional total population of a species
- Relictual status, being representation of taxonomic or physiognomic groups that no longer occur widely in the broader landscape
- New species or anomalous features that indicate a potential new species
- Being representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range)
- Unusual species, including restricted subspecies, varieties, or naturally occurring hybrids
- Local endemism (a restricted distribution) or association with a restricted habitat type (e.g. surface water or groundwater dependent ecosystems)

### Other significant fauna

Fauna species may be significant for a range of reasons other than those protected by international agreement or treaty, Specially Protected or Priority Fauna. Significant fauna may include short-range endemic species, species that have declining populations or declining distributions, species at the extremes of their range, or isolated outlying populations, or species which may be undescribed (EPA 2010).

### Introduced plants (weeds)

#### Declared Pests

Information on species considered to be Declared Pests is provided under *State Biosecurity and Agriculture Management Act 2007*.

#### Weeds of National Significance

The spread of weeds across a range of land uses or ecosystems is important in the context of socio-economic and environmental values. The assessment of Weeds of National Significance (WoNS) is based on four major criteria:

- Invasiveness
- Impacts
- Potential for spread
- Socio-economic and environmental values.

Australian state and territory governments have identified thirty-two Weeds of National Significance (WoNS); a list of 20 WoNS was endorsed in 1999 and a further 12 were added in 2012.



## References

- ANZECC 2000, *Core Environmental Indicators for Reporting on the State of Environment*, ANZECC State of the Environment Reporting Task Force.
- Commonwealth of Australia 2001, *National Targets and Objectives for Biodiversity Conservation 2001–2005*, Canberra, AGPS.
- DAWE 2020a, *Criteria for determining nationally important wetlands*, retrieved 2020, from <http://www.environment.gov.au/topics/water/water-our-environment/wetlands/australian-wetlands-database/directory-important>.
- DAWE 2020b, *The Ramsar Convention on Wetlands*, retrieved 2020, from <http://www.environment.gov.au/topics/water/water-our-environment/wetlands/ramsar-convention-wetlands>.
- English, V and Blyth, J 1997, *Identifying and Conserving Threatened Ecological Communities in the South West Botanical Province*, Perth, Department of Conservation and Land Management.
- EPA 2010, *Technical Guide – Terrestrial Fauna Surveys*, EPA, Perth, WA.
- EPA 2016a, *Technical Guide – Flora and Vegetation Surveys for Environmental Impact Assessment*, EPA, Perth, WA.
- EPA 2016b, *Environmental Factor Guideline - Flora and Vegetation*, EPA, Perth, WA.
- GoWA 2019, *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full report)*, Current as of March 2019, Perth Western Australia, Department of Environment and Conservation, from <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>.
- Shepherd, DP, Beeston, GR & Hopkins, AJM 2002, *Native Vegetation in Western Australia – Extent, Type and Status, Resource Management Technical Report 249*, Perth, Department of Agriculture.

## **Appendix C – Desktop searches**

EPBC Act PMST (5 km)

Naturemap Flora Report (5 km)

Naturemap Fauna Report (5 km)



## 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: 20/10/20 18:43:10

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

[Acknowledgements](#)



This map may contain data which are  
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[Coordinates](#)

Buffer: 5.0Km



# 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](#).

<a href="#">World Heritage Properties:</a>	None
<a href="#">National Heritage Places:</a>	None
<a href="#">Wetlands of International Importance:</a>	None
<a href="#">Great Barrier Reef Marine Park:</a>	None
<a href="#">Commonwealth Marine Area:</a>	None
<a href="#">Listed Threatened Ecological Communities:</a>	4
<a href="#">Listed Threatened Species:</a>	41
<a href="#">Listed Migratory Species:</a>	9

## Other Matters Protected by the EPBC Act

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

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

A [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.

<a href="#">Commonwealth Land:</a>	2
<a href="#">Commonwealth Heritage Places:</a>	None
<a href="#">Listed Marine Species:</a>	15
<a href="#">Whales and Other Cetaceans:</a>	None
<a href="#">Critical Habitats:</a>	None
<a href="#">Commonwealth Reserves Terrestrial:</a>	None
<a href="#">Australian Marine Parks:</a>	None

## Extra Information

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

<a href="#">State and Territory Reserves:</a>	6
<a href="#">Regional Forest Agreements:</a>	None
<a href="#">Invasive Species:</a>	46
<a href="#">Nationally Important Wetlands:</a>	2
<a href="#">Key Ecological Features (Marine)</a>	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
<a href="#">Banksia Woodlands of the Swan Coastal Plain ecological community</a>	Endangered	Community likely to occur within area
<a href="#">Clay Pans of the Swan Coastal Plain</a>	Critically Endangered	Community likely to occur within area
<a href="#">Corymbia calophylla - Kingia australis woodlands on heavy soils of the Swan Coastal Plain</a>	Endangered	Community known to occur within area
<a href="#">Tuart (Eucalyptus gomphocephala) Woodlands and Forests of the Swan Coastal Plain ecological community</a>	Critically Endangered	Community may occur within area

### Listed Threatened Species [ [Resource Information](#) ]

Name	Status	Type of Presence
<b>Birds</b>		
<a href="#">Botaurus poiciloptilus</a> Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calyptorhynchus banksii naso</a> Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Calyptorhynchus baudinii</a> Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Endangered	Roosting known to occur within area
<a href="#">Calyptorhynchus latirostris</a> Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
<a href="#">Leipoa ocellata</a> Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Rostratula australis</a> Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
<b>Insects</b>		
<a href="#">Leioproctus douglasiellus</a> a short-tongued bee [66756]	Critically Endangered	Species or species habitat known to occur within area



Name	Status	Type of Presence
<b>Mammals</b>		
<a href="#">Dasyurus geoffroii</a> Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Pseudocheirus occidentalis</a> Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Setonix brachyurus</a> Quokka [229]	Vulnerable	Species or species habitat likely to occur within area
<b>Other</b>		
<a href="#">Westralunio carteri</a> Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat known to occur within area
<b>Plants</b>		
<a href="#">Acacia anomala</a> Grass Wattle, Chittering Grass Wattle [8153]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Andersonia gracilis</a> Slender Andersonia [14470]	Endangered	Species or species habitat known to occur within area
<a href="#">Austrostipa bronwenae</a> [87808]	Endangered	Species or species habitat known to occur within area
<a href="#">Banksia mimica</a> Summer Honeypot [82765]	Endangered	Species or species habitat likely to occur within area
<a href="#">Caladenia huegelii</a> King Spider-orchid, Grand Spider-orchid, Rusty Spider-orchid [7309]	Endangered	Species or species habitat likely to occur within area
<a href="#">Calytrix breviseta subsp. breviseta</a> Swamp Starflower [23879]	Endangered	Species or species habitat known to occur within area
<a href="#">Chamelaucium sp. Gingin (N.G.Marchant 6)</a> Gingin Wax [88881]	Endangered	Species or species habitat may occur within area
<a href="#">Conospermum undulatum</a> Wavy-leaved Smokebush [24435]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Darwinia apiculata</a> Scarp Darwinia [8763]	Endangered	Species or species habitat may occur within area
<a href="#">Diplolaena andrewsii</a> [6601]	Endangered	Species or species habitat likely to occur within area
<a href="#">Diuris drummondii</a> Tall Donkey Orchid [4365]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Diuris micrantha</a> Dwarf Bee-orchid [55082]	Vulnerable	Species or species habitat likely to occur within area
<a href="#">Diuris purdiei</a> Purdie's Donkey-orchid [12950]	Endangered	Species or species habitat known to occur within area
<a href="#">Drakaea elastica</a> Glossy-leaved Hammer Orchid, Glossy-leaved	Endangered	Species or species

Name	Status	Type of Presence
Hammer Orchid, Warty Hammer Orchid [16753]		habitat likely to occur within area
<a href="#">Drakaea micrantha</a> Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat may occur within area
<a href="#">Eleocharis keigheryi</a> Keighery's Eleocharis [64893]	Vulnerable	Species or species habitat known to occur within area
<a href="#">Eremophila glabra subsp. chlorella</a> [84927]	Endangered	Species or species habitat known to occur within area
<a href="#">Eucalyptus x balanites</a> Cadda Road Mallee, Cadda Mallee [87816]	Endangered	Species or species habitat may occur within area
<a href="#">Goodenia arthrotricha</a> [12448]	Endangered	Species or species habitat likely to occur within area
<a href="#">Grevillea curviloba subsp. incurva</a> Narrow curved-leaf Grevillea [64909]	Endangered	Species or species habitat likely to occur within area
<a href="#">Grevillea thelemanniana</a> Spider Net Grevillea [32835]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Lepidosperma rostratum</a> Beaked Lepidosperma [14152]	Endangered	Species or species habitat known to occur within area
<a href="#">Macarthuria keigheryi</a> Keighery's Macarthuria [64930]	Endangered	Species or species habitat likely to occur within area
<a href="#">Ptilotus pyramidatus</a> Pyramid Mulla-mulla [18216]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Synaphea sp. Fairbridge Farm (D. Papenfus 696)</a> Selena's Synaphea [82881]	Critically Endangered	Species or species habitat known to occur within area
<a href="#">Synaphea sp. Pinjarra Plain (A.S. George 17182)</a> [86878]	Endangered	Species or species habitat may occur within area
<a href="#">Thelymitra dedmaniarum</a> Cinnamon Sun Orchid [65105]	Endangered	Species or species habitat likely to occur within area
<a href="#">Thelymitra stellata</a> Star Sun-orchid [7060]	Endangered	Species or species habitat known to 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
<b>Migratory Marine Birds</b>		
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area

#### Migratory Terrestrial Species

<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
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#### Migratory Wetlands Species

Name	Threatened	Type of Presence
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

## Other Matters Protected by the EPBC Act

### Commonwealth Land [ [Resource Information](#) ]

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

Name
Commonwealth Land - Defence - AIRTC CANNINGTON

### Listed Marine Species [ [Resource Information](#) ]

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
<b>Birds</b>		
<a href="#">Actitis hypoleucos</a> Common Sandpiper [59309]		Species or species habitat may occur within area
<a href="#">Apus pacificus</a> Fork-tailed Swift [678]		Species or species habitat likely to occur within area
<a href="#">Ardea alba</a> Great Egret, White Egret [59541]		Breeding known to occur within area
<a href="#">Ardea ibis</a> Cattle Egret [59542]		Species or species habitat may occur within area
<a href="#">Calidris acuminata</a> Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
<a href="#">Calidris ferruginea</a> Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Calidris melanotos</a> Pectoral Sandpiper [858]		Species or species habitat may occur within

Name	Threatened	Type of Presence area
<a href="#">Haliaeetus leucogaster</a> White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
<a href="#">Merops ornatus</a> Rainbow Bee-eater [670]		Species or species habitat may occur within area
<a href="#">Motacilla cinerea</a> Grey Wagtail [642]		Species or species habitat may occur within area
<a href="#">Numenius madagascariensis</a> Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
<a href="#">Pandion haliaetus</a> Osprey [952]		Breeding known to occur within area
<a href="#">Rostratula benghalensis (sensu lato)</a> Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
<a href="#">Thinornis rubricollis</a> Hooded Plover [59510]		Species or species habitat likely to occur within area
<a href="#">Tringa nebularia</a> Common Greenshank, Greenshank [832]		Species or species habitat likely to occur within area

## Extra Information

State and Territory Reserves	[ <a href="#">Resource Information</a> ]
Name	State
Canning River	WA
Dundas Road	WA
Kenwick Wetlands	WA
Unnamed WA29815	WA
Unnamed WA37997	WA
Unnamed WA49363	WA

## 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 Resources Audit, 2001.

Name	Status	Type of Presence
<b>Birds</b>		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area

Name	Status	Type of Presence
Carduelis carduelis European Goldfinch [403]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species 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
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
<b>Mammals</b>		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Funambulus pennantii Northern Palm Squirrel, Five-striped Palm Squirrel [129]		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 norvegicus Brown Rat, Norway Rat [83]		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



Name	Status	Type of Presence
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
<b>Plants</b>		
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 aethiopicus Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus [62425]		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
Chrysanthemoides monilifera subsp. monilifera Boneseed [16905]		Species or species habitat likely to occur within area
Eichhornia crassipes Water Hyacinth, Water Orchid, Nile Lily [13466]		Species or species habitat likely to occur within area
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800]		Species or species habitat likely to occur within area
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitat likely to occur within area
Genista sp. X Genista monspessulana Broom [67538]		Species or species habitat may occur within area
Lantana camara Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage [10892]		Species or species habitat likely to 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 area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Pinus radiata 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
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead [68483]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed [13665]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area
<b>Reptiles</b>		
Hemidactylus frenatus Asian House Gecko [1708]		Species or species habitat likely to occur within area

Nationally Important Wetlands		[ Resource Information ]
Name		State
<a href="#">Brixton Street Swamps</a>		WA
<a href="#">Perth Airport Woodland Swamps</a>		WA

# 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

-32.00725 115.97453

# 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.

# NatureMap Species Report

Created By Guest user on 21/09/2020

**Kingdom** Plantae  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 115° 58' 24" E, 32° 00' 31" S  
**Buffer** 5km  
**Group By** Family

Family	Species	Records
Alliaceae	1	1
Amaranthaceae	6	16
Amaryllidaceae	2	2
Anacardiaceae	1	1
Anarthriaceae	4	22
Apiaceae	10	46
Apocynaceae	2	3
Aponogetonaceae	1	16
Araceae	4	8
Araliaceae	6	34
Archidiaceae	1	1
Asparagaceae	32	113
Asphodelaceae	2	4
Asteraceae	49	171
Basellaceae	1	1
Boryaceae	2	16
Brassicaceae	4	5
Bryaceae	6	8
Byblidaceae	1	9
Cactaceae	2	2
Campanulaceae	6	27
Caprifoliaceae	1	1
Caryophyllaceae	1	2
Casuarinaceae	3	15
Celastraceae	1	5
Centrolepidaceae	10	55
Chenopodiaceae	3	4
Colchicaceae	7	30
Convolvulaceae	1	2
Crassulaceae	7	11
Cucurbitaceae	2	2
Cupressaceae	2	11
Cyperaceae	74	309
Dasygongonaceae	6	22
Dicranaceae	2	2
Dilleniaceae	13	32
Dioscoreaceae	1	2
Ditrichaceae	1	1
Droseraceae	19	89
Elaeocarpaceae	3	4
Elatinaceae	1	1
Ericaceae	22	56
Euphorbiaceae	7	13
Fabaceae	87	267
Fissidentaceae	2	2
Funariaceae	1	1
Gentianaceae	3	20
Goodeniaceae	14	71
Haemodoraceae	33	148
Haloragaceae	8	20
Hemerocallidaceae	12	33
Hydatellaceae	2	24
Hydrocharitaceae	2	5
Hypoxidaceae	2	2
Iridaceae	21	77
Juncaceae	5	15
Juncaginaceae	10	29
Lamiaceae	5	14
Lauraceae	8	22
Lentibulariaceae	4	13
Linaceae	1	1
Loganiaceae	1	1
Loranthaceae	2	8
Lycopodiaceae	1	3
Lythraceae	1	4
Macarthuriaceae	2	23
Malvaceae	7	32
Marsileaceae	1	1
Meliaceae	1	2
Menyanthaceae	3	17
Montiaceae	5	12
Myrtaceae	75	283
Nymphaeaceae	1	3
Olacaceae	2	5
Onagraceae	11	13



Ophioglossaceae	1	1
Orchidaceae	49	116
Orobanchaceae	3	6
Oxalidaceae	4	9
Papaveraceae	4	6
Philydraceae	3	27
Phrymaceae	1	1
Phyllanthaceae	1	2
Pittosporaceae	2	2
Plantaginaceae	3	14
Poaceae	65	208
Polygalaceae	6	16
Polygonaceae	5	9
Portulacaceae	1	1
Potamogetonaceae	2	4
Pottiaceae	3	6
Primulaceae	3	8
Proteaceae	71	418
Pteridaceae	1	1
Ranunculaceae	1	1
Restionaceae	18	89
Rhamnaceae	5	9
Rosaceae	1	1
Rubiaceae	2	6
Rutaceae	8	20
Sapindaceae	1	3
Scrophulariaceae	1	16
Selaginellaceae	1	3
Sematophyllaceae	1	1
Solanaceae	1	1
Stylidiaceae	32	157
Thymelaeaceae	5	22
Typhaceae	2	9
Verbenaceae	1	1
Violaceae	1	3
Xanthorrhoeaceae	8	22
Zygophyllaceae	1	1
<b>TOTAL</b>	<b>981</b>	<b>3566</b>

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
<b>Alliaceae</b>				
1.	1381 <i>Nothoscordum gracile</i>	Y		
<b>Amaranthaceae</b>				
2.	2648 <i>Alternanthera denticulata</i> (Lesser Joyweed)			
3.	2655 <i>Amaranthus albus</i> (Tumbleweed)	Y		
4.	2716 <i>Ptilotus declinatus</i> (Curved Mulla Mulla)			
5.	2720 <i>Ptilotus esquamatus</i>			
6.	2742 <i>Ptilotus manglesii</i> (Pom Poms, Mulamula)			
7.	2753 <i>Ptilotus pyramidatus</i>		T	Y
<b>Amaryllidaceae</b>				
8.	44496 <i>Narcissus tazetta</i> subsp. <i>italicus</i>	Y		
9.	44495 <i>Narcissus tazetta</i> subsp. <i>tazetta</i>	Y		
<b>Anacardiaceae</b>				
10.	48834 <i>Schinus terebinthifolia</i>	Y		
<b>Anarthriaceae</b>				
11.	1058 <i>Anarthria gracilis</i>			
12.	1060 <i>Anarthria laevis</i>			
13.	1097 <i>Lyginia barbata</i>			
14.	18049 <i>Lyginia imberbis</i>			
<b>Apiaceae</b>				
15.	6214 <i>Centella asiatica</i>			
16.	6219 <i>Eryngium pinnatifidum</i> (Blue Devils)			
17.	41801 <i>Eryngium pinnatifidum</i> subsp. <i>Palustre</i> (G.J. Keighery 13459)		P3	
18.	41810 <i>Eryngium</i> sp. <i>Subdecumbens</i> (G.J. Keighery 5390)		P3	
19.	6222 <i>Homalosciadium homalocarpum</i>			
20.	6253 <i>Platysace filiformis</i>			
21.	6255 <i>Platysace juncea</i>			
22.	11132 <i>Platysace ramosissima</i>		P3	
23.	6263 <i>Schoenolaena juncea</i>			
24.	6289 <i>Xanthosia huegelii</i>			
<b>Apocynaceae</b>				
25.	17355 <i>Araujia sericifera</i>	Y		
26.	6587 <i>Gomphocarpus fruticosus</i> (Narrowleaf Cottonbush)	Y		
<b>Aponogetonaceae</b>				
27.	141 <i>Aponogeton hexatepalus</i> (Stalked Water Ribbons)		P4	
<b>Araceae</b>				
28.	32999 <i>Colocasia esculenta</i> var. <i>esculenta</i>	Y		
29.	28342 <i>Landoltia punctata</i> (Thin Duckweed)			
30.	1051 <i>Lemna disperma</i> (Duckweed)			
31.	1049 <i>Zantedeschia aethiopica</i> (Arum Lily)	Y		
<b>Araliaceae</b>				
32.	6223 <i>Hydrocotyle alata</i>			
33.	6226 <i>Hydrocotyle callicarpa</i> (Small Pennywort)			
34.	6229 <i>Hydrocotyle diantha</i>			
35.	6233 <i>Hydrocotyle lemnoides</i> (Aquatic Pennywort)		P4	
36.	6238 <i>Hydrocotyle ranunculoides</i>	Y		
37.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
<b>Archidiaceae</b>				
38.	32314 <i>Archidium rehmannii</i>			
<b>Asparagaceae</b>				
39.	1205 <i>Acanthocarpus canaliculatus</i>			
40.	1201 <i>Asparagus officinalis</i> (Asparagus)	Y		
41.	1287 <i>Dichopogon capillipes</i>			
42.	1289 <i>Dichopogon preissii</i>			
43.	1307 <i>Laxmannia ramosa</i> (Branching Lily)			
44.	11911 <i>Laxmannia ramosa</i> subsp. <i>ramosa</i>			
45.	11464 <i>Laxmannia sessiliflora</i> subsp. <i>australis</i>			
46.	1309 <i>Laxmannia squarrosa</i>			
47.	1223 <i>Lomandra caespitosa</i> (Tufted Mat Rush)			
48.	1228 <i>Lomandra hermaphrodita</i>			
49.	1229 <i>Lomandra integra</i>			
50.	1232 <i>Lomandra micrantha</i> (Small-flower Mat-rush)			

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
51.	14542 <i>Lomandra micrantha</i> subsp. <i>micrantha</i>			
52.	1234 <i>Lomandra nigricans</i>			
53.	1236 <i>Lomandra odora</i> (Tiered Matrush)			
54.	1239 <i>Lomandra preissii</i>			
55.	1240 <i>Lomandra purpurea</i> (Purple Mat Rush)			
56.	1243 <i>Lomandra sericea</i> (Silky Mat Rush)			
57.	1246 <i>Lomandra suaveolens</i>			
58.	1312 <i>Sowerbaea laxiflora</i> (Purple Tassels)			
59.	1317 <i>Thysanotus anceps</i>		P3	
60.	1318 <i>Thysanotus arbuscula</i>			
61.	1319 <i>Thysanotus arenarius</i>			
62.	1338 <i>Thysanotus manglesianus</i> (Fringed Lily)			
63.	<i>Thysanotus manglesianus/patersonii</i> complex			
64.	1339 <i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
65.	1343 <i>Thysanotus patersonii</i>			
66.	46055 <i>Thysanotus</i> sp. Coastal plain (N.H. Brittan 66/63)			
67.	1351 <i>Thysanotus sparteus</i>			
68.	1354 <i>Thysanotus tenellus</i>			
69.	1357 <i>Thysanotus thyrsoideus</i>			
70.	1358 <i>Thysanotus triandrus</i>			

### Asphodelaceae

71.	1364 <i>Asphodelus fistulosus</i> (Onion Weed)	Y		
72.	1366 <i>Bulbine semibarbata</i> (Leek Lily)			

### Asteraceae

73.	7811 <i>Acanthospermum hispidum</i> (Starburr)	Y		
74.	7820 <i>Ambrosia artemisiifolia</i> (Annual Ragweed, Bitterweed, Hay-feverweed, Hog-weed)	Y		
75.	7821 <i>Ambrosia psilostachya</i> (Perennial Ragweed)	Y		
76.	7833 <i>Angianthus preissianus</i>			
77.	7838 <i>Arctotheca calendula</i> (Cape Weed, African Marigold)	Y		
78.	7878 <i>Brachyscome iberidifolia</i>			
79.	7917 <i>Centaurea solstitialis</i> (St Barnaby's Thistle, Yellow Star Thistle)	Y		
80.	7918 <i>Centipeda cunninghamii</i> (Common Sneezewood, Gukwonderuk, Old Man Weed)			
81.	7939 <i>Conyza bonariensis</i> (Flaxleaf Fleabane)	Y		
82.	7941 <i>Conyza parva</i>	Y		
83.	<i>Conyza</i> sp. Brix1R			Y
84.	<i>Conyza</i> sp. Brix4			Y
85.	20074 <i>Conyza sumatrensis</i>	Y		
86.	7943 <i>Cotula australis</i> (Common Cotula)			
87.	7945 <i>Cotula coronopifolia</i> (Waterbuttons)	Y		
88.	7947 <i>Cotula turbinata</i> (Funnel Weed)	Y		
89.	7961 <i>Dittrichia graveolens</i> (Stinkwort)	Y		
90.	8450 <i>Eclipta prostrata</i>	Y		
91.	16311 <i>Gazania linearis</i>	Y		
92.	<i>Gnephosis tenuissima</i> - <i>drummondii</i> complex			
93.	<i>Gnephosis tenuissima-drummondii</i> complex			
94.	8008 <i>Helianthus annuus</i> (Sunflower, Common Sunflower)	Y		
95.	12741 <i>Hyalosperma cotula</i>			
96.	8086 <i>Hypochoeris glabra</i> (Smooth Catsear)	Y		
97.	18585 <i>Lagenophora huegelii</i>			
98.	44490 <i>Leontodon rhagadioloides</i>	Y		
99.	8106 <i>Millotia tenuifolia</i> (Soft Millotia)			
100.	14187 <i>Myriocephalus occidentalis</i>			
101.	8127 <i>Olearia axillaris</i> (Coastal Daisybush)			
102.	8143 <i>Olearia paucidentata</i> (Autumn Scrub Daisy)			
103.	8175 <i>Podolepis gracilis</i> (Slender Podolepis)			
104.	8177 <i>Podolepis lessonii</i>			
105.	8182 <i>Podotheca angustifolia</i> (Sticky Longheads)			
106.	8188 <i>Pogonolepis stricta</i>			
107.	13255 <i>Pterochaeta paniculata</i>			
108.	8195 <i>Quinetia urvillei</i>			
109.	13312 <i>Rhodanthe pyrethrum</i>			
110.	20663 <i>Senecio multicaulis</i> subsp. <i>multicaulis</i>			
111.	8220 <i>Senecio vulgaris</i> (Common Groundsel)	Y		
112.	8224 <i>Siloxerus filifolius</i>			
113.	8225 <i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
114.	14583 <i>Siloxerus multiflorus</i>			
115.	8231 <i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
116.	25902 <i>Symphotrichum squamatum</i> (Bushy Starwort)	Y		
117.	8251 <i>Trichocline spathulata</i> (Native Gerbera)			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
118.	8254 <i>Urospermum picroides</i> (False Hawkbit)	Y		
119.	8255 <i>Ursinia anthemoides</i> (Ursinia)	Y		
120.	38388 <i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Y		
121.	15725 <i>Verbesina encelioides</i>	Y		
<b>Basellaceae</b>				
122.	17455 <i>Anredera cordifolia</i>	Y		
<b>Boryaceae</b>				
123.	1272 <i>Borya scirpoidea</i>			
124.	1273 <i>Borya sphaerocephala</i> (Pincushions)			
<b>Brassicaceae</b>				
125.	3000 <i>Brassica tournefortii</i> (Mediterranean Turnip)	Y		
126.	3016 <i>Heliophila pusilla</i>	Y		
127.	3048 <i>Lobularia maritima</i> (Sweet Alyssum)	Y		
128.	3066 <i>Rorippa nasturtium-aquaticum</i> (Watercress)	Y		
<b>Bryaceae</b>				
129.	32330 <i>Bryum argenteum</i>			
130.	32375 <i>Gemmabryum chrysonuron</i>			
131.	32376 <i>Gemmabryum dichotomum</i>			
132.	32380 <i>Gemmabryum pachythecum</i>			
133.	44608 <i>Rosulabryum billardieri</i>			
134.	32432 <i>Schizymenium bryoides</i>			
<b>Byblidaceae</b>				
135.	3178 <i>Byblis gigantea</i> (Rainbow Plant)		P3	
<b>Cactaceae</b>				
136.	29276 <i>Opuntia monacantha</i> (Barbary Fig)	Y		
137.	5227 <i>Opuntia stricta</i> (Common Prickly Pear)	Y		
<b>Campanulaceae</b>				
138.	7398 <i>Isotoma pusilla</i> (Small Isotome)			
139.	9289 <i>Lobelia anceps</i> (Angled Lobelia)			
140.	7410 <i>Monopsis debilis</i>	Y		
141.	37440 <i>Monopsis debilis</i> var. <i>depressa</i>	Y		
142.	7384 <i>Wahlenbergia capensis</i> (Cape Bluebell)	Y		
143.	7389 <i>Wahlenbergia preissii</i>			
<b>Caprifoliaceae</b>				
144.	7368 <i>Scabiosa atropurpurea</i> (Purple Pincushion)	Y		
<b>Caryophyllaceae</b>				
145.	2909 <i>Silene gallica</i> (French Catchfly)	Y		
<b>Casuarinaceae</b>				
146.	1728 <i>Allocasuarina fraseriana</i> (Sheoak, Kondii)			
147.	1732 <i>Allocasuarina humilis</i> (Dwarf Sheoak)			
148.	1734 <i>Allocasuarina microstachya</i>			
<b>Celastraceae</b>				
149.	4737 <i>Tripterococcus brunonis</i> (Winged Stackhousia)			
<b>Centrolepidaceae</b>				
150.	1117 <i>Aphelia cyperoides</i>			
151.	1118 <i>Aphelia drummondii</i>			
152.	43548 <i>Aphelia</i> sp. <i>Albany</i> (B.G. Briggs 596)			
153.	1120 <i>Centrolepis alepyroides</i>			
154.	1121 <i>Centrolepis aristata</i> (Pointed Centrolepis)			
155.	1123 <i>Centrolepis caespitosa</i>			
156.	1125 <i>Centrolepis drummondiana</i>			
157.	1129 <i>Centrolepis glabra</i> (Smooth Centrolepis)			
158.	1131 <i>Centrolepis inconspicua</i>			
159.	1134 <i>Centrolepis polygyna</i> (Wiry Centrolepis)			
<b>Chenopodiaceae</b>				
160.	2471 <i>Atriplex prostrata</i> (Hastate Orache)	Y		
161.	33500 <i>Dysphania ambrosioides</i> (Mexican Tea)	Y		
162.	48430 <i>Salicornia quinqueflora</i>			
<b>Colchicaceae</b>				
163.	1383 <i>Burchardia bairdiae</i>			
164.	12770 <i>Burchardia congesta</i>			
165.	1385 <i>Burchardia multiflora</i> (Dwarf Burchardia)			
166.	1394 <i>Wurmbea dioica</i> (Early Nancy)			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
167.	<i>Wurmbea dioica</i> subsp. aff. <i>alba</i> (gjk 12803)			
168.	12072 <i>Wurmbea dioica</i> subsp. <i>alba</i>			
169.	1401 <i>Wurmbea pygmaea</i>			
<b>Convolvulaceae</b>				
170.	11021 <i>Cuscuta planiflora</i>	Y		
<b>Crassulaceae</b>				
171.	17701 <i>Crassula closiana</i>			
172.	3137 <i>Crassula colorata</i> (Dense Stonecrop)			
173.	11709 <i>Crassula colorata</i> var. <i>acuminata</i>			
174.	11563 <i>Crassula colorata</i> var. <i>colorata</i>			
175.	3138 <i>Crassula decumbens</i> (Rufous Stonecrop)			
176.	3142 <i>Crassula natans</i>	Y		
177.	15706 <i>Crassula natans</i> var. <i>minus</i>	Y		
<b>Cucurbitaceae</b>				
178.	48838 <i>Citrullus amarus</i>	Y		
179.	7374 <i>Ecballium elaterium</i> (Squirting Cucumber)	Y		
<b>Cupressaceae</b>				
180.	36520 <i>Callitris acuminata</i> (Dwarf Cypress)			
181.	36600 <i>Callitris pyramidalis</i> (Swamp Cypress)			
<b>Cyperaceae</b>				
182.	740 <i>Baumea arthropphylla</i>			
183.	743 <i>Baumea juncea</i> (Bare Twigrush)			
184.	749 <i>Bolboschoenus caldwelii</i> (Marsh Club-rush)			
185.	48689 <i>Bolboschoenus fluviatilis</i>		P1	
186.	754 <i>Carex divisa</i> (Divided Sedge)	Y		
187.	759 <i>Carex tereticaulis</i>		P3	
188.	760 <i>Caustis dioica</i>			
189.	763 <i>Chorizandra enodis</i> (Black Bristlerush)			
190.	764 <i>Chorizandra multiarticulata</i>			
191.	768 <i>Cyathochaeta avenacea</i>			
192.	769 <i>Cyathochaeta clandestina</i>			
193.	792 <i>Cyperus eragrostis</i> (Umbrella Sedge)	Y		
194.	18318 <i>Cyperus involucratus</i>	Y		
195.	806 <i>Cyperus polystachyos</i> (Bunchy Sedge)			
196.	815 <i>Cyperus tenellus</i> (Tiny Flatsedge)	Y		
197.	816 <i>Cyperus tenuiflorus</i> (Scaly Sedge)	Y		
198.	822 <i>Eleocharis acuta</i> (Common Spikerush)			
199.	17605 <i>Eleocharis keigheryi</i>		T	
200.	894 <i>Fimbristylis velata</i>			
201.	907 <i>Gahnia trifida</i> (Coast Saw-sedge)			
202.	910 <i>Isolepis cernua</i> (Nodding Club-rush)			
203.	20199 <i>Isolepis cernua</i> var. <i>cernua</i>			
204.	20200 <i>Isolepis cernua</i> var. <i>setiformis</i>			
205.	912 <i>Isolepis cyperoides</i>			
206.	914 <i>Isolepis hookeriana</i> (Bristle Club Rush)			
207.	14540 <i>Isolepis hystrix</i>	Y		
208.	917 <i>Isolepis marginata</i> (Coarse Club-rush)			
209.	919 <i>Isolepis oldfieldiana</i>			
210.	10831 <i>Isolepis prolifera</i> (Budding Club-rush)	Y		
211.	925 <i>Lepidosperma angustatum</i>			
212.	937 <i>Lepidosperma longitudinale</i> (Pithy Sword-sedge)			
213.	940 <i>Lepidosperma pubisquamum</i>			
214.	942 <i>Lepidosperma rostratum</i>		T	
215.	944 <i>Lepidosperma scabrum</i>			
216.	<i>Lepidosperma</i> sp.			
217.	29150 <i>Lepidosperma</i> sp. Margaret River (B.J. Lepschi 1841)			
218.	16284 <i>Lepidosperma</i> sp. P1 small head (M.D. Tindale 166A)			
219.	955 <i>Mesomelaena pseudostygia</i>			
220.	957 <i>Mesomelaena tetragona</i> (Semaphore Sedge)			
221.	971 <i>Schoenus andrewsii</i>			
222.	973 <i>Schoenus asperocarpus</i> (Poison Sedge)			
223.	974 <i>Schoenus benthamii</i>		P3	
224.	975 <i>Schoenus bifidus</i>			
225.	978 <i>Schoenus brevisetis</i>			
226.	979 <i>Schoenus caespititius</i>			
227.	980 <i>Schoenus capillifolius</i>		P3	
228.	984 <i>Schoenus curvifolius</i>			
229.	985 <i>Schoenus discifer</i>			



Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
230.	986 <i>Schoenus efoliatus</i>			
231.	987 <i>Schoenus elegans</i>			
232.	991 <i>Schoenus grammatophyllus</i>			
233.	994 <i>Schoenus humilis</i>			
234.	996 <i>Schoenus laevigatus</i>			
235.	998 <i>Schoenus latitans</i>			
236.	999 <i>Schoenus loliaceus</i>		P2	
237.	1002 <i>Schoenus nanus</i> ( <i>Tiny Bog Rush</i> )			
238.	1003 <i>Schoenus natans</i> ( <i>Floating Bog-rush</i> )		P4	
239.	1006 <i>Schoenus odontocarpus</i>			
240.	1007 <i>Schoenus pedicellatus</i>			
241.	1008 <i>Schoenus pennisetis</i>		P3	
242.	1009 <i>Schoenus pleiostemoneus</i>			
243.	17614 <i>Schoenus plumosus</i>			
244.	1011 <i>Schoenus rigens</i>			
245.	1013 <i>Schoenus sculptus</i> ( <i>Gimlet Bog-rush</i> )			
246.	16280 <i>Schoenus</i> sp. <i>Beaufort</i> (G.J. Keighery 6291)		P1	
247.	17731 <i>Schoenus</i> sp. <i>Waroona</i> (G.J. Keighery 12235)		P3	
248.	1016 <i>Schoenus subbarbatus</i> ( <i>Bearded Bog-rush</i> )			
249.	1017 <i>Schoenus subbulbosus</i>			
250.	1018 <i>Schoenus subfascicularis</i>			
251.	1019 <i>Schoenus subflavus</i> ( <i>Yellow Bog-rush</i> )			
252.	1026 <i>Schoenus unispiculatus</i>			
253.	17409 <i>Schoenus variicellae</i>			
254.	1033 <i>Tetragia australiensis</i>		T	
255.	1036 <i>Tetragia octandra</i>			
<b>Dasypogonaceae</b>				
256.	1213 <i>Calectasia cyanea</i> ( <i>Blue Tinsel Lily</i> )		T	
257.	1214 <i>Calectasia grandiflora</i> ( <i>Blue Tinsel Lily</i> )			
258.	19309 <i>Calectasia narragara</i>			
259.	1218 <i>Dasypogon bromeliifolius</i> ( <i>Pineapple Bush</i> )			
260.	1220 <i>Dasypogon obliquifolius</i>			
261.	1221 <i>Kingia australis</i> ( <i>Kingia</i> , <i>Pulonok</i> )			
<b>Dicranaceae</b>				
262.	32461 <i>Campylopus bicolor</i> var. <i>bicolor</i>			
263.	32338 <i>Campylopus introflexus</i>	Y		
<b>Dilleniaceae</b>				
264.	5112 <i>Hibbertia aurea</i>			
265.	5114 <i>Hibbertia commutata</i>			
266.	19778 <i>Hibbertia glomerata</i> subsp. <i>darlingensis</i>			
267.	5134 <i>Hibbertia huegelii</i>			
268.	5135 <i>Hibbertia hypericoides</i> ( <i>Yellow Buttercups</i> )			
269.	45534 <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i>			
270.	5146 <i>Hibbertia montana</i>		P4	
271.	5148 <i>Hibbertia mylnei</i>			
272.	5152 <i>Hibbertia ovata</i>			
273.	5162 <i>Hibbertia racemosa</i> ( <i>Stalked Guinea Flower</i> )			
274.	5169 <i>Hibbertia serrata</i> ( <i>Serrate Leaved Guinea Flower</i> )			
275.	5172 <i>Hibbertia stellaris</i> ( <i>Orange Stars</i> )			
276.	48381 <i>Hibbertia striata</i>			
<b>Dioscoreaceae</b>				
277.	1509 <i>Dioscorea hastifolia</i> ( <i>Warrine</i> , <i>Warrarn</i> )			
<b>Ditrichaceae</b>				
278.	32347 <i>Ditrichum difficile</i>			
<b>Droseraceae</b>				
279.	48751 <i>Drosera drummondii</i>			
280.	3095 <i>Drosera erythrorhiza</i> ( <i>Red Ink Sundew</i> )			
281.	3097 <i>Drosera gigantea</i> ( <i>Giant Sundew</i> )			
282.	3098 <i>Drosera glanduligera</i> ( <i>Pimpernel Sundew</i> )			
283.	13195 <i>Drosera helodes</i>			
284.	3101 <i>Drosera heterophylla</i> ( <i>Swamp Rainbow</i> )			
285.	3106 <i>Drosera macrantha</i> ( <i>Bridal Rainbow</i> )			
286.	3109 <i>Drosera menziesii</i> ( <i>Pink Rainbow</i> )			
287.	3113 <i>Drosera neesii</i> ( <i>Jewel Rainbow</i> )			
288.	3114 <i>Drosera nitidula</i> ( <i>Shining Sundew</i> )			
289.	3115 <i>Drosera occidentalis</i> ( <i>Western Sundew</i> )		P4	
290.	29178 <i>Drosera porrecta</i>			

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291.	3128 <i>Drosera ramellosa</i> (Branched Sundew)			
292.	8911 <i>Drosera rosulata</i>			
293.	<i>Drosera</i> sp.			
294.	49090 <i>Drosera</i> sp. Branched styles (S.C. Coffey 193)			
295.	3131 <i>Drosera stolonifera</i> (Leafy Sundew)			
296.	13205 <i>Drosera tubaestylis</i>			
297.	3135 <i>Drosera zonaria</i> (Painted Sundew)			
<b>Elaeocarpaceae</b>				
298.	4524 <i>Platytheca galioides</i>			
299.	48342 <i>Tetratheca hirsuta</i> subsp. <i>hirsuta</i>			
300.	4537 <i>Tetratheca nuda</i>			
<b>Elatinaceae</b>				
301.	5187 <i>Elatine gratioloides</i> (Waterwort)			
<b>Ericaceae</b>				
302.	6300 <i>Andersonia aristata</i> (Rice Flower)			
303.	6309 <i>Andersonia gracilis</i>		T	
304.	6312 <i>Andersonia involucrata</i>			
305.	11471 <i>Andersonia lehmanniana</i> subsp. <i>lehmanniana</i>			
306.	6327 <i>Astroloma foliosum</i> (Candle Cranberry)			
307.	6330 <i>Astroloma macrocalyx</i> (Swan Berry)			
308.	6334 <i>Astroloma pallidum</i> (Kick Bush)			
309.	6337 <i>Astroloma stomarrhena</i> (Red Swamp Cranberry)			
310.	6341 <i>Brachyloma preissii</i> (Globe Heath)			
311.	6347 <i>Conostephium minus</i> (Pink-tipped Pearl flower)			
312.	6348 <i>Conostephium pendulum</i> (Pearl Flower)			
313.	6349 <i>Conostephium preissii</i>			
314.	6374 <i>Leucopogon conostephioides</i>			
315.	6397 <i>Leucopogon glaucifolius</i>			
316.	6427 <i>Leucopogon parviflorus</i> (Coast Beard-heath)			
317.	6444 <i>Leucopogon sprengelioides</i>			
318.	6445 <i>Leucopogon squarrosus</i>			
319.	40803 <i>Leucopogon squarrosus</i> subsp. <i>squarrosus</i>			
320.	6456 <i>Lysinema ciliatum</i> (Curry Flower)			
321.	34736 <i>Lysinema pentapetalum</i>			
322.	48297 <i>Styphelia filifolia</i>		P3	
323.	6476 <i>Styphelia tenuiflora</i> (Common Pinheath)			
<b>Euphorbiaceae</b>				
324.	16492 <i>Calycopeplus paucifolius</i>			
325.	29940 <i>Euphorbia maculata</i>	Y		
326.	34757 <i>Euphorbia prostrata</i>	Y		
327.	4648 <i>Euphorbia terracina</i> (Geraldton Carnation Weed)	Y		
328.	4662 <i>Monotaxis grandiflora</i> (Diamond of the Desert)			
329.	19585 <i>Monotaxis grandiflora</i> var. <i>grandiflora</i>			
330.	4716 <i>Stachystemon vermicularis</i>			
<b>Fabaceae</b>				
331.	15466 <i>Acacia applanata</i>			
332.	3294 <i>Acacia dentifera</i>			
333.	11926 <i>Acacia drewiana</i> subsp. <i>drewiana</i>			
334.	3373 <i>Acacia horridula</i>		P3	
335.	3374 <i>Acacia huegelii</i>			
336.	3382 <i>Acacia incrassata</i>			
337.	3409 <i>Acacia lasiocarpa</i> (Panjang)			
338.	11611 <i>Acacia lasiocarpa</i> var. <i>lasiocarpa</i>			
339.	17861 <i>Acacia longifolia</i>	Y		
340.	17464 <i>Acacia longifolia</i> subsp. <i>longifolia</i>	Y		
341.	3464 <i>Acacia obovata</i>			
342.	17860 <i>Acacia podalyriifolia</i>	Y		
343.	15481 <i>Acacia pulchella</i> var. <i>glaberrima</i>			
344.	15483 <i>Acacia pulchella</i> var. <i>pulchella</i>			
345.	3527 <i>Acacia saligna</i> (Orange Wattle, Kudjong)			
346.	30033 <i>Acacia saligna</i> subsp. <i>lindleyi</i>			
347.	30032 <i>Acacia saligna</i> subsp. <i>saligna</i>			
348.	3541 <i>Acacia sessilis</i>			
349.	3557 <i>Acacia stenoptera</i> (Narrow Winged Wattle)			
350.	3574 <i>Acacia teretifolia</i>			
351.	3602 <i>Acacia willdenowiana</i> (Grass Wattle)			
352.	3686 <i>Aotus cordifolia</i>			
353.	3688 <i>Aotus gracillima</i>			

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354.	3710 <i>Bossiaea eriocarpa</i> (Common Brown Pea)			
355.	3753 <i>Chorizema dicksonii</i> (Yellow-eyed Flame Pea)			
356.	35838 <i>Cristonia biloba</i> subsp. <i>biloba</i>			
357.	3793 <i>Daviesia angulata</i>			
358.	3799 <i>Daviesia cordata</i> (Bookleaf)			
359.	19747 <i>Daviesia decurrens</i> subsp. <i>decurrens</i>			
360.	3807 <i>Daviesia divaricata</i> (Marmo)			
361.	18560 <i>Daviesia divaricata</i> subsp. <i>divaricata</i>			
362.	3815 <i>Daviesia horrida</i> (Prickly Bitter-pea)			
363.	3824 <i>Daviesia nudiflora</i>			
364.	16585 <i>Daviesia nudiflora</i> subsp. <i>nudiflora</i>			
365.	3832 <i>Daviesia physodes</i>			
366.	3845 <i>Daviesia triflora</i>			
367.	3867 <i>Dipogon lignosus</i> (Dolichos Pea)	Y		
368.	48633 <i>Erythrina crista-galli</i>	Y		Y
369.	18299 <i>Erythrina x sykesii</i>	Y		
370.	3872 <i>Euchilopsis linearis</i> (Swamp Pea)			
371.	3880 <i>Eutaxia virgata</i>			
372.	3887 <i>Gastrolobium acutum</i>			
373.	20475 <i>Gastrolobium capitatum</i>			
374.	20483 <i>Gastrolobium linearifolium</i>			
375.	3923 <i>Gastrolobium spathulatum</i> (Poison Bush)			
376.	10909 <i>Gompholobium confertum</i>			
377.	3950 <i>Gompholobium knightianum</i>			
378.	3951 <i>Gompholobium marginatum</i>			
379.	3956 <i>Gompholobium shuttleworthii</i>			
380.	3957 <i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
381.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
382.	3966 <i>Hovea pungens</i> (Devil's Pins, Puyenak)			
383.	3968 <i>Hovea trisperma</i> (Common Hovea)			
384.	12859 <i>Hovea trisperma</i> var. <i>trisperma</i>			
385.	3992 <i>Isotropis cuneifolia</i> (Granny Bonnets)			
386.	16317 <i>Isotropis cuneifolia</i> subsp. <i>glabra</i>		P3	
387.	3998 <i>Jacksonia angulata</i>			
388.	4010 <i>Jacksonia floribunda</i> (Holly Pea)			
389.	4012 <i>Jacksonia furcellata</i> (Grey Stinkwood)			
390.	20462 <i>Jacksonia gracillima</i>		P3	
391.	4018 <i>Jacksonia lehmannii</i>			
392.	4025 <i>Jacksonia restioides</i>			
393.	4029 <i>Jacksonia sternbergiana</i> (Stinkwood, Kapur)			
394.	4044 <i>Kennedia prostrata</i> (Scarlet Runner)			
395.	3669 <i>Labichea punctata</i> (Lance-leaved Cassia)			
396.	4052 <i>Latrobea tenella</i>			
397.	4059 <i>Lotus angustissimus</i> (Narrowleaf Trefoil)	Y		
398.	8564 <i>Lotus subbiflorus</i>	Y		
399.	4067 <i>Lupinus luteus</i> (Yellow Lupin)	Y		
400.	4079 <i>Medicago polymorpha</i> (Burr Medic)	Y		
401.	4080 <i>Medicago sativa</i> (Alfalfa)	Y		
402.	4100 <i>Mirbelia spinosa</i>			
403.	4172 <i>Pultenaea ericifolia</i>			
404.	4181 <i>Pultenaea reticulata</i>			
405.	17020 <i>Robinia pseudoacacia</i>	Y		
406.	4205 <i>Sphaerolobium linophyllum</i>			
407.	4206 <i>Sphaerolobium macranthum</i>			
408.	4251 <i>Templetonia drummondii</i>			
409.	17145 <i>Trifolium angustifolium</i> var. <i>angustifolium</i>	Y		
410.	4291 <i>Trifolium arvense</i> (Hare's Foot Clover)	Y		
411.	4292 <i>Trifolium campestre</i> (Hop Clover)	Y		
412.	4295 <i>Trifolium dubium</i> (Suckling Clover)	Y		
413.	4297 <i>Trifolium glomeratum</i> (Cluster Clover)	Y		
414.	4322 <i>Vicia sativa</i> (Common Vetch)	Y		
415.	12070 <i>Vicia sativa</i> subsp. <i>sativa</i>	Y		
416.	29491 <i>Vicia tetrasperma</i>	Y		Y
417.	4325 <i>Viminaria juncea</i> (Swishbush, Koweda)			

#### Fissidentaceae

418.	32368 <i>Fissidens taylorii</i>
419.	32469 <i>Fissidens taylorii</i> var. <i>taylorii</i>

#### Funariaceae

420.	32370 <i>Funaria hygrometrica</i>
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<b>Gentianaceae</b>				
421.	6539 <i>Centaurium erythraea</i> (Common Centaury)	Y		
422.	6542 <i>Centaurium tenuiflorum</i>	Y		
423.	6543 <i>Cicendia filiformis</i> (Slender Cicendia)	Y		
<b>Goodeniaceae</b>				
424.	12724 <i>Anthotium junciforme</i>			
425.	7454 <i>Dampiera linearis</i> (Common Dampiera)			
426.	7462 <i>Dampiera pedunculata</i>			
427.	29362 <i>Goodenia coerulea</i>			
428.	7517 <i>Goodenia incana</i> (Hoary Goodenia)			
429.	12551 <i>Goodenia micrantha</i>			
430.	7538 <i>Goodenia pulchella</i>			
431.	19286 <i>Goodenia pulchella</i> subsp. Coastal Plain A (M. Hislop 634)			
432.	19284 <i>Goodenia pulchella</i> subsp. Coastal Plain B (L.W. Sage 2336)			
433.	7568 <i>Lechenaultia biloba</i> (Blue Leschenaultia)			
434.	7613 <i>Scaevola glandulifera</i> (Viscid Hand-flower)			
435.	7619 <i>Scaevola lanceolata</i> (Long-leaved Scaevola)			
436.	13182 <i>Scaevola repens</i> var. <i>repens</i>			
437.	7665 <i>Velleia trinervis</i>			
<b>Haemodoraceae</b>				
438.	11470 <i>Anigozanthos bicolor</i> subsp. <i>bicolor</i>			
439.	1409 <i>Anigozanthos humilis</i> (Catspaw)			
440.	11434 <i>Anigozanthos humilis</i> subsp. <i>humilis</i>			
441.	1411 <i>Anigozanthos manglesii</i> (Mangles Kangaroo Paw, Kurulbrang)			
442.	11261 <i>Anigozanthos manglesii</i> subsp. <i>manglesii</i>			
443.	1416 <i>Anigozanthos viridis</i> (Green Kangaroo Paw, Kurulbardang)			
444.	11566 <i>Anigozanthos viridis</i> subsp. <i>viridis</i>			
445.	1417 <i>Blancoa canescens</i> (Winter Bell)			
446.	11826 <i>Conostylis aculeata</i> subsp. <i>aculeata</i>			
447.	1420 <i>Conostylis androstemma</i> (Trumpets)			
448.	1423 <i>Conostylis aurea</i> (Golden Conostylis)			
449.	1429 <i>Conostylis caricina</i>			
450.	12035 <i>Conostylis caricina</i> subsp. <i>caricina</i>			
451.	11695 <i>Conostylis festucacea</i> subsp. <i>festucacea</i>			
452.	1436 <i>Conostylis juncea</i>			
453.	1437 <i>Conostylis latens</i>			
454.	1454 <i>Conostylis setigera</i> (Bristly Cottonhead)			
455.	11597 <i>Conostylis setigera</i> subsp. <i>setigera</i>			
456.	<i>Conostylis</i> sp.			
457.	1464 <i>Haemodorum brevisepalum</i>			
458.	1468 <i>Haemodorum laxum</i>			
459.	1469 <i>Haemodorum loratum</i>		P3	
460.	1472 <i>Haemodorum simplex</i>			
461.	1474 <i>Haemodorum sparsiflorum</i>			
462.	1475 <i>Haemodorum spicatum</i> (Mardja)			
463.	1478 <i>Phlebocarya ciliata</i>			
464.	1479 <i>Phlebocarya filifolia</i>			
465.	1481 <i>Tribonanthes australis</i> (Southern Tiurmdin)			
466.	1482 <i>Tribonanthes brachypetala</i> (Nodding Tiurmdin)			
467.	1483 <i>Tribonanthes longipetala</i> (Branching Tiurmdin)			
468.	8798 <i>Tribonanthes uniflora</i> (Woolly Tiurmdin)			
469.	8799 <i>Tribonanthes variabilis</i> (Hairy-stigma Tiurmdin)			
470.	1485 <i>Tribonanthes violacea</i> (Violet Tiurmdin)			
<b>Haloragaceae</b>				
471.	6143 <i>Glischrocaryon aureum</i> (Common Popflower)			
472.	6149 <i>Gonocarpus cordiger</i>			
473.	6159 <i>Gonocarpus nodulosus</i>			
474.	6160 <i>Gonocarpus paniculatus</i>			
475.	6161 <i>Gonocarpus pithyoides</i>			
476.	33638 <i>Meionectes tenuifolia</i>		P3	
477.	6189 <i>Myriophyllum crispatum</i>			
478.	6193 <i>Myriophyllum echinatum</i>		P3	
<b>Hemerocallidaceae</b>				
479.	23474 <i>Agrostocrinum hirsutum</i>			
480.	1261 <i>Agrostocrinum scabrum</i> (Blue Grass Lily)			
481.	23501 <i>Agrostocrinum scabrum</i> subsp. <i>scabrum</i>			
482.	1264 <i>Arnocrinum preissii</i>			
483.	1276 <i>Caesia micrantha</i> (Pale Grass Lily)			

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484.	1277 <i>Caesia occidentalis</i>			
485.	1298 <i>Johnsonia pubescens</i> (Pipe Lily)			
486.	19632 <i>Johnsonia pubescens</i> subsp. <i>pubescens</i>			
487.	1260 <i>Stypantra glauca</i> (Blind Grass)			
488.	1361 <i>Tricoryne elatior</i> (Yellow Autumn Lily)			
489.	1362 <i>Tricoryne humilis</i>			
490.	1363 <i>Tricoryne tenella</i>			
<b>Hydatellaceae</b>				
491.	1139 <i>Trithuria bibracteata</i>			
492.	1141 <i>Trithuria submersa</i>			
<b>Hydrocharitaceae</b>				
493.	168 <i>Ottelia ovalifolia</i> (Swamp Lily)			
494.	14531 <i>Ottelia ovalifolia</i> subsp. <i>ovalifolia</i>			
<b>Hypoxidaceae</b>				
495.	43760 <i>Pauridia occidentalis</i>			
496.	43761 <i>Pauridia occidentalis</i> var. <i>occidentalis</i>			
<b>Iridaceae</b>				
497.	18279 <i>Babiana angustifolia</i>	Y		
498.	1513 <i>Chasmanthe floribunda</i> (African Cornflag)	Y		
499.	1518 <i>Gladiolus angustus</i> (Long Tubed Painted Lady)	Y		
500.	18298 <i>Gladiolus carneus</i>	Y		
501.	1520 <i>Gladiolus caryophyllaceus</i> (Wild Gladiolus)	Y		
502.	1526 <i>Hesperantha falcata</i>	Y		
503.	19179 <i>Moraea flaccida</i> (One-leaf Cape Tulip)	Y		
504.	19178 <i>Moraea lewisiae</i>	Y		
505.	19438 <i>Moraea ochroleuca</i>	Y		
506.	11749 <i>Orthrosanthus laxus</i> var. <i>laxus</i> (Morning Iris)			
507.	1546 <i>Patersonia juncea</i> (Rush Leaved Patersonia)			
508.	1550 <i>Patersonia occidentalis</i> (Purple Flag, Koma)			
509.	30472 <i>Patersonia occidentalis</i> var. <i>occidentalis</i>			
510.	1556 <i>Romulea rosea</i> (Guildford Grass)	Y		
511.	1558 <i>Sparaxis bulbifera</i>	Y		
512.	13103 <i>Watsonia borbonica</i>	Y		
513.	1566 <i>Watsonia marginata</i>	Y		
514.	1567 <i>Watsonia meriana</i> (Bulbil Watsonia)	Y		
515.	18108 <i>Watsonia meriana</i> var. <i>bulbillifera</i>	Y		
516.	18118 <i>Watsonia meriana</i> var. <i>meriana</i>	Y		
517.	1569 <i>Watsonia versfeldii</i>	Y		
<b>Juncaceae</b>				
518.	1178 <i>Juncus bufonius</i> (Toad Rush)	Y		
519.	1180 <i>Juncus capitatus</i> (Capitate Rush)	Y		
520.	11922 <i>Juncus kraussii</i> subsp. <i>australiensis</i>			
521.	1188 <i>Juncus pallidus</i> (Pale Rush)			
522.	1196 <i>Juncus usitatus</i> (Common Rush)	Y		
<b>Juncaginaceae</b>				
523.	40661 <i>Cycnogeton lineare</i>			
524.	33676 <i>Triglochin calcitrapa</i>			
525.	33677 <i>Triglochin centrocarpa</i>			
526.	147 <i>Triglochin mucronata</i>			
527.	148 <i>Triglochin muelleri</i>			
528.	18587 <i>Triglochin nana</i>			
529.	<i>Triglochin</i> sp. <i>scps</i>			
530.	<i>Triglochin</i> sp. <i>Brixton 04</i> (possibly <i>T. mullerii</i> )			Y
531.	150 <i>Triglochin stowardii</i>			
532.	151 <i>Triglochin striata</i>			
<b>Lamiaceae</b>				
533.	16933 <i>Hemiandra glabra</i>			
534.	6838 <i>Hemiandra linearis</i> (Speckled Snakebush)			
535.	6839 <i>Hemiandra pungens</i> (Snakebush)			
536.	41020 <i>Hemiphora bartlingii</i> (Woolly Dragon)			
537.	6930 <i>Stachys arvensis</i> (Staggerweed)	Y		
<b>Lauraceae</b>				
538.	11351 <i>Cassytha aurea</i> var. <i>hirta</i>			
539.	2951 <i>Cassytha flava</i> (Dodder Laurel)			
540.	2952 <i>Cassytha glabella</i> (Tangled Dodder Laurel)			
541.	11501 <i>Cassytha glabella</i> forma <i>casuarinae</i>			



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542.	2957 <i>Cassytha racemosa</i> (Dodder Laurel)			
543.	11242 <i>Cassytha racemosa forma pilosa</i>			
544.	11799 <i>Cassytha racemosa forma racemosa</i>			
545.	<i>Cassytha sp. scps</i>			Y
<b>Lentibulariaceae</b>				
546.	<i>Polypompholyx tenella scps</i>			
547.	7138 <i>Utricularia inaequalis</i>			
548.	7148 <i>Utricularia multifida</i>			
549.	7153 <i>Utricularia tenella</i>			
<b>Linaceae</b>				
550.	4363 <i>Linum trigynum</i> (French Flax)	Y		
<b>Loganiaceae</b>				
551.	16825 <i>Phyllangium divergens</i>			
<b>Loranthaceae</b>				
552.	13267 <i>Amyema linophylla subsp. linophylla</i>			
553.	2401 <i>Nuytsia floribunda</i> (Christmas Tree, Mudja)			
<b>Lycopodiaceae</b>				
554.	4 <i>Phylloglossum drummondii</i> (Pigmy Clubmoss)			
<b>Lythraceae</b>				
555.	5281 <i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
<b>Macarthuraceae</b>				
556.	2839 <i>Macarthuria australis</i>			
557.	17106 <i>Macarthuria keigheryi</i>			T
<b>Malvaceae</b>				
558.	19708 <i>Abutilon grandifolium</i>	Y		
559.	5025 <i>Lasiopetalum bracteatum</i> (Helena Velvet Bush)		P4	
560.	45081 <i>Lasiopetalum glutinosum subsp. glutinosum</i>		P3	
561.	4959 <i>Lawrencia squamata</i>			
562.	4963 <i>Modiola caroliniana</i>	Y		
563.	4980 <i>Sida hookeriana</i>			
564.	5087 <i>Thomasia macrocarpa</i> (Large Fruited Thomasia)			
<b>Marsileaceae</b>				
565.	78 <i>Piilaria novae-hollandiae</i> (Austral Pillwort)			
<b>Meliaceae</b>				
566.	4516 <i>Melia azedarach</i> (White Cedar)			
<b>Menyanthaceae</b>				
567.	36160 <i>Liparophyllum capitatum</i>			
568.	36177 <i>Ornduffia albiflora</i>			
569.	36200 <i>Ornduffia submersa</i>		P4	
<b>Montiaceae</b>				
570.	2848 <i>Calandrinia corrigioloides</i> (Strap Purslane)			
571.	2854 <i>Calandrinia granulifera</i> (Pygmy Purslane)			
572.	2856 <i>Calandrinia liniflora</i> (Parakeelya)			
573.	16365 <i>Calandrinia sp. Kenwick</i> (G.J. Keighery 10905)			
574.	20096 <i>Calandrinia sp. Piawaning</i> (A.C. Beauglehole 12257)			P1
<b>Myrtaceae</b>				
575.	<i>Astartea aff. fascicularis sthctst</i>			
576.	20350 <i>Astartea affinis</i> (West-coast Astartea)			
577.	20249 <i>Astartea leptophylla</i> (River-bank Astartea)			
578.	20283 <i>Astartea scoparia</i> (Common Astartea)			
579.	36441 <i>Babingtonia camphorosmae</i> (Camphor Myrtle)			
580.	45403 <i>Babingtonia pelloeae</i> (Pelloe's Babingtonia)			
581.	45402 <i>Babingtonia urbana</i> (Coastal Plain Babingtonia)		P3	
582.	5387 <i>Beaufortia macrostemon</i> (Darling Range Beaufortia)			
583.	5393 <i>Beaufortia squarrosa</i> (Sand Beaufortia, Sand Bottlebrush, Puno)			
584.	5411 <i>Calothamnus hirsutus</i>			
585.	5415 <i>Calothamnus lateralis</i>			
586.	35816 <i>Calothamnus quadrifidus subsp. quadrifidus</i>			
587.	5431 <i>Calothamnus torulosus</i>			
588.	5439 <i>Calytrix angulata</i> (Yellow Starflower)			
589.	5441 <i>Calytrix aurea</i>			
590.	13653 <i>Calytrix breviseta subsp. breviseta</i>			T
591.	5458 <i>Calytrix flavescens</i> (Summer Starflower)			
592.	5461 <i>Calytrix glutinosa</i>			

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593.	5476 <i>Calytrix sapphirina</i>			
594.	5498 <i>Chamelaucium uncinatum</i> (Geraldton Wax)			
595.	5502 <i>Conothamnus trinervis</i>			
596.	17104 <i>Corymbia calophylla</i> (Marr)			
597.	5508 <i>Darwinia citriodora</i> (Lemon-scented Darwinia)			
598.	5540 <i>Eremaea fimbriata</i>			
599.	14103 <i>Eremaea pauciflora</i> var. <i>calyptra</i>			
600.	14104 <i>Eremaea pauciflora</i> var. <i>pauciflora</i>			
601.	17359 <i>Eucalyptus botryoides</i>	Y		
602.	5580 <i>Eucalyptus camaldulensis</i> (River Gum, Yabalinyba)			
603.	48440 <i>Eucalyptus grandis</i>	Y		
604.	5708 <i>Eucalyptus marginata</i> (Jarrah, Djara)			
605.	13547 <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
606.	5763 <i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
607.	13511 <i>Eucalyptus rudis</i> subsp. <i>rudis</i>			
608.	5790 <i>Eucalyptus todtiana</i> (Coastal Blackbutt)			
609.	5817 <i>Hypocalymma angustifolium</i> (White Myrtle, Kudjid)			
610.	35070 <i>Hypocalymma angustifolium</i> subsp. <i>Swan Coastal Plain</i> (G.J. Keighery 16777)			
611.	5825 <i>Hypocalymma robustum</i> (Swan River Myrtle)			
612.	5832 <i>Kunzea ericifolia</i> (Spearwood, Pondil)			
613.	15498 <i>Kunzea glabrescens</i> (Spearwood)			
614.	5835 <i>Kunzea micrantha</i>			
615.	17461 <i>Kunzea micrantha</i> subsp. <i>micrantha</i>			
616.	17785 <i>Kunzea micrantha</i> subsp. <i>petiolata</i>			
617.	37580 <i>Melaleuca acutifolia</i>			
618.	19721 <i>Melaleuca armillaris</i>	Y		
619.	5881 <i>Melaleuca brevifolia</i>			
620.	40780 <i>Melaleuca citrina</i>	Y		
621.	13273 <i>Melaleuca incana</i> subsp. <i>incana</i>			
622.	5926 <i>Melaleuca lateritia</i> (Robin Redbreast Bush)			
623.	5932 <i>Melaleuca leucadendra</i>			
624.	5943 <i>Melaleuca nesophila</i> (Mindiyed)			
625.	20297 <i>Melaleuca osullivanii</i>			
626.	18394 <i>Melaleuca parviceps</i>			
627.	5952 <i>Melaleuca preissiana</i> (Moonah)			
628.	48990 <i>Melaleuca quinquenervia</i>	Y		
629.	5958 <i>Melaleuca radula</i> (Graceful Honeymyrtle)			
630.	5959 <i>Melaleuca raphiophylla</i> (Swamp Paperbark)			
631.	5961 <i>Melaleuca scabra</i> (Rough Honeymyrtle, Wurru Bush)			
632.	5964 <i>Melaleuca seriata</i>			
633.	37683 <i>Melaleuca viminalis</i>		P2	
634.	5987 <i>Melaleuca viminea</i> (Mohan)			
635.	13280 <i>Melaleuca viminea</i> subsp. <i>viminea</i>			
636.	16478 <i>Pericalymma ellipticum</i> var. <i>floridum</i>			
637.	6012 <i>Regelia ciliata</i>			
638.	6033 <i>Scholtzia involucrata</i> (Spiked Scholtzia)			
639.	6070 <i>Verticordia acerosa</i>			
640.	15431 <i>Verticordia acerosa</i> var. <i>acerosa</i>			
641.	12388 <i>Verticordia acerosa</i> var. <i>preissii</i>			
642.	6076 <i>Verticordia densiflora</i> (Compacted Featherflower)			
643.	15432 <i>Verticordia densiflora</i> var. <i>densiflora</i>			
644.	6088 <i>Verticordia huegelii</i> (Variegated Featherflower)			
645.	15433 <i>Verticordia huegelii</i> var. <i>huegelii</i>			
646.	14714 <i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>		P4	
647.	6107 <i>Verticordia pennigera</i>			
648.	6110 <i>Verticordia plumosa</i> (Plumed Featherflower)			
649.	12449 <i>Verticordia plumosa</i> var. <i>brachyphylla</i>			
<b>Nymphaeaceae</b>				
650.	2923 <i>Nymphaea odorata</i> (Fragrant Waterlily)	Y		
<b>Olacaceae</b>				
651.	2365 <i>Olax benthamiana</i>			
652.	2367 <i>Olax scalariformis</i>			
<b>Onagraceae</b>				
653.	6132 <i>Epilobium ciliatum</i>	Y		
654.	6133 <i>Epilobium hirtigerum</i> (Hairy Willow Herb)			
655.	14289 <i>Epilobium tetragonum</i> subsp. <i>tetragonum</i>	Y		
656.	44680 <i>Ludwigia repens</i>	Y		
657.	6138 <i>Oenothera drummondii</i> (Beach Evening Primrose)	Y		
658.	16390 <i>Oenothera drummondii</i> subsp. <i>drummondii</i>	Y		

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659.	20052 <i>Oenothera jamesii</i>	Y		
660.	16347 <i>Oenothera laciniata</i>	Y		
661.	6140 <i>Oenothera mollissima</i>	Y		
662.	6142 <i>Oenothera stricta</i> (Common Evening Primrose)	Y		
663.	14292 <i>Oenothera stricta</i> subsp. <i>stricta</i>	Y		

**Ophioglossaceae**

664.	17 <i>Ophioglossum lusitanicum</i> (Adders Tongue)			
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**Orchidaceae**

665.	15330 <i>Caladenia arenicola</i>			
666.	1586 <i>Caladenia discoidea</i> (Dancing Orchid)			
667.	1590 <i>Caladenia ferruginea</i> (Rusty Spider Orchid)			
668.	1592 <i>Caladenia flava</i> (Cowslip Orchid)			
669.	15348 <i>Caladenia flava</i> subsp. <i>flava</i>			
670.	15354 <i>Caladenia hirta</i> subsp. <i>hirta</i>			
671.	1596 <i>Caladenia huegelii</i> (Grand Spider Orchid)		T	
672.	15365 <i>Caladenia longicauda</i> subsp. <i>longicauda</i>			
673.	17760 <i>Caladenia nobilis</i>			
674.	15503 <i>Caladenia paludosa</i>			
675.	15114 <i>Cyanicula gemmata</i>			
676.	19649 <i>Disa bracteata</i>	Y		
677.	12943 <i>Diuris brumalis</i>			
678.	11049 <i>Diuris corymbosa</i>			
679.	42231 <i>Diuris decremanta</i>			
680.	1634 <i>Diuris laxiflora</i> (Bee Orchid)			
681.	12939 <i>Diuris magnifica</i>			
682.	1637 <i>Diuris purdiei</i> (Purdie's Donkey Orchid)		T	
683.	15406 <i>Drakaea gracilis</i>			
684.	1643 <i>Elythranthera brunonis</i> (Purple Enamel Orchid)			
685.	1645 <i>Epiblema grandiflorum</i> (Babe-in-a-cradle)			
686.	15414 <i>Eriochilus helonomos</i>			
687.	1653 <i>Leporella fimbriata</i> (Hare Orchid)			
688.	1656 <i>Lyperanthus serratus</i> (Rattle Beak Orchid)			
689.	1658 <i>Microtis atrata</i> (Swamp Mignonette Orchid)			
690.	10954 <i>Microtis media</i> (Tall Mignonette Orchid)			
691.	15419 <i>Microtis media</i> subsp. <i>media</i>			
692.	20460 <i>Pheladenia deformis</i>			
693.	1670 <i>Prasophyllum drummondii</i> (Swamp Leek Orchid)			
694.	1680 <i>Prasophyllum parvifolium</i> (Autumn Leek Orchid)			
695.	10853 <i>Prasophyllum plumiforme</i>			
696.	1686 <i>Pterostylis barbata</i> (Bird Orchid)			
697.	44527 <i>Pterostylis erubescens</i>			
698.	11118 <i>Pterostylis pyramidalis</i> (Snail Orchid)			
699.	1693 <i>Pterostylis recurva</i> (Jug Orchid)			
700.	12217 <i>Pterostylis sanguinea</i>			
701.	<i>Pterostylis</i> sp.			
702.	1698 <i>Pterostylis vittata</i> (Banded Greenhood)			
703.	16367 <i>Pyrorchis nigricans</i> (Red beaks, Elephants ears)			
704.	1701 <i>Thelymitra antennifera</i> (Vanilla Orchid)			
705.	1705 <i>Thelymitra crinita</i> (Blue Lady Orchid)			
706.	1707 <i>Thelymitra flexuosa</i> (Twisted Sun Orchid)			
707.	11053 <i>Thelymitra macrophylla</i>			
708.	20729 <i>Thelymitra magnifica</i> (Crystal Brook Star Orchid)		P1	
709.	<i>Thelymitra</i> sp.			
710.	1715 <i>Thelymitra spiralis</i> (Curlylocks)			
711.	10862 <i>Thelymitra stellata</i> (Star Orchid)		T	
712.	1718 <i>Thelymitra villosa</i> (Custard Orchid)			
713.	20731 <i>Thelymitra vulgaris</i>			

**Orobanchaceae**

714.	7046 <i>Bellardia trixago</i> (Bellardia)	Y		
715.	48868 <i>Bellardia viscosa</i>	Y		
716.	7089 <i>Parentucellia latifolia</i> (Common Bartsia)	Y		

**Oxalidaceae**

717.	4349 <i>Oxalis corniculata</i> (Yellow Wood Sorrel)	Y		
718.	4352 <i>Oxalis glabra</i>	Y		
719.	4356 <i>Oxalis pes-caprae</i> (Soursob)	Y		
720.	4358 <i>Oxalis purpurea</i> (Largeflower Wood Sorrel)	Y		

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<b>Papaveraceae</b>				
721.	8365 <i>Fumaria bastardii</i>	Y		
722.	2969 <i>Fumaria capreolata</i> (Whiteflower Fumitory)	Y		
723.	31532 <i>Fumaria muralis</i> subsp. <i>muralis</i>	Y		
724.	<i>Fumaria</i> sp.			
<b>Philydraceae</b>				
725.	1172 <i>Philydrella drummondii</i>			
726.	1173 <i>Philydrella pygmaea</i> (Butterfly Flowers)			
727.	14306 <i>Philydrella pygmaea</i> subsp. <i>pygmaea</i>			
<b>Phymaceae</b>				
728.	7061 <i>Glossostigma drummondii</i> (Mudmat)			
<b>Phyllanthaceae</b>				
729.	4691 <i>Poranthera microphylla</i> (Small Poranthera)			
<b>Pittosporaceae</b>				
730.	25798 <i>Billardiera fusiformis</i> (Australian Bluebell)			
731.	3169 <i>Cheiranthra preissiana</i>			
<b>Plantaginaceae</b>				
732.	4717 <i>Callitriche stagnalis</i> (Common Starwort)	Y		
733.	14282 <i>Gratiola pubescens</i>			
734.	7303 <i>Plantago lanceolata</i> (Ribwort Plantain)	Y		
<b>Poaceae</b>				
735.	184 <i>Aira caryophyllea</i> (Silvery Hairgrass)	Y		
736.	185 <i>Aira cupaniana</i> (Silvery Hairgrass)	Y		
737.	13380 <i>Amphibromus nervosus</i>			
738.	197 <i>Amphipogon debilis</i>			
739.	200 <i>Amphipogon turbinatus</i>			
740.	38480 <i>Austrostipa bronwenae</i>		T	
741.	17234 <i>Austrostipa compressa</i>			
742.	17237 <i>Austrostipa elegantissima</i>			
743.	17241 <i>Austrostipa hemipogon</i>			
744.	37421 <i>Austrostipa</i> sp. <i>Marchagee</i> (B.R. Maslin 1407)			
745.	17257 <i>Austrostipa variabilis</i>			
746.	233 <i>Avena barbata</i> (Bearded Oat)	Y		
747.	<i>Avena</i> sp. <i>Yule5</i>			Y
748.	244 <i>Briza maxima</i> (Blowfly Grass)	Y		
749.	245 <i>Briza minor</i> (Shivery Grass)	Y		
750.	248 <i>Bromus catharticus</i> (Prairie Grass)	Y		
751.	249 <i>Bromus diandrus</i> (Great Brome)	Y		
752.	250 <i>Bromus hordeaceus</i> (Soft Brome)	Y		
753.	41564 <i>Cenchrus clandestinus</i> (Kikuyu Grass)	Y		
754.	41563 <i>Cenchrus purpureus</i> (Elephant Grass)	Y		
755.	48259 <i>Cortaderia selloana</i> subsp. <i>selloana</i>	Y		
756.	283 <i>Cynodon dactylon</i> (Couch)	Y		
757.	48378 <i>Diplachne fusca</i> subsp. <i>fusca</i>			
758.	328 <i>Echinochloa colona</i> (Awnless Barnyard Grass)	Y		
759.	11105 <i>Echinochloa crus-galli</i>	Y		
760.	329 <i>Echinochloa crus-pavonis</i> (South American Barnyard Grass)	Y		
761.	337 <i>Echinochloa pyramidalis</i> (Antelope Grass)	Y		
762.	347 <i>Ehrharta calycina</i> (Perennial Veldt Grass)	Y		
763.	349 <i>Ehrharta longiflora</i> (Annual Veldt Grass)	Y		
764.	352 <i>Eleusine coracan</i> (Indian Millet)	Y		
765.	353 <i>Eleusine indica</i> (Crowsfoot Grass)	Y		
766.	374 <i>Eragrostis cilianensis</i> (Stinkgrass)	Y		
767.	376 <i>Eragrostis curvula</i> (African Lovegrass)	Y		
768.	379 <i>Eragrostis elongata</i> (Clustered Lovegrass)			
769.	17043 <i>Glyceria declinata</i>	Y		
770.	452 <i>Hyparrhenia hirta</i> (Tambookie Grass)	Y		
771.	20019 <i>Lachnagrostis filiformis</i>			
772.	19955 <i>Lachnagrostis plebeia</i>			
773.	475 <i>Lolium multiflorum</i> (Italian Ryegrass)	Y		
774.	<i>Lolium</i> sp.			
775.	11384 <i>Lolium temulentum</i> forma <i>temulentum</i>	Y		
776.	11073 <i>Lolium x hybridum</i>	Y		
777.	20639 <i>Megathyrus maximus</i> var. <i>maximus</i>	Y		
778.	14985 <i>Melinis repens</i>	Y		
779.	485 <i>Microlaena stipoides</i> (Weeping Grass)			
780.	492 <i>Neurachne alopecuroidea</i> (Foxtail Mulga Grass)			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
781.	527 <i>Paspalum dilatatum</i>	Y		
782.	528 <i>Paspalum distichum</i> (Water Couch)	Y		
783.	532 <i>Paspalum urvillei</i> (Vasey Grass)	Y		
784.	40422 <i>Pentameris pallida</i>	Y		
785.	551 <i>Phalaris minor</i> (Lesser Canary Grass)	Y		
786.	571 <i>Poa annua</i> (Winter Grass)	Y		
787.	582 <i>Polypogon monspeliensis</i> (Annual Beardgrass)	Y		
788.	583 <i>Polypogon tenellus</i>			
789.	11151 <i>Rostraria pumila</i>	Y		
790.	40431 <i>Rytidosperma acerosum</i>			
791.	40425 <i>Rytidosperma caespitosum</i>			
792.	40427 <i>Rytidosperma setaceum</i>			
793.	611 <i>Setaria sphacelata</i> (South African Pigeon Grass)	Y		
794.	616 <i>Sorghum bicolor</i> (Grain Sorghum)	Y		
795.	635 <i>Sporobolus virginicus</i> (Marine Couch)			
796.	11112 <i>Tribolium uniola</i>	Y		
797.	722 <i>Vulpia bromoides</i> (Squirrel Tail Fescue)	Y		
798.	724 <i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
799.	33101 <i>Vulpia myuros forma myuros</i>	Y		
<b>Polygalaceae</b>				
800.	4550 <i>Comesperma calymega</i> (Blue-spike Milkwort)			
801.	4551 <i>Comesperma ciliatum</i>			
802.	14663 <i>Comesperma griffinii</i>		P2	
803.	4560 <i>Comesperma rhadinocarpum</i> (Slender-fruited Comesperma)		P3	
804.	<i>Comesperma</i> sp. <i>Brix1R</i> (possibly <i>virigatum</i> )			Y
805.	4564 <i>Comesperma virgatum</i> (Milkwort)			
<b>Polygonaceae</b>				
806.	13911 <i>Persicaria decipiens</i>			
807.	2416 <i>Polygonum arenastrum</i> (Sand Wireweed)	Y		
808.	2419 <i>Polygonum aviculare</i> (Wireweed)	Y		
809.	2432 <i>Rumex conglomeratus</i> (Clustered Dock)	Y		
810.	2433 <i>Rumex crispus</i> (Curled Dock)	Y		
<b>Portulacaceae</b>				
811.	2884 <i>Portulaca oleracea</i> (Purslane, Wakati)			
<b>Potamogetonaceae</b>				
812.	48626 <i>Althenia australis</i>			
813.	109 <i>Potamogeton crispus</i> (Curly Pondweed)			
<b>Pottiaceae</b>				
814.	32315 <i>Barbula calycina</i>			
815.	32437 <i>Syntrichia antarctica</i>			
816.	32438 <i>Syntrichia pagorum</i>			
<b>Primulaceae</b>				
817.	36375 <i>Lysimachia arvensis</i> (Pimpernel)	Y		
818.	36373 <i>Lysimachia minima</i>	Y		
819.	6483 <i>Samolus junceus</i>			
<b>Proteaceae</b>				
820.	14970 <i>Adenanthos barbiger</i>			
821.	1775 <i>Adenanthos cygnorum</i> (Common Woollybush)			
822.	11837 <i>Adenanthos cygnorum</i> subsp. <i>cygnorum</i> (Common Woollybush)			
823.	32682 <i>Banksia armata</i> var. <i>armata</i>			
824.	1800 <i>Banksia attenuata</i> (Slender Banksia, Piara)			
825.	32576 <i>Banksia dallanneyi</i> (Couch Honeypot)			
826.	32580 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>dallanneyi</i>			
827.	32577 <i>Banksia dallanneyi</i> subsp. <i>dallanneyi</i> var. <i>mellicula</i>			
828.	1819 <i>Banksia grandis</i> (Bull Banksia, Pulgarla)			
829.	1822 <i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
830.	1823 <i>Banksia incana</i>			
831.	33399 <i>Banksia incana</i> var. <i>incana</i>			
832.	1834 <i>Banksia menziesii</i> (Firewood Banksia)			
833.	32211 <i>Banksia mimica</i> (Summer Honeypot)		T	
834.	32202 <i>Banksia nivea</i> (Honeypot Dryandra, Pudjarn)			
835.	32138 <i>Banksia pteridifolia</i> subsp. <i>vernalis</i>		P3	
836.	32080 <i>Banksia sessilis</i> var. <i>sessilis</i>			
837.	1852 <i>Banksia telmatiaea</i> (Swamp Fox Banksia)			
838.	1855 <i>Banksia victoriae</i> (Woolly Orange Banksia)			
839.	15607 <i>Conospermum acerosum</i> subsp. <i>acerosum</i>			
840.	15041 <i>Conospermum canaliculatum</i>			



Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
841.	16853 <i>Conospermum capitatum</i> subsp. <i>glabratum</i>			
842.	1875 <i>Conospermum huegelii</i> (Slender Smokebush)			
843.	1882 <i>Conospermum stoechadis</i> (Common Smokebush)			
844.	1885 <i>Conospermum triplinervium</i> (Tree Smokebush)			
845.	13999 <i>Conospermum undulatum</i>		T	
846.	1964 <i>Grevillea bipinnatifida</i> (Fuchsia Grevillea)			
847.	19628 <i>Grevillea bipinnatifida</i> subsp. <i>bipinnatifida</i>			
848.	1997 <i>Grevillea endlicheriana</i> (Spindly Grevillea)			
849.	2032 <i>Grevillea leucopteris</i> (White Plume Grevillea)			
850.	2066 <i>Grevillea pilulifera</i> (Woolly-flowered Grevillea)			
851.	15839 <i>Grevillea preissii</i> subsp. <i>preissii</i>			
852.	2107 <i>Grevillea thelemanniana</i> (Spider Net Grevillea)		T	
853.	2136 <i>Hakea candolleana</i>			
854.	2137 <i>Hakea ceratophylla</i> (Horned Leaf Hakea)			
855.	2143 <i>Hakea conchifolia</i> (Shell-leaved Hakea)			
856.	2158 <i>Hakea erinacea</i> (Hedge-hog Hakea)			
857.	2166 <i>Hakea incrassata</i> (Marble Hakea)			
858.	2175 <i>Hakea lissocarpha</i> (Honey Bush)			
859.	2185 <i>Hakea myrtoidea</i> (Myrtle Hakea)			
860.	2197 <i>Hakea prostrata</i> (Harsh Hakea)			
861.	2203 <i>Hakea ruscifolia</i> (Candle Hakea)			
862.	31793 <i>Hakea</i> sp. Eastern coastal plain (G.J. Keighery 8014)			
863.	2212 <i>Hakea sulcata</i> (Furrowed Hakea)			
864.	2214 <i>Hakea trifurcata</i> (Two-leaf Hakea)			
865.	2215 <i>Hakea undulata</i> (Wavy-leaved Hakea)			
866.	2216 <i>Hakea varia</i> (Variable-leaved Hakea)			
867.	2221 <i>Isopogon asper</i>			
868.	29775 <i>Isopogon drummondii</i>		P3	
869.	2229 <i>Isopogon dubius</i> (Pincushion Coneflower)			
870.	2237 <i>Isopogon sphaerocephalus</i> (Drumstick Isopogon)			
871.	2249 <i>Lambertia multiflora</i> (Many-flowered Honeysuckle)			
872.	14083 <i>Lambertia multiflora</i> var. <i>darlingensis</i>			
873.	2255 <i>Persoonia angustiflora</i>			
874.	2262 <i>Persoonia elliptica</i> (Spreading Snottygobble)			
875.	2273 <i>Persoonia saccata</i> (Snottygobble)			
876.	2284 <i>Petrophile biloba</i> (Granite Petrophile)			
877.	20391 <i>Petrophile juncifolia</i>			
878.	2299 <i>Petrophile linearis</i> (Pixie Mops)			
879.	2301 <i>Petrophile macrostachya</i>			
880.	2308 <i>Petrophile seminuda</i>			
881.	2312 <i>Petrophile striata</i>			
882.	2316 <i>Stirlingia latifolia</i> (Blueboy)			
883.	2317 <i>Stirlingia simplex</i>			
884.	2321 <i>Synaphea acutiloba</i> (Granite Synaphea)			
885.	2324 <i>Synaphea petiolaris</i> (Synaphea)			
886.	16864 <i>Synaphea petiolaris</i> subsp. <i>petiolaris</i>			
887.	18590 <i>Synaphea</i> sp. Fairbridge Farm (D. Papenfus 696)		T	
888.	2329 <i>Synaphea spinulosa</i>			
889.	15532 <i>Synaphea spinulosa</i> subsp. <i>spinulosa</i>			
890.	2331 <i>Xylomelum occidentale</i> (Woody Pear, Djandin)			

**Pteridaceae**

891.	31	<i>Cheilanthes austrotenuifolia</i>		
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**Ranunculaceae**

892.	2933	<i>Ranunculus muricatus</i> (Sharp Buttercup)	Y	
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**Restionaceae**

893.	1056	<i>Alexgeorgea nitens</i>		
894.	17685	<i>Chaetanthus aristatus</i>		
895.	17706	<i>Chordifex sinuosus</i>		
896.	17692	<i>Cytogonidium leptocarpoides</i>		
897.	17691	<i>Desmocladus fasciculatus</i>		
898.	46362	<i>Desmocladus lateriflorus</i>		
899.	17838	<i>Dielsia stenostachya</i>		
900.	1070	<i>Hypolaena exsulca</i>		
901.	17841	<i>Hypolaena pubescens</i>		
902.	1077	<i>Leptocarpus canus</i> (Hoary Twine-rush)		
903.	1078	<i>Leptocarpus coangustatus</i>		
904.	46375	<i>Leptocarpus decipiens</i>		
905.	1080	<i>Leptocarpus scariosus</i>		
906.	19241	<i>Lepyrodia curvescens</i>		

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
			P2	
907.	1085 <i>Lepyrodia glauca</i>			
908.	1088 <i>Lepyrodia macra</i> (Large Scale Rush)			
909.	1090 <i>Lepyrodia muirii</i>			
910.	17684 <i>Tremulina tremula</i>			
<b>Rhamnaceae</b>				
911.	13470 <i>Cryptandra arbutiflora</i> var. <i>arbutiflora</i>			
912.	4809 <i>Cryptandra pungens</i>			
913.	13475 <i>Stenanthemum humile</i>			
914.	13479 <i>Trymalium ledifolium</i> var. <i>rosmarinifolium</i>			
915.	33418 <i>Trymalium odoratissimum</i> subsp. <i>odoratissimum</i>			
<b>Rosaceae</b>				
916.	20496 <i>Rubus laudatus</i>	Y		
<b>Rubiaceae</b>				
917.	18254 <i>Opercularia apiciflora</i>			
918.	18255 <i>Opercularia vaginata</i> (Dog Weed)			
<b>Rutaceae</b>				
919.	4413 <i>Boronia crenulata</i> (Aniseed Boronia)			
920.	11503 <i>Boronia crenulata</i> subsp. <i>crenulata</i> var. <i>crenulata</i>			
921.	16636 <i>Boronia crenulata</i> subsp. <i>viminea</i>			
922.	4414 <i>Boronia cymosa</i> (Granite Boronia)			
923.	17665 <i>Boronia purdieana</i> subsp. <i>purdieana</i>			
924.	4438 <i>Boronia ramosa</i>			
925.	11381 <i>Boronia ramosa</i> subsp. <i>anethifolia</i>			
926.	18529 <i>Philotheca spicata</i> (Pepper and Salt)			
<b>Sapindaceae</b>				
927.	18589 <i>Diplopeltis huegelii</i> subsp. <i>lehmannii</i>			
<b>Scrophulariaceae</b>				
928.	17150 <i>Eremophila glabra</i> subsp. <i>chlorella</i>		T	
<b>Selaginellaceae</b>				
929.	6 <i>Selaginella gracillima</i> (Tiny Clubmoss)			
<b>Sematophyllaceae</b>				
930.	32433 <i>Sematophyllum homomallum</i>			
<b>Solanaceae</b>				
931.	7022 <i>Solanum nigrum</i> (Black Berry Nightshade)	Y		
<b>Stylidiaceae</b>				
932.	7676 <i>Levenhookia pusilla</i> (Midget Stylewort)			
933.	7677 <i>Levenhookia stipitata</i> (Common Stylewort)			
934.	18564 <i>Stylidium aceratum</i>		P3	
935.	7681 <i>Stylidium affine</i> (Queen Triggerplant)			
936.	7684 <i>Stylidium amoenum</i> (Lovely Triggerplant)			
937.	30278 <i>Stylidium androsaceum</i>			
938.	30276 <i>Stylidium bicolor</i>			
939.	48457 <i>Stylidium bindoon</i>			
940.	7693 <i>Stylidium brunonianum</i> (Pink Fountain Triggerplant)			
941.	7696 <i>Stylidium calcaratum</i> (Book Triggerplant)			
942.	7699 <i>Stylidium carnosum</i> (Fleshy-leaved Triggerplant)			
943.	7712 <i>Stylidium despectum</i> (Dwarf Triggerplant)			
944.	7713 <i>Stylidium dichotomum</i> (Pins-and-needles)			
945.	7716 <i>Stylidium diuroides</i> (Donkey Triggerplant)			
946.	11808 <i>Stylidium diuroides</i> subsp. <i>diuroides</i>			
947.	7717 <i>Stylidium divaricatum</i> (Daddy-long-legs)			
948.	7721 <i>Stylidium emarginatum</i> (Biddy-four-legs)			
949.	7734 <i>Stylidium guttatum</i> (Dotted Triggerplant)			
950.	7742 <i>Stylidium inundatum</i> (Hundreds and Thousands)			
951.	7756 <i>Stylidium longitubum</i> (Jumping Jacks)		P4	
952.	7768 <i>Stylidium obtusatum</i> (Pinafore Triggerplant)			
953.	7771 <i>Stylidium periscelanthum</i> (Pantaloons Triggerplant)		P3	
954.	7772 <i>Stylidium perpusillum</i> (Tiny Triggerplant)			
955.	7773 <i>Stylidium petiolare</i> (Horn Triggerplant)			
956.	7774 <i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
957.	7782 <i>Stylidium pulchellum</i> (Thumbelina Triggerplant)			
958.	7785 <i>Stylidium repens</i> (Matted Triggerplant)			
959.	<i>Stylidium roseo-alatum</i>			
960.	7790 <i>Stylidium roseoalatum</i> (Pink-wing Triggerplant)			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
961.	45594 <i>Stylidium tenue</i> subsp. <i>majusculum</i> (Showy Fountain Triggerplant)			
962.	23511 <i>Stylidium thesioides</i> (Delicate Triggerplant)			
963.	7806 <i>Stylidium utricularioides</i> (Pink Fan Triggerplant)			
<b>Thymelaeaceae</b>				
964.	5231 <i>Pimelea angustifolia</i> (Narrow-leaved Pimelea)			
965.	11404 <i>Pimelea imbricata</i> var. <i>major</i>			
966.	11402 <i>Pimelea imbricata</i> var. <i>piligera</i>			
967.	12041 <i>Pimelea suaveolens</i> subsp. <i>suaveolens</i>			
968.	5268 <i>Pimelea sulphurea</i> (Yellow Banjine)			
<b>Typhaceae</b>				
969.	98 <i>Typha domingensis</i> (Bulrush, Djandjidi)			
970.	99 <i>Typha orientalis</i> (Bulrush, Cumbungi)			
<b>Verbenaceae</b>				
971.	6733 <i>Lantana camara</i> (Common Lantana)	Y		
<b>Violaceae</b>				
972.	5216 <i>Hybanthus calycinus</i> (Wild Violet)			
<b>Xanthorrhoeaceae</b>				
973.	1280 <i>Chamaescilla corymbosa</i> (Blue Squill)			
974.	11299 <i>Chamaescilla corymbosa</i> var. <i>corymbosa</i>			
975.	19338 <i>Chamaescilla gibsonii</i>		P3	
976.	1251 <i>Xanthorrhoea brunonis</i>			
977.	14544 <i>Xanthorrhoea brunonis</i> subsp. <i>brunonis</i>			
978.	1252 <i>Xanthorrhoea drummondii</i>			
979.	1256 <i>Xanthorrhoea preissii</i> (Grass tree, Palga)			
980.	20658 <i>Xanthorrhoea</i> sp. <i>Lesueur</i> (G.J. Keighery 16404)			
<b>Zygophyllaceae</b>				
981.	4383 <i>Tribulus terrestris</i> (Caltrop)	Y		

**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

<sup>1</sup> 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.

# NatureMap Species Report

Created By Guest user on 21/09/2020

**Kingdom** Animalia  
**Current Names Only** Yes  
**Core Datasets Only** Yes  
**Method** 'By Circle'  
**Centre** 115° 58' 34" E, 32° 00' 19" S  
**Buffer** 5km  
**Group By** Species Group

Species Group	Species	Records
Amphibian	10	172
Bird	145	28958
Fish	3	4
Invertebrate	104	378
Mammal	16	96
Reptile	45	355
<b>TOTAL</b>	<b>323</b>	<b>29963</b>

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
<b>Amphibian</b>				
1.	25398 <i>Crinia georgiana</i> (Quacking Frog)			
2.	25399 <i>Crinia glauerti</i> (Clicking Frog)			
3.	25400 <i>Crinia insignifera</i> (Squelching Froglet)			
4.	25409 <i>Heleioporus barycragus</i> (Hooting Frog)			
5.	25410 <i>Heleioporus eyrei</i> (Moaning Frog)			
6.	25415 <i>Limnodynastes dorsalis</i> (Western Banjo Frog)			
7.	25378 <i>Litoria adelaidensis</i> (Slender Tree Frog)			
8.	25388 <i>Litoria moorei</i> (Motorbike Frog)			
9.	25420 <i>Myobatrachus gouldii</i> (Turtle Frog)			
10.	25433 <i>Pseudophryne guentheri</i> (Crawling Toadlet)			
<b>Bird</b>				
11.	24260 <i>Acanthiza apicalis</i> (Broad-tailed Thornbill, Inland Thornbill)			
12.	24261 <i>Acanthiza chrysorrhoa</i> (Yellow-rumped Thornbill)			
13.	24262 <i>Acanthiza inornata</i> (Western Thornbill)			
14.	24560 <i>Acanthorhynchus superciliosus</i> (Western Spinebill)			
15.	25535 <i>Accipiter cirrocephalus</i> (Collared Sparrowhawk)			
16.	25536 <i>Accipiter fasciatus</i> (Brown Goshawk)			
17.	24282 <i>Accipiter fasciatus</i> subsp. <i>fasciatus</i> (Brown Goshawk)			
18.	25755 <i>Acrocephalus australis</i> (Australian Reed Warbler)			
19.	41323 <i>Actitis hypoleucos</i> (Common Sandpiper)		IA	
20.	24312 <i>Anas gracilis</i> (Grey Teal)			
21.	24313 <i>Anas platyrhynchos</i> (Mallard)			
22.	<i>Anas platyrhynchos</i> subsp. <i>domesticus</i>			
23.	24315 <i>Anas rhynchotis</i> (Australasian Shoveler)			
24.	24316 <i>Anas superciliosa</i> (Pacific Black Duck)			
25.	47414 <i>Anhinga novaehollandiae</i> (Australasian Darter)			
26.	<i>Anser anser</i>			
27.	24561 <i>Anthochaera carunculata</i> (Red Wattlebird)			
28.	24562 <i>Anthochaera lunulata</i> (Western Little Wattlebird)			
29.	24285 <i>Aquila audax</i> (Wedge-tailed Eagle)			
30.	41324 <i>Ardea modesta</i> (great egret, white egret)			
31.	24340 <i>Ardea novaehollandiae</i> (White-faced Heron)			
32.	24341 <i>Ardea pacifica</i> (White-necked Heron)			
33.	25566 <i>Artamus cinereus</i> (Black-faced Woodswallow)			
34.	24353 <i>Artamus cyanopterus</i> (Dusky Woodswallow)			
35.	24318 <i>Aythya australis</i> (Hardhead)			
36.	<i>Barnardius zonarius</i>			
37.	24319 <i>Biziura lobata</i> (Musk Duck)			
38.	24359 <i>Burhinus grallarius</i> (Bush Stone-curlew)			
39.	25713 <i>Cacatua galerita</i> (Sulphur-crested Cockatoo)			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
40.	25714 <i>Cacatua pastinator</i> (Western Long-billed Corella)			
41.	25715 <i>Cacatua roseicapilla</i> (Galah)			
42.	25716 <i>Cacatua sanguinea</i> (Little Corella)			
43.	24729 <i>Cacatua tenuirostris</i> (Eastern Long-billed Corella)	Y		
44.	25598 <i>Cacomantis flabelliformis</i> (Fan-tailed Cuckoo)			
45.	42307 <i>Cacomantis pallidus</i> (Pallid Cuckoo)			
46.	25717 <i>Calyptorhynchus banksii</i> (Red-tailed Black-Cockatoo)			
47.	24731 <i>Calyptorhynchus banksii</i> subsp. <i>naso</i> (Forest Red-tailed Black Cockatoo)		T	
48.	24733 <i>Calyptorhynchus baudinii</i> (Baudin's Cockatoo, White-tailed Long-billed Black Cockatoo)		T	
49.	24734 <i>Calyptorhynchus latirostris</i> (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)		T	
50.	48400 <i>Calyptorhynchus</i> sp. (white-tailed black cockatoo)		T	
51.	24321 <i>Chenonetta jubata</i> (Australian Wood Duck, Wood Duck)			
52.	<i>Chroicocephalus novaehollandiae</i>			
53.	25601 <i>Chrysococcyx lucidus</i> (Shining Bronze Cuckoo)			
54.	24288 <i>Circus approximans</i> (Swamp Harrier)			
55.	25675 <i>Colluricincla harmonica</i> (Grey Shrike-thrush)			
56.	24399 <i>Columba livia</i> (Domestic Pigeon)	Y		
57.	25568 <i>Coracina novaehollandiae</i> (Black-faced Cuckoo-shrike)			
58.	25592 <i>Corvus coronoides</i> (Australian Raven)			
59.	24420 <i>Cracticus nigrogularis</i> (Pied Butcherbird)			
60.	25595 <i>Cracticus tibicen</i> (Australian Magpie)			
61.	24422 <i>Cracticus tibicen</i> subsp. <i>dorsalis</i> (White-backed Magpie)			
62.	25596 <i>Cracticus torquatus</i> (Grey Butcherbird)			
63.	24322 <i>Cygnus atratus</i> (Black Swan)			
64.	30901 <i>Dacelo novaeguineae</i> (Laughing Kookaburra)	Y		
65.	25673 <i>Daphoenositta chrysoptera</i> (Varied Sittella)			
66.	25607 <i>Dicaeum hirundinaceum</i> (Mistletoebird)			
67.	<i>Egretta novaehollandiae</i>			
68.	<i>Elanus axillaris</i>			
69.	24290 <i>Elanus caeruleus</i> subsp. <i>axillaris</i> (Australian Black-shouldered Kite)			
70.	47937 <i>Elseyornis melanops</i> (Black-fronted Dotterel)			
71.	<i>Eolophus roseicapillus</i>			
72.	24651 <i>Eopsaltria australis</i> subsp. <i>griseogularis</i> (Western Yellow Robin)			
73.	24379 <i>Erythronyctes alba</i> (Red-kneed Dotterel)			
74.	25621 <i>Falco berigora</i> (Brown Falcon)			
75.	25622 <i>Falco cenchroides</i> (Australian Kestrel, Nankeen Kestrel)			
76.	24472 <i>Falco cenchroides</i> subsp. <i>cenchrus</i> (Australian Kestrel, Nankeen Kestrel)			
77.	25623 <i>Falco longipennis</i> (Australian Hobby)			
78.	25624 <i>Falco peregrinus</i> (Peregrine Falcon)		S	
79.	25727 <i>Fulica atra</i> (Eurasian Coot)			
80.	24761 <i>Fulica atra</i> subsp. <i>australis</i> (Eurasian Coot)			
81.	25729 <i>Gallinula tenebrosa</i> (Dusky Moorhen)			
82.	24763 <i>Gallinula tenebrosa</i> subsp. <i>tenebrosa</i> (Dusky Moorhen)			
83.	25730 <i>Gallirallus philippensis</i> (Buff-banded Rail)			
84.	<i>Gallus gallus</i>			
85.	25530 <i>Gerygone fusca</i> (Western Gerygone)			
86.	47962 <i>Glyciphila melanops</i> (Tawny-crowned Honeyeater)			
87.	24443 <i>Grallina cyanoleuca</i> (Magpie-lark)			
88.	24295 <i>Haliastur sphenurus</i> (Whistling Kite)			
89.	47965 <i>Hieraaetus morphnoides</i> (Little Eagle)			
90.	25734 <i>Himantopus himantopus</i> (Black-winged Stilt)			
91.	24491 <i>Hirundo neoxena</i> (Welcome Swallow)			
92.	25661 <i>Lichmera indistincta</i> (Brown Honeyeater)			
93.	24582 <i>Lichmera indistincta</i> subsp. <i>indistincta</i> (Brown Honeyeater)			
94.	24326 <i>Malacorhynchus membranaceus</i> (Pink-eared Duck)			
95.	25654 <i>Malurus splendens</i> (Splendid Fairy-wren)			
96.	24583 <i>Manorina flavigula</i> (Yellow-throated Miner)			
97.	25758 <i>Megalurus gramineus</i> (Little Grassbird)			
98.	25663 <i>Melithreptus brevirostris</i> (Brown-headed Honeyeater)			
99.	24587 <i>Melithreptus chloropsis</i> (Western White-naped Honeyeater)			
100.	24598 <i>Merops ornatus</i> (Rainbow Bee-eater)			
101.	<i>Microcarbo melanoleucos</i>			
102.	24738 <i>Neophema elegans</i> (Elegant Parrot)			
103.	24739 <i>Neophema petrophila</i> (Rock Parrot)			
104.	25564 <i>Nycticorax caledonicus</i> (Rufous Night Heron)			
105.	24407 <i>Ocyphaps lophotes</i> (Crested Pigeon)			
106.	24328 <i>Oxyura australis</i> (Blue-billed Duck)		P4	
107.	25680 <i>Pachycephala rufiventris</i> (Rufous Whistler)			

Name ID	Species Name	Naturalised	Conservation Code	Endemic To Query Area
108.	24624 <i>Pachycephala rufiventris</i> subsp. <i>rufiventris</i> (Rufous Whistler)			
109.	25681 <i>Pardalotus punctatus</i> (Spotted Pardalote)			
110.	25682 <i>Pardalotus striatus</i> (Striated Pardalote)			
111.	24648 <i>Pelecanus conspicillatus</i> (Australian Pelican)			
112.	48060 <i>Petrochelidon ariel</i> (Fairy Martin)			
113.	48061 <i>Petrochelidon nigricans</i> (Tree Martin)			
114.	48066 <i>Petroica boodang</i> (Scarlet Robin)			
115.	24659 <i>Petroica goodenovii</i> (Red-capped Robin)			
116.	25697 <i>Phalacrocorax carbo</i> (Great Cormorant)			
117.	25698 <i>Phalacrocorax melanoleucos</i> (Little Pied Cormorant)			
118.	24667 <i>Phalacrocorax sulcirostris</i> (Little Black Cormorant)			
119.	25699 <i>Phalacrocorax varius</i> (Pied Cormorant)			
120.	24409 <i>Phaps chalcoptera</i> (Common Bronzewing)			
121.	48071 <i>Phylidonyris niger</i> (White-cheeked Honeyeater)			
122.	24596 <i>Phylidonyris novaehollandiae</i> (New Holland Honeyeater)			
123.	24841 <i>Platalea flavipes</i> (Yellow-billed Spoonbill)			
124.	24842 <i>Platalea regia</i> (Royal Spoonbill)			
125.	25720 <i>Platycercus icterotis</i> (Western Rosella)			
126.	25721 <i>Platycercus zonarius</i> (Australian Ringneck, Ring-necked Parrot)			
127.	25703 <i>Podargus strigoides</i> (Tawny Frogmouth)			
128.	24681 <i>Poliiocephalus poliocephalus</i> (Hoary-headed Grebe)			
129.	25731 <i>Porphyrio porphyrio</i> (Purple Swamphen)			
130.	24767 <i>Porphyrio porphyrio</i> subsp. <i>bellus</i> (Purple Swamphen)			
131.	24769 <i>Porzana fluminea</i> (Australian Spotted Crane)			
132.	24771 <i>Porzana tabuensis</i> (Spotless Crane)			
133.	24702 <i>Pterodroma brevirostris</i> (Kerguelen Petrel)			
134.	<i>Purpureicephalus spurius</i>			
135.	48096 <i>Rhipidura albiscapa</i> (Grey Fantail)			
136.	25614 <i>Rhipidura leucophrys</i> (Willie Wagtail)			
137.	25534 <i>Sericornis frontalis</i> (White-browed Scrubwren)			
138.	30948 <i>Sericornis brevirostris</i> (Weebill)			
139.	24525 <i>Sterna fuscata</i> subsp. <i>nubilosa</i> (Sooty Tern)			
140.	24329 <i>Stictonetta naevosa</i> (Freckled Duck)			
141.	25589 <i>Streptopelia chinensis</i> (Spotted Turtle-Dove)	Y		
142.	25590 <i>Streptopelia senegalensis</i> (Laughing Turtle-Dove)	Y		
143.	30950 <i>Streptopelia senegalensis</i> subsp. <i>senegalensis</i> (Laughing Turtle-Dove)	Y		
144.	25705 <i>Tachybaptus novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
145.	24682 <i>Tachybaptus novaehollandiae</i> subsp. <i>novaehollandiae</i> (Australasian Grebe, Black-throated Grebe)			
146.	24331 <i>Tadorna tadornoides</i> (Australian Shelduck, Mountain Duck)			
147.	24845 <i>Threskiornis spinicollis</i> (Straw-necked Ibis)			
148.	25549 <i>Todiramphus sanctus</i> (Sacred Kingfisher)			
149.	24309 <i>Todiramphus sanctus</i> subsp. <i>sanctus</i> (Sacred Kingfisher)			
150.	48141 <i>Tribonyx ventralis</i> (Black-tailed Native-hen)			
151.	25723 <i>Trichoglossus haematodus</i> (Rainbow Lorikeet)			
152.	24806 <i>Tringa glareola</i> (Wood Sandpiper)		IA	
153.	24808 <i>Tringa nebularia</i> (Common Greenshank, greenshank)		IA	
154.	24852 <i>Tyto alba</i> subsp. <i>delicatula</i> (Barn Owl)			
155.	25765 <i>Zosterops lateralis</i> (Grey-breasted White-eye, Silvereye)			

### Fish

156.	<i>Afurcagobius suppositus</i>			
157.	34028 <i>Galaxias occidentalis</i> (Western Minnow)			
158.	<i>Nannoperca vittata</i>			

### Invertebrate

159.	<i>Akamptogonus novarae</i>			
160.	<i>Aname mainae</i>			
161.	<i>Aname tepperi</i>			
162.	<i>Anisops hyperion</i>			
163.	<i>Araneus cyphoxis</i>			
164.	<i>Araneus senicaudatus</i>			
165.	<i>Araneus talipedatus</i>			
166.	<i>Argiope trifasciata</i>			
167.	<i>Artema atlanta</i>			
168.	<i>Artoria linnaei</i>			
169.	<i>Artoriopsis eccentrica</i>			
170.	<i>Artoriopsis joergi</i>			
171.	<i>Austracantha minax</i>			
172.	48574 <i>Australotomurus morbidus</i> (cemetery springtail, Guildford springtail)		P3	
173.	<i>Badumna insignis</i>			



Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
174.	<i>Ballarra longipalpus</i>			
175.	<i>Ceinidae sp.</i>			
176.	<i>Ceratopogonidae sp.</i>			
177.	<i>Cercophonius granulatus</i>			
178.	<i>Cercophonius sulcatus</i>			
179.	33939 <i>Cherax cainii (Marron)</i>			
180.	<i>Cherax destructor</i>			
181.	<i>Cherax quinquecarinatus</i>			
182.	<i>Chironominae sp.</i>			
183.	<i>Coenagrionidae sp.</i>			
184.	<i>Corixidae sp.</i>			
185.	<i>Cormocephalus aurantiipes</i>			
186.	<i>Cormocephalus novaehollandiae</i>			
187.	<i>Cormocephalus rubriceps</i>			
188.	<i>Cormocephalus strigosus</i>			
189.	<i>Cryptoerithus quobba</i>			
190.	<i>Cyclosa trilobata</i>			
191.	<i>Delena cancerides</i>			
192.	<i>Dingosa murata</i>			
193.	<i>Dingosa serrata</i>			
194.	<i>Dinocambala ingens</i>			
195.	<i>Dytiscidae sp.</i>			
196.	<i>Eriophora biapicata</i>			
197.	<i>Eupograptus kottae</i>			
198.	<i>Eurytion incisunguis</i>			Y
199.	48581 <i>Glossurocolletes bilobatus (a short-tongued bee (southwest), short-tongued bee)</i>		P2	
200.	<i>Gripopterygidae sp.</i>			
201.	<i>Hebridae sp.</i>			
202.	<i>Hemicorduliidae sp.</i>			
203.	<i>Hogna crispipes</i>			
204.	<i>Holasteron perth</i>			
205.	<i>Holasteron wamuseum</i>			Y
206.	<i>Hydrophilidae sp.</i>			
207.	<i>Idiommata blackwalli</i>			
208.	48935 <i>Idiosoma sigillatum (Swan Coastal Plain shield-backed trapdoor spider)</i>		P3	
209.	<i>Isopeda leishmanni</i>			
210.	<i>Kangarosa properipes</i>			
211.	<i>Lampona cylindrata</i>			
212.	<i>Latrodectus hasseltii</i>			
213.	33983 <i>Leioproctus douglasiellus (a short-tongued bee)</i>		T	
214.	<i>Leptoceridae sp.</i>			
215.	<i>Libellulidae sp.</i>			
216.	<i>Longepi woodman</i>			
217.	<i>Lycosa godeffroyi</i>			
218.	<i>Maratus pavonis</i>			
219.	<i>Masasteron maini</i>			
220.	<i>Missulena granulosa</i>			
221.	<i>Missulena occatoria</i>			
222.	<i>Mitullodon tarantulinus</i>			
223.	<i>Mitzoruga insularis</i>			
224.	<i>Myandra bicincta</i>			
225.	<i>Myandra cambridgei</i>			
226.	33984 <i>Neopasiphae simplicior (a short-tongued bee)</i>		T	
227.	<i>Nephila edulis</i>			
228.	<i>Nicodamus mainae</i>			
229.	<i>Notiasemus glauerti</i>			
230.	<i>Notonectidae sp.</i>			
231.	<i>Oecobius navus</i>			
232.	<i>Oligochaeta sp.</i>			
233.	<i>Orthocladinae sp.</i>			
234.	<i>Oxyopes gracilipes</i>			
235.	<i>Palaemonidae sp.</i>			
236.	<i>Phenasteron longiconductor</i>			
237.	<i>Phreatoicidae sp.</i>			
238.	<i>Phryganoporus gausapatus subsp. occidentalis</i>			Y
239.	<i>Physidae sp.</i>			
240.	<i>Pinkfloydia harveii</i>			
241.	<i>Planorbidae sp.</i>			
242.	<i>Raveniella cirrata</i>			
243.	<i>Raveniella peckorum</i>			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
244.	<i>Simuliidae sp.</i>			
245.	<i>Steatoda capensis</i>			
246.	<i>Steatoda grossa</i>			
247.	<i>Storena formosa</i>			
248.	<i>Supunna funerea</i>			
249.	<i>Supunna picta</i>			
250.	<i>Tabanidae sp.</i>			
251.	<i>Tanypodinae sp.</i>			
252.	<i>Tasmanicosa leuckartii</i>			
253.	<i>Tegenaria atrica</i>			Y
254.	<i>Tipulidae sp.</i>			
255.	<i>Trichocycclus balladong</i>			
256.	<i>Urodacus novaehollandiae</i>			
257.	<i>Urodacus planimanus</i>			
258.	<i>Venator immansueta</i>			
259.	<i>Venatrix pullastra</i>			
260.	34113 <i>Westralunio carteri</i> (Carter's Freshwater Mussel)		T	
261.	<i>Westrarchaea spinosa</i>			
262.	<i>Zachria flavicoma</i>			

### Mammal

263.	24251 <i>Bos taurus</i> (European Cattle)	Y		
264.	24187 <i>Chalinolobus morio</i> (Chocolate Wattled Bat)			
265.	24092 <i>Dasyurus geoffroi</i> (Chuditch, Western Quoll)		T	
266.	24041 <i>Felis catus</i> (Cat)	Y		
267.	30916 <i>Funambulus pennanti</i> (Indian Palm Squirrel)	Y		
268.	48588 <i>Isoodon fusciventer</i> (Quenda, southwestern brown bandicoot)		P4	
269.	24132 <i>Macropus fuliginosus</i> (Western Grey Kangaroo)			
270.	24223 <i>Mus musculus</i> (House Mouse)	Y		
271.	48022 <i>Notamacropus irma</i> (Western Brush Wallaby)		P4	
272.	24085 <i>Oryctolagus cuniculus</i> (Rabbit)	Y		
273.	24234 <i>Pseudomys delicatulus</i> (Delicate Mouse)			
274.	24243 <i>Rattus fuscipes</i> (Western Bush Rat)			
275.	24245 <i>Rattus rattus</i> (Black Rat)	Y		
276.	<i>Sminthopsis murina</i>			
277.	24167 <i>Tarsipes rostratus</i> (Honey Possum, Noolbenger)			
278.	24206 <i>Vespadelus regulus</i> (Southern Forest Bat)			

### Reptile

279.	42368 <i>Acritoscincus trilineatus</i> (Western Three-lined Skink)			
280.	24991 <i>Aprasia repens</i> (Sand-plain Worm-lizard)			
281.	42381 <i>Brachyurophis semifasciatus</i> (Southern Shovel-nosed Snake)			
282.	43380 <i>Chelodina colliei</i> (South-western Snake-necked Turtle)			
283.	24980 <i>Christinus marmoratus</i> (Marbled Gecko)			
284.	30893 <i>Cryptoblepharus buechananii</i>			
285.	25020 <i>Cryptoblepharus plagiocephalus</i>			
286.	24883 <i>Ctenophorus ornatus</i> (Ornate Crevice-Dragon)			
287.	25027 <i>Ctenotus australis</i>			
288.	25039 <i>Ctenotus fallens</i>			
289.	25766 <i>Delma fraseri</i> (Fraser's Legless Lizard)			
290.	24999 <i>Delma grayii</i>			
291.	25296 <i>Demansia psammophis</i> subsp. <i>reticulata</i> (Yellow-faced Whipsnake)			
292.	25325 <i>Dendrelaphis punctulata</i> (Green Tree Snake)			
293.	24939 <i>Diplodactylus polyophthalmus</i>			
294.	25250 <i>Elapognathus coronatus</i> (Crowned Snake)			
295.	25119 <i>Hemiergis quadrilineata</i>			
296.	24961 <i>Heteronotia binoei</i> (Bynoe's Gecko)			
297.	25133 <i>Lerista elegans</i>			
298.	25147 <i>Lerista lineata</i> (Perth Slider, Lined Skink)		P3	
299.	25005 <i>Lialis burtonis</i>			
300.	25184 <i>Menetia greyii</i>			
301.	25240 <i>Morelia spilota</i> subsp. <i>imbricata</i> (Carpet Python)			
302.	25192 <i>Morethia obscura</i>			
303.	25248 <i>Neelaps bimaculatus</i> (Black-naped Snake)			
304.	25249 <i>Neelaps calonotos</i> (Black-striped Snake, black-striped burrowing snake)		P3	
305.	25252 <i>Notechis scutatus</i> (Tiger Snake)			
306.	25253 <i>Parasuta gouldii</i>			
307.	25007 <i>Pletholax gracilis</i> subsp. <i>gracilis</i> (Keeled Legless Lizard)			
308.	25510 <i>Pogona minor</i> (Dwarf Bearded Dragon)			
309.	24907 <i>Pogona minor</i> subsp. <i>minor</i> (Dwarf Bearded Dragon)			
310.	25261 <i>Pseudechis australis</i> (Mulga Snake)			

Name ID	Species Name	Naturalised	Conservation Code	<sup>1</sup> Endemic To Query Area
311.	25345 <i>Pseudemydura umbrina</i> (Western Swamp Tortoise, Western Swamp Turtle)		T	
312.	25259 <i>Pseudonaja affinis subsp. affinis</i> (Dugite)			
313.	25266 <i>Simoselaps bertholdi</i> (Jan's Banded Snake)			
314.	24943 <i>Strophurus spinigerus subsp. inornatus</i>			
315.	24942 <i>Strophurus spinigerus subsp. spinigerus</i>			
316.	25203 <i>Tiliqua occipitalis</i> (Western Bluetongue)			
317.	25519 <i>Tiliqua rugosa</i>			
318.	25204 <i>Tiliqua rugosa subsp. aspera</i>			
319.	25207 <i>Tiliqua rugosa subsp. rugosa</i>			
320.	24983 <i>Underwoodisaurus millii</i> (Barking Gecko)			
321.	25218 <i>Varanus gouldii</i> (Bungarra or Sand Monitor)			
322.	25225 <i>Varanus rosenbergi</i> (Heath Monitor)			
323.	25526 <i>Varanus tristis</i> (Racehorse Monitor)			

**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

<sup>1</sup> 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 D** – Survey results

## Flora taxa identified within the survey area

Family	Taxon	Status <sup>4</sup>
Anacardiaceae	<i>Schinus terebinthifolius</i>	*
Apocynaceae	<i>Gomphocarpus fruticosus</i>	*DP
Asteraceae	<i>Conyza bonariensis</i>	*
Asteraceae	<i>Sonchus asper</i>	*
Asteraceae	<i>Sonchus oleraceus</i>	*
Asteraceae	<i>Urospermum picroides</i>	*
Brassicaceae	<i>Brassica tournefortii</i>	*
Cupressaceae	<i>Callitris pyramidalis</i>	*
Euphorbiaceae	<i>Euphorbia terracina</i>	*
Euphorbiaceae	<i>Ricinus communis</i>	*
Fabaceae	<i>Acacia saligna</i>	
Fabaceae	<i>Acacia sp.</i>	*
Fabaceae	<i>Lupinus sp.</i>	*
Fabaceae	<i>Vicia sativa subsp. nigra</i>	*
Iridaceae	<i>Watsonia ?meriana</i>	*
Juncaceae	<i>Juncus pallidus</i>	
Malvaceae	<i>Hibiscus diversifolius</i>	*
Myrtaceae	<i>Calothamnus quadrifidus</i>	
Myrtaceae	<i>Eucalyptus rudis</i>	
Myrtaceae	<i>Kunzea glabrescens</i>	
Myrtaceae	<i>Melaleuca ?viminalis</i>	P2 Naturalised
Myrtaceae	<i>Melaleuca radula</i>	
Myrtaceae	<i>Melaleuca raphiophylla</i>	
Oxalidaceae	<i>Oxalis pes-caprae</i>	*
Poaceae	<i>Arundo donax</i>	*
Poaceae	<i>Avena barbata</i>	*
Poaceae	<i>Cynodon dactylon</i>	*
Poaceae	<i>Ehrharta calycina</i>	*
Poaceae	<i>Eragrostis curvula</i>	*
Poaceae	<i>Hyparrhenia hirta</i>	*
Poaceae	<i>Lagurus ovatus</i>	*
Poaceae	<i>Stenotaphrum secundatum</i>	*
Typhaceae	<i>Typha ?domingensis</i>	

<sup>4</sup> Use of \* denotes weed species

## Fauna species identified during the survey

Family	Taxa	Common Name	Status
<b>Birds</b>			
Acanthizidae	<i>Acanthiza chrysorrhoa</i>	Yellow-rumped Thornbill	
Anatidae	<i>Anas superciliosa</i>	Pacific Black Duck	
Cacatuidae	<i>Calyptorhynchus banksii naso</i>	Forest Red-tailed Black Cockatoo	V
Corvidae	<i>Corvus coronoides perplexus</i>	Australian Raven	
Hirundinidae	<i>Petrochelidon nigricans</i>	Tree Martin	
Maluridae	<i>Malurus splendens</i>	Splendid Fairy-wren	
Meliphagidae	<i>Lichenostomus virescens</i>	Singing Honeyeater	
Meliphagidae	<i>Phylidonyris novaehollandiae</i>	New Holland Honeyeater	
Rhipiduridae	<i>Rhipidura albiscapa</i>	Grey Fantail	
Rhipiduridae	<i>Rhipidura leucophrys</i>	Willie Wagtail	
Zosteropidae	<i>Zosterops lateralis</i>	Silvereye	
<b>Amphibians</b>			
Myobatrachidae	<i>Crinia glauerti</i>	Clicking froglet	



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Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
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