

Crown Reserve 42507 Denmark- Nornalup Heritage Rail Trail

Reconnaissance flora and vegetation and targeted fauna survey report



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1. Introduction, scope and background information

Shire of Denmark ("the client") commissioned Bio Diverse Solutions as Environmental Consultants to undertake a Spring season flora and vegetation assessment and targeted fauna assessment of the proposed new Denmark-Nornalup Heritage Rail Trail bridge located in Crown Reserve 42507, west of Denmark. The scope of works included:

- Desktop assessment of the subject area, including all publicly available database searches for threatened flora, vegetation communities and threatened fauna data;
- A Spring reconnaissance (including targeted threatened) flora and vegetation survey across subject site to identify any possible populations of conservation significant flora as per Schedule 1, Item 2 of the DWER Decision Letter;
- Seven species Priority listed flora could possibly be present at the site and are listed in the Decision Letter as follows:
 - *Andersonia* sp. *Virolens* (G.J. Keighery 12000) (P3);
 - *Anthocercis sylvicola* (P3);
 - *Banksia serra* (P4);
 - *Eucalyptus virginea* (P4);
 - *Gahnia sclerioides* (P4);
 - *Melaleuca viminalis* (P2); and
 - *Tetralia* sp. Blackwood River (A.R. Annels 3043) (P3).
- Identification of flora species, including herbarium identification if required;
- Targeted Black cockatoo habitat assessment survey (trees suitable for breeding), and habitat assessment survey for south-western brush-tailed phascogale (wambenger) and western ringtail possum (suitable habitat trees) across the subject site. The survey was required to identify all trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater that contain hollow(s) as per Schedule 1, Item 1 of the DWER Decision Letter;
- GPS and map any populations of threatened species (if applicable);
- GIS mapping of vegetation types present;
- Prepare a report on survey outcomes; and
- Provide the client with the IBSA Data package (as required to be submitted by the client).

1.1. Site location and Development Proposal

The "survey area" is defined as the 0.0458ha area within Crown Reserve 42507, situated on the Denmark-Nornalup Heritage Rail Trail, west of Denmark (refer to Figure 1). The client is proposing to clear native vegetation for a bridge realignment on the trail, through the Department of Water and Environmental Regulation, under section 51E(1) of the *Environmental Protection Act 1986*.



Figure 1: Survey Area Locality

2. Desktop Assessment

2.1. Geology and soils

Database searches using the NRInfo Portal (Department of Primary Industries and Regional Development, 2020) shows the subject site lies within the Walpole Hills System (254Wh). The system is described as “Granitic hills and low hills, in the south of the Warren-Denmark Southland. Loamy gravel, loamy earth, sandy gravel and loamy duplex. Jarrah-marri-karri forest and woodland” (DPIRD, 2020a). The Warren-Denmark Southland Zone is described as “Rises in a series of broad benches from the Southern Ocean north to the Blackwood Valley. Deeply weathered granite and gneiss overlain by Tertiary and Quaternary sediments in the south. Swampy in places.” (DPIRD, 2020a). The soil type within the application area is mapped as the Hazelvale Subsystem (254WhHA), described as narrow sandy plains, slight stream incision. Humus podzols on crests of spurs; Teatree scrub. Yellow duplex soils on valley flanks; Jarrah-Marri low forest. Peaty podzols on minor valley floors; sedges and reeds (DPIRD, 2020a).

2.2. Climate

The closest Bureau of Meteorology (BoM) site is Mount Barker (009581) The average annual temperature in Mount Barker ranges from 9.5 – 20.2°C. The average summer temperature ranges between 11.4-26.3°C, whilst average winter temperatures range between 6.1-15.3°C. The annual mean rainfall for Mount Barker is 726.9mm (BoM, 2020). Climate data for Mount Barker has been used as there is no climate data available for Denmark.

2.3. Existing Land use

The survey area consists of remnant native vegetation within Crown Reserve 42507, which is comprised of a riparian vegetation corridor along the Little River valley and lies within a modified agricultural landscape. The Reserve is bordered by Mount Shadforth to the north (mixed bushland, private residential and agricultural), Mount Hallowell Shire reserve to the south, and residential areas and the Wilson Inlet to the east.

2.4. Habitat Connectivity

The South Coast Macro Corridor Network is a bioregional and landscape-scale approach to habitat connectivity that acknowledges that remnant vegetation can play a very important role in developing corridors between protected areas to help achieve long-term biodiversity management outcomes (Wilkins *et al.* 2006; DBCA, 2017). The survey area is classified as a “Strategic Zone A” area which “Contains areas of woody vegetation where polygons greater than 30 ha in size are spaced no greater than 1km apart and potentially form the most strategic link between major protected areas”. The area lies within one of the un-named areas of the South Coast Macro-corridor (WALGA, 2020a), and is linked to larger areas of bushland and river corridor as stated in 1.4 above.

2.5. Water

The survey area does not lie within any Public Drinking Water Source areas (WALGA, 2020b). The Little River runs through the survey site, and the proposed clearing is associated with bridge realignment over it.

There are no significant wetlands within the survey area.

2.6. Environmentally Sensitive Areas

The survey area does not contain any environmentally sensitive areas (ESA), the nearest site lying approximately 14km to the north in the vicinity of Mount Lindesay.

2.7. Remnant Vegetation

The survey area lies within the Warren WAR01 IBRA subregion. The region is described as “Dissected undulating country of the Leeuwin Complex and Albany Orogen with loamy soils supporting Karri forest, laterites supporting Jarrah-Marri forest, leached sandy soils in depressions and plains supporting paperbark/sedge swamps, and Holocene marine dunes with *Agonis flexuosa* woodlands. Moderate Mediterranean.” (Environment Australia, 2000).

The vegetation has been mapped on a broad scale by J.S. Beard (Shepherd *et al.* 2002) in the 1970's, where a system was devised for state-wide mapping and vegetation classification based on geographic, geological, soil, climate structure, life form and vegetation characteristics (Sandiford and Barrett, 2010). Vegetation units were regarded as associations and were grouped into Vegetation Systems representing a particular pattern of association distribution within a given area. A GIS search of J.S. Beards (Beard *et al.* 2013) vegetation classification places the survey area within one System and Vegetation Association (Source Pre-European dataset, DPIRD-006):

- **System Association Name:** Denmark.
- **Vegetation Association Number:** 14.
- **Structure Description:** Low forest, woodland or low woodland with scattered trees. Jarrah, banksia or casuarina *Eucalyptus marginata*, *Banksia* spp., *Allocasuarina* spp.
- **Floristic Description:** Jarrah, banksia or casuarina *Eucalyptus marginata*, *Banksia* spp., *Allocasuarina* spp.
- **Remnant Vegetation by Beard Association Rarity in LGA:** 90.32% remaining (GoWA, 2019).
- **Remnant Vegetation by Beard Association Rarity in IBRA Region:** 63.35% remaining (GoWA, 2019).

Mattiske and Havel (1998) as part of the biodiversity assessment for the comprehensive regional assessment for the south west forest region mapped the area as containing two vegetation complexes present:

- **Vegetation Complex:** Hazelvale (HA).
- **Vegetation Description:** Mosaic of a low woodland to woodland of *Eucalyptus marginata* - *Eucalyptus patens*, low forest of *Agonis junipera* - *Callistachys lanceolata* with closed heath of *Myrtaceae* spp. on sandy plains in the hyper humid zone.

2.8. Conservation Significant Flora

Desktop inventory of potential conservation significant flora species likely to occur within 10km of the survey area was undertaken using the following databases:

- Nature Map Database Search (combined data from DBCA, WA Museum and WA Herbarium);

- Protected matters search tool (DAWE 2020);
- WA Herbarium records accessed through Flora Base (Western Australian Herbarium, 1998-); and
- The DWER preliminary desktop assessment (CPS 8708/1) provided by the client.

The full species list compiled from all available data (Appendix B) is based on observations from a broader area than the survey area and is likely to include species that would not occur in the actual survey area due to a lack of suitable habitat. The data also includes very old records and in some cases the species in question may have become locally or regionally extinct.

The conservation significance of flora species has been assessed using data from the following sources:

- *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*. Administered by the Australian Government Department of Agriculture, Water and the Environment (DAWE);
- *Biodiversity Conservation Act 2016 (BC Act)*. Administered by the Western Australian Department of Biodiversity Conservation and Attractions (DBCA); and
- DBCA Priority Flora list. A non-legislative list maintained by DBCA for management purposes.

As a result of the above-mentioned database searches 11 Threatened and 25 Priority species were identified as potentially being present within the survey area (10km buffer). Refer to Appendix C for likelihood of presence analysis.

2.9. Threatened and Priority Ecological Communities

Database results also indicate that one ecological community 'Subtropical and Temperate Coastal Saltmarsh' may be present within the survey area. This ecological community is listed as a Priority Ecological Community (PEC) P3 within WA under the *Biodiversity Conservation Act 2016 (BC Act)* and as a Vulnerable Threatened Ecological Community (TEC) under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*.

Consists of the assemblage of plants, animals and micro-organisms associated with saltmarsh in coastal regions of sub-tropical and temperate Australia (south of 23 Degrees S latitude). It occurs on the coastal margin, along estuaries and coastal embayments and on low wave energy coast in places with at least some tidal connection, including rarely-inundated supratidal areas, intermittently opened or closed lagoons, and groundwater tidal influences. The community occurs on sandy or muddy substrate and may include coastal clay pans and similar habitats. It consists of dense to patchy areas of characteristic coastal saltmarsh plant species that include salt-tolerant herbs, succulent shrubs or grasses, and may also include bare sediment as part of the mosaic. It can occur where the proportional cover by tree canopy such as mangroves, *Melaleucas* or *Casuarinas* or seagrass is not greater than 50%. (DBCA, 2020).

The description, area and condition thresholds that apply to the EPBC-listed TEC of the same name, also apply to this Priority ecological community.

The approved conservation advice for the ecological community and description above indicates that there is no relationship with the Beards vegetation type present within the survey area.

2.10. Potential Breeding, Foraging and Roosting Black Cockatoo Habitat

Desktop searches of publicly available information indicates that areas of the jarrah and marri dominated vegetation throughout the subject site is potential feeding / foraging habitat to Carnaby's black cockatoos (WALGA, 2020c). This dataset is based on vegetation containing plant species favoured by Carnaby's black cockatoos not point records of feeding (WALGA, 2020c). This dataset shows no confirmed or potential breeding or roosting areas for Carnaby's black cockatoos to be present within the subject site. Based on known habitat preferences for Baudin's black cockatoos and forest red-tailed black cockatoos the vegetation present in the subject site also holds potential for foraging, breeding and roosting for the two species (DSEWPac (2012).

3. Flora and Vegetation Survey Methodology

Bio Diverse Solutions undertook a Spring season reconnaissance level flora and vegetation survey on the 9th September 2020. The survey area was surveyed via meandering traverses on foot, to identify the different vegetation types, their condition category and targeted survey for conservation significant species. Where areas contained suitable habitat for conservation significant flora these were more intensely surveyed. Two relevés were systematically surveyed within representative vegetation types to enable analysis and categorisation across the wider area (refer to Appendix B). The flora was systematically recorded within the relevés and collections of plant specimens were made where further identification was required. For species that were not flowering and where foliage or nuts / fruit couldn't be used for identification, potential habitat was used as an indication of the likelihood of species occurrence. The vegetation types occurring within the survey area were mapped and described using opportunistic mapping and relevés. Vegetation types were described based on structure, dominant taxa and cover characteristics as defined by relevé data and field observations.

Information collected within each relevé included:

- Location: coordinates of the relevé using a handheld GPS unit.
- Date and site code.
- Site description: landform, slope, soil colour and type and hydrology.
- Vegetation description: dominant and non-dominant species present within the different growth forms and percentage cover.
- Vegetation condition.

The aim of this survey was to provide context and gather knowledge of the survey area. This type of survey aims to verify the desktop information obtained, and to characterise the flora / vegetation units present within the survey area.

3.1. Survey Limitations and constraints

No limitations occurred for this survey. Please see Table 5 below for details.

Table 1: Flora survey limitations and constraints

Limitation	Comment
Experience of personnel	██████████ 25years' experience as a botanist, initially with the University of Western Australia, and subsequently with the Dept of Environment and Conservation (now DBCA). ██████████ 4.5 years' experience in flora and vegetation assessment since working with Bio Diverse Solutions.
Survey timing	The client requested a Spring flora and vegetation survey, consistent with peak flowering times for the majority of species in the area.
Access restrictions	Access by vehicle along the Denmark-Nornalup Heritage Rail Trail and on foot. No access restrictions were encountered.
Availability of contextual information	Publicly available desktop and background information was readily available to give a broad contextual understanding of the site.
Survey effort and extent	32 species were identified during the survey, and two relevé data sets collected to gain as complete a picture as possible of flora species present at the site.
Disturbances that may affect results	No recent disturbances which may affect results of the survey were identified, e.g. recent fire or grazing.
Identification issues	The survey was undertaken during the peak flowering period for many south coast flora species to maximise ease of identifying them, however given that not all flora species flower during this time some species will be more difficult to observe in the field than others.

4. Flora and vegetation survey outcomes

During the survey 32 species, consisting of 18 families and 25 genera were found. The most commonly occurring families were Myrtaceae and Poaceae. The list includes 32 native species (Refer to Appendix B) and 5 introduced / alien species. The vegetation complexes identified across the subject site are described in Section 4.1. Refer to Appendix A for vegetation mapping, and Appendix B for full species list.

4.1. Vegetation Types

One vegetation type was described from within the survey area and is described below. Refer to Map 3 in Appendix A for mapping, and Appendix B for full species list and relevé specific data.

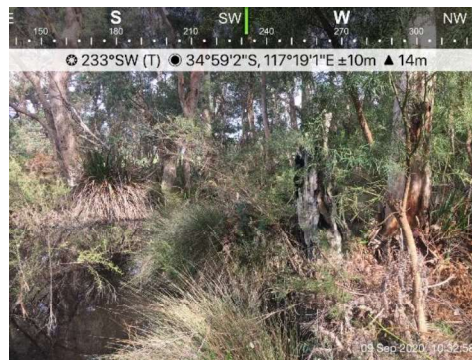
Table 2: Dominant vegetation type Karri forest – *Eucalyptus diversicolor*

Flat site situated at the bottom of a slope, with dark brown Clay Loam soil which is seasonally wet.

Vegetation Description: *Eucalyptus diversicolor* Tall forest over *Corymbia calophylla*, *Allocasuarina decussata* Woodland, over *Acacia pentadenia* Open Low Scrub A. *Hibbertia cuneiformis* Open Dwarf Scrub C, *Lepidosperma effusum*, *Lepidosperma costale* Very Open Tall Sedges, over *Pteridium esculentum* Very Open Ferns, over *Oxalis incarnata*., *Plantago lanceolata* Very Open Herbs, over *Cenchrus clandestinus*, *Cynodon dactylon* Very Open Grasses.

Total of 0.046ha within the survey area.

Lifeform	Cover (%)	Dominant species
Trees >30m	30-70%	<i>Eucalyptus diversicolor</i>
Trees 10-30m	10-30%	<i>Corymbia calophylla</i> , <i>Allocasuarina decussata</i>
Shrubs >2m	30-70%	<i>Trymalium odoratissimum</i> subsp. <i>trifidum</i>
Shrub 1-2m	2-10%	<i>Acacia pentadenia</i>
Shrubs 0.5-1m	<5%	<i>Hibbertia cuneiformis</i>
Sedge	<5%	<i>Lepidosperma effusum</i> , <i>Lepidosperma costale</i>
Herbaceous	2-10%	<i>Pteridium esculentum</i> , <i>Oxalis incarnata</i> *, <i>Plantago lanceolata</i> *
Grass	2-10%	<i>Cenchrus clandestinus</i> *, <i>Cynodon dactylon</i> *



4.2. Vegetation Condition

The vegetation at the site is comprised of one type, namely karri forest (*Eucalyptus diversicolor*), and was rated as being in 'Very Good' condition (refer to Table A10: Condition Rating Scale (adapted from Keighery, 1994)). This classification level refers to there being some visible disturbance at the site, and some degradation from fire/weeds/grazing pressure present.

Table 3: Vegetation condition rating

Vegetation type	Condition rating	Area (ha)
<i>Eucalyptus diversicolor</i> forest	Very Good	0.046
Total		0.046

4.3. Weeds and disturbance

Of the 32 species recorded within the subject site, 6 species are introduced; *Zantedeschia aethiopica* (Arum Lily), *Plantago lanceolata* (Ribwort Plantain), *Cenchrus clandestinus* (Kikuyu Grass), *Cynodon dactylon* (Couch), *Hypochaeris* sp. (Flatweed) and *Oxalis incarnata*. All species except Arum Lily (*Zantedeschia aethiopica*) are classed as 'Permitted – s11', while Arum Lily is rated as higher risk classed as a 'Declared Pest – s22(2)' under the *Biosecurity and Agriculture Management Act 2007*. Under the Environmental Weeds Strategy for Western Australia (CALM 1999) Arum Lily is listed as "High", Kikuyu as "Moderate" with the remaining four species not listed. Refer to Table 4 below.

Table 4: Weed species recorded from the subject site

Family	Species	WA Weed Strategy rating (CALM 1999) / BAM Act (2007)
Araceae	<i>Zantedeschia aethiopica</i>	High / Declared Pest – s22(2) (Exempt)
Asteraceae	<i>Hypochaeris</i> sp.	- / Permitted – s11
Plantaginaceae	<i>Plantago lanceolata</i>	Not listed / Permitted – s11
Poaceae	<i>Cynodon dactylon</i>	Not listed / Permitted – s11
Poaceae	<i>Cenchrus clandestinus</i>	Moderate / Permitted – s11
Oxalidaceae	<i>Oxalis incarnata</i>	Low / Permitted – s11

4.4. Threatened Flora

The scope for this survey was to provide the client with information on any Threatened or Priority flora species that are potentially present within the survey area. For species that were not flowering and that require flowers for accurate identification, a risk assessment was undertaken of habitat suitability (Table A5, Appendix C). Species were deemed either likely or unlikely to occur in the area based on habitat suitability (e.g. soil type, vegetation type, density etc). None of the 36 Threatened/Priority species identified during the desktop assessment were identified during the survey.

Likelihood of occurrence assessment.

Of the 32-conservation significant flora potentially present 20 were classified as "Highly Unlikely" 10 as 'Unlikely', 4 as "Possible" and 2 as "Likely". Refer to Table A5 in Appendix C for likelihood assessment. The 2 species given a likelihood of "Likely" are:

- *Tetraria* sp. Blackwood River (A.R. Annels 3043) (P3); and
- *Gahnia sclerioides* (P4).

The four species given a likelihood analysis of "Possible" are:

- *Melaleuca viminalis* (P2);
- *Anthocercis sylvicola* (P3);
- *Commersonia apella* (T); and
- *Thomasia solanacea* (P4).

Priority 3 species *Tetraria* sp. Blackwood River (A.R. Annels 3043) and *Gahnia sclerioides* (P4) were both assessed as being likely to occur within the area, based of local knowledge and understanding of the species habitat preferences. *Gahnia sclerioides* prefers moist shaded situations and loam / sandy soils. Whilst there is little known about *Tetraria* sp. Blackwood River (A.R. Annels 3043), given a high proportion species prefer riparian habitats it was deemed likely to occur in the broader

area. Neither of these two species were identified in the survey period, and no unidentifiable species from their respective genera were observed during the survey.

Melaleuca viminalis (P2), *Anthocercis sylvicola* (P3), *Commersonia apella* (T) and *Thomasia solanacea* (P4) were all deemed as “Possible” to occur within the survey area, although they were not located during the survey period. There were no unidentified species of *Melaleuca*, *Anthocercis*, *Commersonia*, or *Thomasia* observed within the survey period.

5. Targeted Fauna Habitat Survey Methodology

The DWER provided a letter that states assessment / survey is required for the application area (Schedule 1, Item 1) and the survey is required to identify all trees that have a diameter, measured at 1.5 metres from the base of the tree, of 500 millimetres or greater that contain a hollow(s) that may be suitable for breeding by Carnaby's cockatoo, Baudin's cockatoo, and/or forest red-tailed black cockatoo. As such, a targeted survey was undertaken which focused solely on trees >500mm DBH that contained hollows likely to be suitable for cockatoos. The letter also outlined that the following must be documented:

- the date(s) of the survey;
- the GPS locations (i.e. eastings and northings or decimal degrees) of all trees identified as containing hollows which may be suitable for black cockatoos;
- the methodology for determining the evidence of use of each hollow; and
- a description/photo of the evidence of use.

Furthermore, the DWER letter states the survey area may also contain significant diurnal refuge sites and breeding habitat for both the south-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*), and the western ringtail possum (*Pseudocheirus occidentalis*). The survey methodology also incorporated assessing the area for sign of habitat utilisation by these two species.

Field survey work was carried out by [REDACTED] (Conservation and Wildlife Biologist) from Bio Diverse Solutions on the 9th of September 2020, in accordance with Guidance Statement 56: *Terrestrial Fauna Surveys* (EPA 2020) and Technical Guidance: Sampling methods for Terrestrial vertebrate fauna (EPA 2020). All trees >500mm DBH within and directly adjacent to the survey area were GPS located, measured 1.5m above ground (DBH), photographed and trees assessed for hollows. Suitable hollows are also assessed based on evidence of scratching and chewing around the hollow entrance, hollow entrance size and signs of activity at the base of the tree, e.g. feathers, faecal material, feeding debris.

The assessment was carried out in a manner consistent with the following documents developed by the EPA and Department of Agriculture, Water and the Environment (DAWE) formerly the Department of Sustainability, Water, Population, and Communities (DSEWPac) and Department of the Environment, Water, Heritage and the Arts (DEWHA):

- EPA (2020) Technical Guidance – Terrestrial vertebrate fauna surveys for environmental impact assessment;
- DEWHA (2010) Survey guidelines for Australia's threatened birds; and
- DSEWPac (2012) Referral Guidelines for Three Threatened Black Cockatoo Species.

The results presented are based upon field data collected over a limited period of time and are indicative of the environmental condition of the site at the time.

5.1. Survey Limitations and Constraints

No limitations occurred for this survey. Please see Table 5 below for details.

Table 5: Fauna survey limitations and constraints

Limitation	Comment
Scope	The scope was a targeted survey to identify significant trees (>500mm DBH) that contain a hollow(s) that may be suitable for breeding by Carnaby's cockatoo, Baudin's cockatoo, and/or forest red-tailed black cockatoo.
Disturbances that may affect results	No recent disturbances which may affect results of the survey were identified, e.g. recent fire or grazing.
Intensity of survey	The threatened targeted assessment was deemed appropriate given the scope was to identify if the Karri trees present contained suitable black cockatoo breeding hollows.
Sources of information (recent or historic) and availability of contextual information	Information regarding the site was readily available from the Shire of Denmark and databases such as NatureMap.
Remoteness or access issues	Access by vehicle along the Denmark-Nornalup Heritage Rail Trail and on foot. No access restrictions were encountered.
Experience of personnel	[REDACTED] has 4.5 years' experience in fauna assessment working alongside [REDACTED] (Wildlife Ecologist) since working with Bio Diverse Solutions.

6. Fauna Habitat Survey Outcomes

Seven significant trees (>500mm DBH) were identified within the subject site, all of them karri (*Eucalyptus diversicolor*). None of the seven trees identified contained any hollows and there was no evidence found of feeding or roosting by the three black cockatoo species. Refer to Table 6 and Figure 2 over the page. No signs of presence, diurnal refuges or breeding habitat were identified for western ringtail possum (*Pseudocheirus occidentalis*), or phascogale (*Phascogale tapoatafa wambenger*) during the survey. The vegetation in the survey area is very sparse and open with a limited mid and understorey. Both mammal species can be difficult to detect in the karri forest from a single-phase survey. However, there were no hollows detected in the karri trees and no other signs of species presence were observed within the survey period.

Table 6: Significant trees (>500mm DBH) assessed within and directly adjacent to the survey area.

Tree ID	Species	DBH (mm)	Eastings	Northings	Hollows Present (Y/N)	Location (trunk, branch)	Size of entrance (w x h) cm	Type of entrance (side, chimney, elbow)	Height above ground (m)	Chewing and/ or scratching present (Y/N)
1	<i>Eucalyptus diversicolor</i>	639	528942.840401	6128680.43864	N	N/A	N/A	N/A	N/A	N
2	<i>Eucalyptus diversicolor</i>	681	528917.872779	6128683.53913	N	N/A	N/A	N/A	N/A	N
3	<i>Eucalyptus diversicolor</i>	931	528936.926114	6128684.69303	N	N/A	N/A	N/A	N/A	N
4	<i>Eucalyptus diversicolor</i>	727	528925.704449	6128676.86514	N	N/A	N/A	N/A	N/A	N
5	<i>Eucalyptus diversicolor</i>	649	528875.835794	6128679.53057	N	N/A	N/A	N/A	N/A	N
6	<i>Eucalyptus diversicolor</i>	1078	528865.487841	6128686.28321	N	N/A	N/A	N/A	N/A	N
7	<i>Eucalyptus diversicolor</i>	860	528863.488049	6128681.62753	N	N/A	N/A	N/A	N/A	N

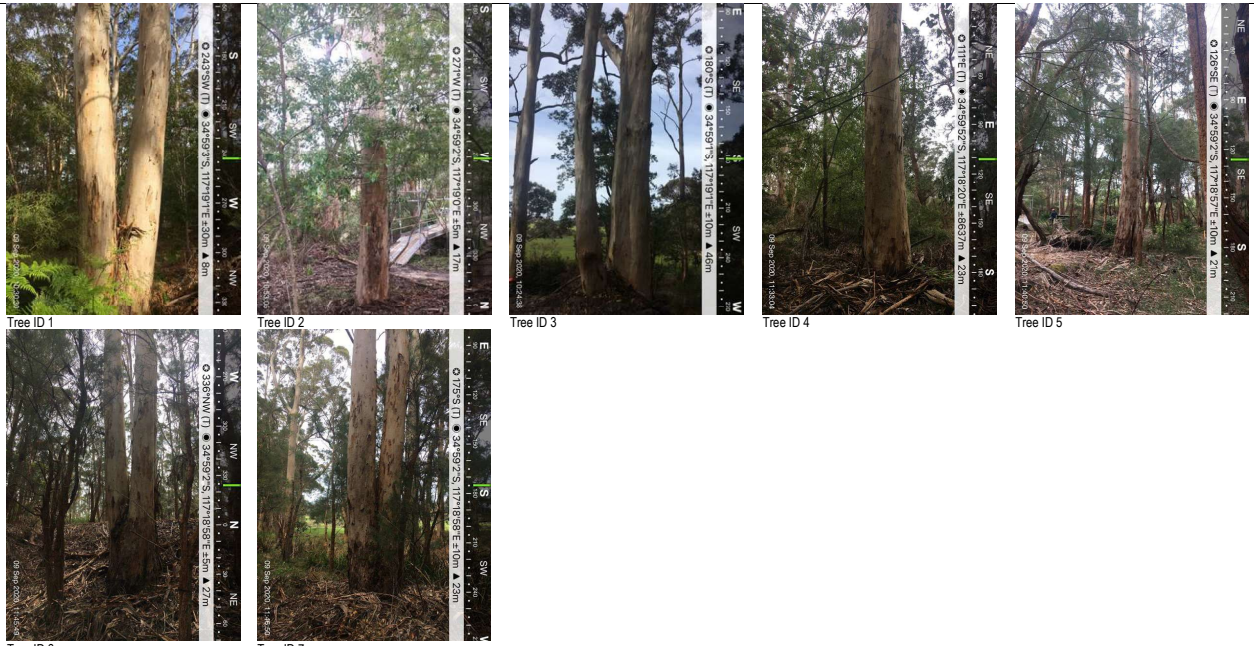


Figure 2: Images of Significant Trees (>500mm DBH)

7. Summary

7.1. Vegetation, Threatened and Priority Flora and Ecological Communities

The scope for this spring season survey was to provide the client with further details on the vegetation composition present at the site and to identify areas of suitable habitat for conservation significant species. A total of 32 flora species were identified throughout the subject site, of these six are introduced. One vegetation complex was identified within the area; Karri forest. Vegetation structure in the western portion consisted of a tree layer containing eucalypts of various ages including mature, young and saplings, and a midstorey and understorey layers consisting of a mix of common local native species and weedy introduced herbaceous/grass species. Overall, the vegetation condition is described as Very Good throughout the survey area, due to there being some evidence of disturbance and weed species present.

The survey effort found no conservation significant species, although it was noted that suitable habitat was present for six conservation listed species identified in the desktop assessment.

7.2. Fauna / significant tree survey

Of the seven significant trees identified during the survey, none contained hollows or showed any signs of inhabitation by black cockatoo species. In addition, no feeding signs were observed, and no indicators of roosting by the three black cockatoo species. Similarly, no signs of presence, diurnal refuges or breeding habitat were identified for western ringtail possum (*Pseudocheirus occidentalis*), or phascogale (*Phascogale tapoatafa wambenger*) during the survey.

8. References

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9. Appendices

Appendix A – Maps

Appendix B – Species Lists and Relevé Data

Appendix C – Conservation Significant Values Likelihood of Occurrence Analysis

Appendix D – Conservation Status Definitions and Condition Scale

Appendix E - NatureMap and EPBC Act PMST reports

Appendix A

Maps



29 Hercules Crescent
Albany, WA 6330
Australia
Tel: 08 9842 1575
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Overview Map Scale 1:100,000

Legend

- Survey Area
- Cadastral
- 5m Contours

Sample Sites

- Releve 1
- Releve 2
- Significant Tree
- Karri, No Hollows

- Vegetation Mapping
- Karri Forest Eucalyptus diversicolor
- Vegetation Condition
- Very Good



Scale
1:500 @ A3
GDA MGA 94 Zone 50

Data Sources
Aerial Imagery: SLIP Virtual Mosaic WMS Service, Landgate 2016
Cadastral and Contours: Landgate 2016
Overview Map: World Topographic map service, ESRI 2012

CLIENT
Shire of Denmark
Denmark to Normalup Heritage Trail Bridge
Reserve 42507
Denmark, WA 6333

Survey Findings

STATUS	FILE	DATE
FINAL	SOD003	24/09/2020

Appendix B

Flora Species Lists and Relevé Data

Table A1: Flora Species List recorded within survey area

Note: * Denotes a weed species

Family	Genus	Species	Common Name	Conservation Status
Araceae	<i>Zantedeschia</i>	<i>aethiopica</i>	Arum Lily	*
Asparagaceae	<i>Lomandra</i>	<i>pauciflora</i>		
Asteraceae	<i>Hypochaeris</i>	<i>sp.</i>		*
Casuarinaceae	<i>Allocasuarina</i>	<i>decussata</i>	Karri She-oak	
Cyperaceae	<i>Lepidosperma</i>	<i>costale</i>		
Cyperaceae	<i>Lepidosperma</i>	<i>effusum</i>	Spreading Sword-sedge	
Dilleniaceae	<i>Hibbertia</i>	<i>cuneiformis</i>	Cutleaf Hibbertia	
Dilleniaceae	<i>Hibbertia</i>	<i>furfuracea</i>		
Elaeocarpaceae	<i>Tremandra</i>	<i>stelligera</i>		
Ericaceae	<i>Leucopogon</i>	<i>obovatus</i>		
Ericaceae	<i>Leucopogon</i>	<i>verticillata</i>	Tassel Flower	
Fabaceae	<i>Hovea</i>	<i>elliptica</i>	Tree Hovea	
Fabaceae	<i>Callistachys</i>	<i>lanceolata</i>	Wonnich	
Fabaceae	<i>Acacia</i>	<i>pentadenia</i>	Karri Wattle	
Juncaceae	<i>Juncus</i>	<i>pallidus</i>	Pale Rush	
Myrtaceae	<i>Corymbia</i>	<i>calophylla</i>	Marri	
Myrtaceae	<i>Eucalyptus</i>	<i>diversicolor</i>	Karri	
Myrtaceae	<i>Agonis</i>	<i>flexuosus</i>	Peppermint	
Myrtaceae	<i>Taxandria</i>	<i>linearifolia</i>		
Myrtaceae	<i>Eucalyptus</i>	<i>marginata</i>	Jarrah	
Myrtaceae	<i>Taxandria</i>	<i>parviceps</i>		
Oxalidaceae	<i>Oxalis</i>	<i>incarnata</i>		*
Plantaginaceae	<i>Plantago</i>	<i>lanceolata</i>	Ribwort Plantain	*
Poaceae	<i>Cenchrus</i>	<i>clandestinus</i>	Kikuyu Grass	*
Poaceae	<i>Cynodon</i>	<i>dactylon</i>	Couch	*
Pteridaceae	<i>Adiantum</i>	<i>aethiopicum</i>	Common Maidenhair	
Pteridaceae	<i>Pteridium</i>	<i>esculentum</i>	Bracken	
Ranunculaceae	<i>Clematis</i>	<i>pubescens</i>	Common Clematis	
Restionaceae	<i>Leptocarpus</i>	<i>roycei</i>		
Rhamnaceae	<i>Trymalium</i>	<i>odoratissimum</i> subsp. <i>odoratissimum</i>	Karri Hazel	
Rubiaceae	<i>Opercularia</i>	<i>hispida</i>	Hispid Stinkweed	
Rubiaceae	<i>Opercularia</i>	<i>volubilis</i>	Twining Stinkweed	

Table A2: Data from Relevé Site 1


Relevé	R1	Veg Code	Euc div	Date Surveyed	9th September 2020
Location	Denmark-Nornalup Heritage Rail Trail Bridge Site				
GPS (WGS 84)	34° 59' 2.54587" S			117° 19' 1.28750" E	
Landform and Slope	Slope Lower				
Soils	Clay Loam, dark brown colour				
Hydrology	Seasonal wet				
Vegetation description (Muirs)	Eucalyptus diversicolor Tall Forest, over Corymbia calophylla Woodland, over Trymalium odoratissimum subsp. trifidum Thicket, over Pteridium esculentum Very Open Ferns, over Oxalis incarnata, Plantago lanceolata Very Open Herbs, over Cenchrus clandestinus, Cynodon dactylon Very Open Grass.				
Condition	Very Good				
Comments	-				
Life Form	Dominant Species	Other Species			Cover (%)
Trees >30m	Eucalyptus diversicolor				30-70
Trees 10-30m	Corymbia calophylla				10-30
Shrub >2m	Trymalium odoratissimum subsp. trifidum				30-70
Shrub 0.5-1m		Hibbertia cuneiformis			<5
Sedge	Lepidosperma effusum, Lepidosperma costale				<5
Herb	Pteridium esculentum, Oxalis incarnata, Plantago lanceolata	Clematis pubescens			2-10
Grass	Cenchrus clandestinus, Cynodon dactylon				2-10
					

Table A3: Data from Relevé Site 3

Relevé	R2	Veg Code	Euc div	Date Surveyed	9th September 2020
Location	Denmark-Nornalup Heritage Rail Trail Bridge Site.				
GPS (WGS 84)	34° 59' 2.61485" S			117° 18' 58.90182" E	
Landform and Slope	Slope Lower				
Soils	Clay Loam, dark brown colour				
Hydrology	Seasonal wet				
Vegetation description (Muirs)	<i>Eucalyptus diversicolor</i> Tall Forest, over <i>Allocasuarina decussata</i> Woodland, over <i>Acacia pentadenia</i> Open Low Scrub A, over <i>Lepidosperma effusum</i> , <i>Lepidosperma costale</i> Open Tall Sedges, over <i>Pteridium esculentum</i> Very Open Ferns, over <i>Plantago lanceolata</i> Very Open Herbs, over <i>Cynodon dactylon</i> Open Grass.				
Condition	Very Good				
Comments	-				
Life Form	Dominant Species	Other Species			Cover (%)
Trees >30m	<i>Eucalyptus diversicolor</i>				30-70
Trees 10-30m	<i>Allocasuarina decussata</i>				10-30
Shrub >2m		<i>Trymalium odoratissimum</i> subsp. <i>trifidum</i>			<5
Shrub 1-2m	<i>Acacia pentadenia</i>	<i>Hovea elliptica</i>			2-10
Sedge	<i>Lepidosperma effusum</i> , <i>Lepidosperma costale</i>				2-10
Herb	<i>Pteridium esculentum</i> , <i>Plantago lanceolata</i>	<i>Hypochaeris</i> sp., <i>Opercularia hispida</i> , <i>Lomandra pauciflora</i>			2-10
Grass	<i>Cynodon dactylon</i>				10-30



Appendix C

Conservation Significant Values Likelihood of Occurrence Analysis

Table A4: Criteria for assessing the likelihood of occurrence of conservation significant flora within a 10km radius of the survey area

Likelihood	Criteria
Present	Species is recorded within the survey area.
Likely	Species has been previously recorded in close proximity and suitable habitat occurs within the survey area.
Possible	Species previously recorded within 10 km and suitable habitat occurs in the survey area.
Unlikely	Suitable habitat for the species does not occur at the survey area OR Suitable habitat may occur but the species has a highly restricted distribution, is very rare and only known from a limited number of populations.
Highly Unlikely	The survey area is outside the species' natural distribution.

Table A5: Potential conservation significant flora located within 10km of the survey area and likelihood of occurrence analysis (post survey).

Note: Table is sorted in order of likelihood of occurrence.

Family	Species	Conservation Code	Habitat	Survey in Flowering Period	Likelihood post survey	Comments
Cyperaceae	<i>Gahnia sclerioides</i>	P4	Lax, slender rhizomatous, perennial, grass-like or herb (sedge), 0.3-0.9 m high. Loam, sandy soils. Moist shaded situations.	N/A	Likely	Not located
Cyperaceae	<i>Tetaria</i> sp. Blackwood River (A.R. Annels 3043)	P3	N/A	N/A	Likely	Not located
Solanaceae	<i>Anthocercis sylvicola</i>	P3	Shrub, 0.45-1.3 m high. Fl. yellow & purple. Oct. Sand.	N	Possible	Not located
Malvaceae	<i>Commersonia apella</i>	T	Erect to spreading shrub 1.5-2m high, to 1-2.5m wide. Fl. creamy-yellow, Oct-Dec, Banks of streams or rivers, growing in humic, greyish-brown, clayey-sand, in open jarrah-wandoo woodland, karri-marri forest and coastal <i>Eucalyptus angulosa</i> , <i>E. conferruminata</i> and <i>E. cornuta</i> mallee shrubland.	N	Possible	Not located
Myrtaceae	<i>Melaleuca viminalis</i>	P2	N/A	N/A	Possible	Not located
Malvaceae	<i>Thomasia solanacea</i>	P4	Erect shrub, 0.5-3 m high. Fl. blue-purple-pink, Sep to Dec. Alluvium, sand over limestone, rocky loam. Coastal areas.	Y	Possible	Not located
Orchidaceae	<i>Caladenia applanata</i> subsp. <i>erubescens</i>	P2	Tuberous, perennial, herb, 0.25-0.4 m high. Fl. pink, Sep to Oct. Sand. Consolidated dunes, summer burnt areas.	Y	Unlikely	Wrong habitat. Usually found on white sand in dense heath, or Peppermint thicket.
Myrtaceae	<i>Eucalyptus virginea</i>	P4	Tree, to 12 m high, bark smooth, powdery, white. Fl. white, Dec or Jan or Jul. Clay or sandy loam, shallow soil over granite, laterite loam over clay. Lower slopes near watercourses, edge of rock outcrops, gently sloping sites.	N	Unlikely	Wrong habitat. Usually associated with Jarrah/Marri woodland on granite.
Fabaceae	<i>Kennedia glabrata</i>	T	Prostrate shrub, 0.05-0.5 m high, to 5 m wide. Fl. red, Aug to Nov. Soil pockets, sandy soils. Granite outcrops.	Y	Unlikely	Wrong habitat. Usually on granite outcrops.
Malvaceae	<i>Lasioptalam</i> sp. Denmark (B.G. Hammersley 2012)	P3	N/A	N/A	Unlikely	Wrong habitat. Usually found associated with Jarrah/Marri/Sheoak woodland
Brassicaceae	<i>Lepidium pseudotasmanicum</i>	P4	Erect annual or biennial, herb, 0.2-0.4(-1) m high. Fl. white-green, Feb or Dec. Loam, sand.	N	Unlikely	Wrong habitat.
Pleurophascaceae	<i>Pleurophascum occidentale</i>	P4	This distinctive moss forms a loose mat with vertical stems, 1 to 3 cm high, growing off a rhizomatous base. It is generally glossy yellowish-green above and bronze-brown below. The soft leaves are spirally arranged, and overlap. Grows with other mosses under the cover of myrtaceous and other shrubs. Known to occur in a wide range of habitat including shallow soils on the edge of granite, deep white sand on laterite, sandy clay loam on sandstone, pink sand on sandstone as well as sandy soils some distance from granite outcrops	N/A	Unlikely	Wrong habitat.
Malvaceae	<i>Thomasia quercifolia</i>	P4	Shrub, 1m high. Fl pink or purple, April, August, October, November or December. Coastal heath on secondary limestone	Y	Unlikely	Wrong habitat. Usually found in coastal heath.
Apiaceae	<i>Xanthosia eichleri</i>	P4	Erect, procumbent or decumbent shrub (subshrub), 0.05-0.25 m high, leaves simple, cuneate; umbels simple; petals shorter than sepals. Fl. white-cream, Oct to Nov. Grey sand over granite, sandy loam. Granite outcrops, jarrah/marri woodland.	N	Unlikely	Wrong habitat. Usually associated with open Jarrah/Marri woodland or Heath.
Ericaceae	<i>Andersonia</i> sp. <i>Virolens</i> (G.J. Keighery 12000)	P3	N/A	N/A	Highly unlikely	Wrong habitat. Usually associated with Jarrah/Bullich woodland on granite.
Asteraceae	<i>Angianthus drummondii</i>	P3	Erect annual, herb, to 0.1 m high. Fl. yellow, Oct to Dec. Grey or brown clay soils, ironstone. Seasonally wet flats.	N	Highly unlikely	Not found near survey area.
Proteaceae	<i>Banksia serra</i>	P3	Erect, slender, non-lignotuberous shrub, 1-4(-7) m high. Fl. yellow/cream-green, Jul to Sep. Gravel, sand or clay loam over laterite. Hillslopes.	Y	Highly unlikely	Wrong habitat. Usually found in Jarrah/Marri woodland or Heath on ironstone gravel.
Proteaceae	<i>Banksia sessilis</i> var. <i>cordata</i>	P4	Non-lignotuberous shrub, to 2.5 m high. Fl. cream-yellow, Jul to Oct. White/grey sand. Coastal limestone.	Y	Highly unlikely	Wrong habitat. Usually found on coastal limestone.
Rutaceae	<i>Boronia virgata</i>	P4	Slender, erect or sprawling shrub, 0.3-2 m high. Fl. pink, Aug to Dec or Jan to Feb. Peaty sand or clay. Swampy or waterlogged places.	Y	Highly unlikely	Wrong habitat. Usually found on peaty sand and clay in waterlogged habitat.
Boryaceae	<i>Borya longiscapa</i>	P3	Dwarf domed perennial, herb, to 0.6 m high. Fl. cream-white-yellow, Oct to Dec. Grey sand. Granite outcrops.	N	Highly unlikely	Wrong habitat.

Table A5 continued.

Family	Species	Conservation Code	Habitat	Survey in Flowering Period	Likelihood post survey	Comments
Orchidaceae	<i>Caladenia harringtoniae</i>	T	Tuberous, perennial, herb, 0.2-0.4 m high. Fl. pink, Oct to Nov. Sandy loam. Winter-wet flats, margins of lakes, creeklines, granite outcrops.	N	Highly unlikely	Wrong habitat. Usually found associated with seasonally wet Melaleuca shrubland.
Dasygongonaceae	<i>Calectasia cyanea</i>	T	Rhizomatous, clump forming, woody perennial, herb, 0.1-0.6 m high, to 0.3 m wide. Fl. blue/purple, Jun to Oct. White, grey or yellow sand, gravel.	Y	Highly unlikely	Wrong habitat. Usually found in heath or coastal heath on white sand.
Haemodoraceae	<i>Conostylis misera</i>	T	Rhizomatous, tufted perennial, grass-like or herb, 0.05-0.18 m high. Fl. yellow, Oct to Nov. White or grey sand, sandy loam. Winter-wet flats.	N	Highly unlikely	Wrong habitat. Usually found in wet areas of Jarrah/Marri woodland associated with paperbark shrubland.
Orchidaceae	<i>Corybas limpidus</i>	P4	Tuberous, perennial, dwarf herb, 0.01 m high. Fl. red & green, Aug to Sep. Sand. Coastal dunes.	Y	Highly unlikely	Wrong habitat. Usually found in swale of coastal dunes under Peppermint thicket.
Orchidaceae	<i>Drakaea micrantha</i>	T	Tuberous, perennial, herb, 0.15-0.3 m high. Fl. red & yellow, Sep to Oct. White-grey sand.	Y	Highly unlikely	Wrong habitat. Usually found in Jarrah Forest or adjacent heathland.
Amblystegiaceae	<i>Drepanocladus aduncus</i>	P2	N/A	N/A	Highly unlikely	Wrong habitat. Usually associated with Flooded Gum.
Droseraceae	<i>Drosera fimbriata</i>	P4	Erect tuberous, perennial, herb, 0.05-0.15 m high. Fl. white, Sep to Oct. White sand, granite.	Y	Highly unlikely	Wrong habitat. Usually found in open heathland.
Proteaceae	<i>Grevillea fuscolutea</i>	T	Open, erect shrub, 0.5-2.5 m high. Fl. yellow, Apr to Nov. Coarse grey sand or brown-black loam over granite. Granite outcrops.	Y	Highly unlikely	Wrong habitat. Usually found on granite outcrops.
Proteaceae	<i>Iso pogon uncinatus</i>	T	Tufted spreading or prostrate, non-lignotuberous shrub, 0.05-0.4 m high. Fl. yellow/cream, Oct to Nov. Loam or sand on granite, peaty sand. Swampy depressions, hillslopes.	N	Highly unlikely	Wrong habitat. Usually found on peat sand in wet depressions between granite outcrops.
Orchidaceae	<i>Microtis globula</i>	T	Tuberous, perennial, herb, 0.18-0.35 m high. Fl. yellow-green, Dec or Jan. Peaty soils. Winter-wet swamps.	N	Highly unlikely	Wrong habitat. Usually found in myrtaceous swamp.
Orchidaceae	<i>Microtis pulchella</i>	P4	Tuberous, perennial, herb, 0.12-0.25 m high. Fl. white, Nov to Dec or Jan. Peaty sand. Winter-wet swamps.	N	Highly unlikely	Wrong habitat. Usually found in myrtaceous swamp.
Goodeniaceae	<i>Selliera radicans</i> Name changed to <i>Goodenia radicans</i> .	P1	N/A	N/A	Highly unlikely	Wrong habitat.
Ericaceae	<i>Sphenotoma drummondii</i>	T	Tufted shrub, 0.15-0.5 m high. Fl. white, Sep to Dec. Stony or shallow soils over granite or quartzite. Steep rocky slopes, crevices of rocks.	Y	Highly unlikely	Wrong habitat. Usually found on mountain slopes in rock crevices.
Stylidiaceae	<i>Stylidium</i> sp. Kordabup (A.R. Annels 1660)	P1	N/A	N/A	Highly unlikely	Wrong habitat. Usually associated with Jarrah around granite on grey peaty sand.
Proteaceae	<i>Synaphea incurva</i>	P3	Clumped, spreading shrub. Fl. yellow, Sep to Nov. Gravelly loam, sandy soils. Slopes.	Y	Highly unlikely	Wrong habitat. Usually associated with Jarrah/Sheoak woodland.
Myrtaceae	<i>Verticordia apecta</i>	T	Slender, erect shrub, 0.2-0.45 m high. Fl. white-pink, Nov. Sandy clay with loam & broken granite. Slopes.	N	Highly unlikely	Wrong habitat. Usually found in open Wandoo woodland on granite slopes.

Appendix D

Conservation Status Definitions and Condition Scale

Table A6: Conservation code definitions for flora and fauna as listed as threatened or specially protected.

Threatened, Extinct and Specially Protected fauna or flora are species which have been adequately searched for and are deemed to be, in the wild, threatened, extinct or in need of special protection, and have been gazetted as such.

Threat Category	Definition
Threatened - Critically endangered species (CR)	Facing an extremely high risk of extinction in the wild in the immediate future
Threatened - Endangered species (EN)	Facing a very high risk of extinction in the wild in the near future
Threatened - Vulnerable species (VU)	Facing a high risk of extinction in the wild in the medium-term future
Threatened - Extinct (EX)	There is no reasonable doubt that the last member of the species has died
Threatened – Extinct in the wild (EW)	Species 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
Specially protected species - Migratory species (MI)	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; 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.
Specially protected species – Conservation Dependent (CD)	Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened,
Specially protected species – Other specially protected species (OS)	Fauna otherwise in need of special protection to ensure their conservation

Table A7: Conservation code definitions for flora and fauna as listed as Priority.

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.

Threat Category	Definition
Priority 1: Poorly-known species	Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, 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.
Priority 2: Poorly-known species	Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.
Priority 3: Poorly-known species	Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.
Priority 4: Rare, Near Threatened and other species in need of monitoring	(a) Rare. Species 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 species are usually represented on conservation lands. (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent. (c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Table A8: Conservation code definitions for ecological communities listed as threatened (TEC)

Threat Category	Definition
Presumed Totally Destroyed (PD)	An ecological community that has been adequately searched for but for which no representative occurrences have been located. The community has been found to be totally destroyed or so extensively modified throughout its range that no occurrence of it is likely to recover its species composition and/or structure in the foreseeable future.
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.
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.

Table A9: Conservation code definitions for ecological communities listed as priority (PEC)

Possible threatened ecological communities that do not meet survey criteria or that are not adequately defined are added to the Priority Ecological Community List under priorities 1, 2 and 3.

Threat Category	Definition
Priority One (P1)	Ecological communities that are known from very few occurrences with a very restricted distribution (generally ≤ 5 occurrences or a total area of ≤ 100 ha), and appear to be under immediate threat.
Priority Two (P2)	Communities that are known from few occurrences with a restricted distribution (generally ≤ 10 occurrences or a total area of ≤ 200 ha). At least some occurrences are not believed to be under immediate threat (within approximately 10 years) of destruction or degradation.
Priority Three (P3)	(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; (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 (within approximately 10 years), or; (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, inappropriate fire regimes, clearing, hydrological change etc.
Priority Four (P4)	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.
Priority Five (P5)	Conservation Dependent 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.

Table A10: Condition Rating Scale (adapted from Keighery 1994) outlined in EPA (2016a).

Vegetation Condition Rating	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance or 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 the 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 and shrubs.

Appendix E

NatureMap and EPBC Act PMST reports

NatureMap Flora Species Report

Created By Guest user on 24/08/2020

Kingdom Plantae
Current Names Only Yes
Core Datasets Only Yes
Species Group All Plants
Method 'By Circle'
Centre 117° 18' 58" E, 34° 59' 02" S
Buffer 10km
Group By Family

Family	Species	Records
Acrobolbaceae	1	3
Aizoaceae	1	2
Amblystegiaceae	1	3
Anarthriaceae	5	46
Aneuraceae	3	12
Anthocerotaceae	1	4
Apiaceae	17	57
Araliaceae	3	10
Asparagaceae	15	27
Aspleniaceae	1	5
Asteraceae	43	85
Aytoniaceae	1	1
Bartramiaceae	2	3
Basellaceae	1	1
Boraginaceae	1	2
Boryaceae	2	7
Brassicaceae	7	9
Bryaceae	9	16
Campanulaceae	6	11
Caprifoliaceae	1	1
Caryophyllaceae	5	6
Casuarinaceae	2	15
Celastraceae	2	2
Centrolepidaceae	4	11
Cephalozeliaceae	1	3
Ceramiaceae	1	2
Chenopodiaceae	7	16
Colchicaceae	3	4
Convolvulaceae	2	3
Crassulaceae	3	6
Cyperaceae	51	143
Dasygongonaceae	3	5
Dennstaedtiaceae	1	1
Dicranaceae	5	14
Dilleniaceae	14	56
Ditrichaceae	3	4
Droseraceae	12	22
Elaeocarpaceae	5	11
Eremosynaceae	1	2
Ericaceae	36	124
Euphorbiaceae	6	16
Fabaceae	102	312
Fabroniaceae	1	1
Fissidentaceae	2	9
Funariaceae	1	1
Gentianaceae	4	5
Geraniaceae	5	9
Goodeniaceae	18	79
Gyrostemonaceae	1	2
Haemodorumaceae	9	24
Haloragaceae	2	3
Hedwigiaceae	3	3
Hemerocallidaceae	5	16
Hypnaceae	1	1
Iridaceae	7	20
Juncaceae	10	28
Juncaginaceae	1	2
Lamiaceae	7	12
Lauraceae	5	13
Lentibulariaceae	2	2
Lepidoziaceae	2	3
Linaceae	1	2
Lindsaeaceae	1	2
Loganiaceae	3	4
Lophocoleaceae	1	3
Lythraceae	1	3
Malvaceae	13	63
Menyanthaceae	2	3
Montiaceae	3	8
Myrtaceae	61	195
Olacaceae	2	14
Onagraceae	4	4
Orchidaceae	45	76
Orobanchaceae	3	10

Orthodontiaceae	1	2
Orthotrichaceae	1	1
Oxalidaceae	4	4
Pallaviciniaceae	1	2
Papaveraceae	2	2
Passifloraceae	1	1
Philydraceae	1	1
Phyllanthaceae	4	9
Phytolaccaceae	1	2
Pittosporaceae	9	55
Plantaginaceae	5	8
Pleurophascaceae	1	2
Poaceae	65	148
Podocarpaceae	1	2
Polygalaceae	4	12
Polygonaceae	9	15
Polyphysaceae	1	1
Pottiaceae	9	19
Primulaceae	2	4
Proteaceae	42	135
Pteridaceae	1	1
Racopilaceae	1	2
Radulaceae	1	2
Ranunculaceae	2	6
Restionaceae	18	45
Rhamnaceae	3	25
Ricciaceae	1	1
Rosaceae	5	13
Rubiaceae	4	17
Rutaceae	14	47
Salviniaceae	1	1
Santalaceae	6	21
Scapaniaceae	1	3
Schizaeaceae	1	1
Scrophulariaceae	4	9
Sematophyllaceae	3	5
Solanaceae	4	7
Stylidiaceae	25	87
Thuidiaceae	2	2
Thymelaeaceae	10	32
Urticaceae	1	2
Verbenaceae	1	1
Xanthorrhoeaceae	2	2
Xyridaceae	2	5
Zamiaceae	1	3
TOTAL	894	2468

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Acrobolbaceae				
1.	<i>Lethocolea pansa</i>			
Aizoaceae				
2.	2823 <i>Tetragonia implexicoma</i> (Bower Spinach)			
Amblystegiaceae				
3.	20165 <i>Drepanocladus aduncus</i>		P2	
Anarthriaceae				
4.	1058 <i>Anarthria gracilis</i>			
5.	1062 <i>Anarthria prolifera</i>			
6.	1063 <i>Anarthria scabra</i>			
7.	1097 <i>Lyginia barbata</i>			
8.	18049 <i>Lyginia imberbis</i>			
Aneuraceae				
9.	<i>Riccardia aequicellularis</i>			
10.	<i>Riccardia bipinnatifida</i>			
11.	<i>Riccardia graeffei</i>			
Anthocerotaceae				
12.	<i>Anthoceros punctatus</i>			
Apiaceae				
13.	6206 <i>Actinotus omnifertilis</i>			
14.	11399 <i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>filiforme</i>			
15.	12040 <i>Apium prostratum</i> subsp. <i>prostratum</i> var. <i>prostratum</i> (Sea Celery)			
16.	6214 <i>Centella asiatica</i>			
17.	10871 <i>Daucus carota</i> (Wild Carrot)	Y		
18.	6218 <i>Daucus glochidiatus</i> (Australian Carrot)			
19.	6221 <i>Foeniculum vulgare</i> (Fennel)	Y		
20.	6222 <i>Homalosciadium homalocarpum</i>			
21.	6246 <i>Pentapeltis silvatica</i> (Southern Pentapeltis)			
22.	6249 <i>Platysace compressa</i> (Tapeworm Plant)			
23.	6253 <i>Platysace filiformis</i>			
24.	6258 <i>Platysace pendula</i>			
25.	6263 <i>Schoenolaena juncea</i>			
26.	6284 <i>Xanthosia candida</i>			
27.	18453 <i>Xanthosia eichleri</i>		P4	
28.	6289 <i>Xanthosia huegelii</i>			
29.	6292 <i>Xanthosia rotundifolia</i> (Southern Cross)			
Araliaceae				
30.	6241 <i>Hydrocotyle tetragonocarpa</i>			
31.	19045 <i>Trachymene grandis</i>			
32.	6280 <i>Trachymene pilosa</i> (Native Parsnip)			
Asparagaceae				
33.	8779 <i>Asparagus asparagoides</i> (Bridal Creeper)	Y		
34.	24020 <i>Asparagus scandens</i>	Y		
35.	1302 <i>Laxmannia jamesii</i> (James' Paperlily)			
36.	1304 <i>Laxmannia minor</i>			
37.	1222 <i>Lomandra brittanii</i>			
38.	1223 <i>Lomandra caespitosa</i> (Tufted Mat Rush)			
39.	1229 <i>Lomandra integra</i>			
40.	14542 <i>Lomandra micrantha</i> subsp. <i>micrantha</i>			
41.	1234 <i>Lomandra nigricans</i>			
42.	1238 <i>Lomandra pauciflora</i>			
43.	1243 <i>Lomandra sericea</i> (Silky Mat Rush)			
44.	1244 <i>Lomandra sonderi</i>			
45.	<i>Lomandra</i> sp.			
46.	1333 <i>Thysanotus glaucifolius</i>			
47.	1339 <i>Thysanotus multiflorus</i> (Many-flowered Fringe Lily)			
Aspleniaceae				
48.	61 <i>Asplenium aethiopicum</i> (Forked Spleenwort)			
Asteraceae				
49.	7829 <i>Angianthus drummondii</i>		P3	
50.	8616 <i>Angianthus platycephalus</i>			
51.	7833 <i>Angianthus preissianus</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
52.	7851	<i>Asteridea pulverulenta</i> (Common Bristle Daisy)			
53.	7871	<i>Brachyscome ciliaris</i>			
54.	7878	<i>Brachyscome iberidifolia</i>			
55.	7909	<i>Carduus pycnocephalus</i> (Slender Thistle)	Y		
56.	7937	<i>Cirsium vulgare</i> (Spear Thistle, Scotch Thistle)	Y		
57.	7939	<i>Conyza bonariensis</i> (Flaxleaf Fleabane)	Y		
58.	20074	<i>Conyza sumatrensis</i>	Y		
59.	44528	<i>Coreopsis lanceolata</i> (Common Tickseed, Showy Tickseed, Garden Coreopsis)	Y		
60.	7943	<i>Cotula australis</i> (Common Cotula)			
61.	7945	<i>Cotula coronopifolia</i> (Waterbuttons)	Y		
62.	7947	<i>Cotula turbinata</i> (Funnel Weed)	Y		
63.	7962	<i>Dittrichia viscosa</i>	Y		
64.	15137	<i>Euchiton sphaericus</i>			
65.	7983	<i>Gnaphalium indutum</i> (Tiny Cudweed)			
66.	8086	<i>Hypochaeris glabra</i> (Smooth Catsear)	Y		
67.	8092	<i>Ixiolaena viscosa</i> (Sticky Ixiolaena)			
68.	18585	<i>Lagenophora huegelii</i>			
69.	8099	<i>Leontodon saxatilis</i> (Hairy Hawkbit)	Y		
70.	17852	<i>Leptorhynchos scaber</i> (Lanky Buttons)			
71.	8127	<i>Olearia axillaris</i> (Coastal Daisybush)			
72.	8143	<i>Olearia paucidentata</i> (Autumn Scrub Daisy)			
73.	42281	<i>Pithocarpa cordata</i>			
74.	42260	<i>Pithocarpa ramosa</i>			
75.	8175	<i>Podolepis gracilis</i> (Slender Podolepis)			
76.	8182	<i>Podotheca angustifolia</i> (Sticky Longheads)			
77.	8189	<i>Pseudognaphalium luteoalbum</i> (Jersey Cudweed)			
78.	8195	<i>Quinetia urvillei</i>			
79.	8204	<i>Senecio elegans</i> (Purple Groundsel)	Y		
80.	8208	<i>Senecio hispidulus</i> (Hispid Fireweed)			
81.	20663	<i>Senecio multicaulis</i> subsp. <i>multicaulis</i>			
82.	20161	<i>Senecio pinnatifolius</i>			
83.	25884	<i>Senecio pinnatifolius</i> var. <i>latilobus</i>			
84.	8218	<i>Senecio ramosissimus</i> (Auricled Groundsel)			
85.	8225	<i>Siloxerus humifusus</i> (Procumbent Siloxerus)			
86.	8231	<i>Sonchus oleraceus</i> (Common Sowthistle)	Y		
87.	25902	<i>Symphyotrichum squamatum</i> (Bushy Starwort)	Y		
88.	38388	<i>Ursinia anthemoides</i> subsp. <i>anthemoides</i>	Y		
89.	8257	<i>Vellereophyton dealbatum</i> (White Cudweed)	Y		
90.	8282	<i>Waitzia suaveolens</i> (Fragrant Waitzia)			
91.	44861	<i>Xerochrysum macranthum</i>			
Aytoniaceae					
92.		<i>Asterella drummondii</i>			
Bartramiaceae					
93.	32327	<i>Breutelia affinis</i>			
94.	32409	<i>Philonotis australiensis</i>			
Basellaceae					
95.	17455	<i>Anredera cordifolia</i>	Y		
Boraginaceae					
96.	6681	<i>Echium plantagineum</i> (Paterson's Curse)	Y		
Boryaceae					
97.	1270	<i>Borya longiscapa</i>		P3	
98.	1273	<i>Borya sphaerocephala</i> (Pincushions)			
Brassicaceae					
99.	3002	<i>Cakile maritima</i> (Sea Rocket)	Y		
100.	3011	<i>Diplotaxis muralis</i> (Wall Rocket)	Y		
101.	3021	<i>Lepidium bonariense</i> (Peppercress)	Y		
102.	19989	<i>Lepidium didymum</i>	Y		
103.	3042	<i>Lepidium pseudotasmanicum</i>		P4	
104.	3048	<i>Lobularia maritima</i> (Sweet Alyssum)	Y		
105.	3080	<i>Stenopetalum robustum</i>			
Bryaceae					
106.	32330	<i>Bryum argenteum</i>			
107.	32375	<i>Gemmabryum chrysoneuron</i>			
108.	32376	<i>Gemmabryum dichotomum</i>			
109.	32380	<i>Gemmabryum pachythemum</i>			
110.	32404	<i>Ochiobryum blandum</i>			Y
111.	32417	<i>Ptychostomum angustifolium</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
112.	32424	<i>Rosulabryum albolimbatum</i>			
113.	44608	<i>Rosulabryum billardieri</i>			
114.	32429	<i>Rosulabryum torquescens</i>			
Campanulaceae					
115.	9289	<i>Lobelia anceps</i> (Angled Lobelia)			
116.	7402	<i>Lobelia gibbosa</i> (Tall Lobelia)			
117.	7403	<i>Lobelia heterophylla</i> (Wing-seeded Lobelia)			
118.	7406	<i>Lobelia rhombifolia</i> (Tufted Lobelia)			
119.	7408	<i>Lobelia tenuior</i> (Slender Lobelia)			
120.	36840	<i>Lobelia tenuior</i> subsp. <i>tenuior</i>			
Caprifoliaceae					
121.	35322	<i>Centranthus ruber</i> subsp. <i>ruber</i>	Y		
Caryophyllaceae					
122.	13119	<i>Cerastium balearicum</i>	Y		
123.	2891	<i>Corrigiola litoralis</i> (Strapwort)	Y		
124.	2905	<i>Polycarpon tetraphyllum</i> (Fourleaf Allseed)	Y		
125.	2906	<i>Sagina apetala</i> (Annual Pearlwort)	Y		
126.	11803	<i>Silene gallica</i> var. <i>quinquevulnera</i>	Y		
Casuarinaceae					
127.	1724	<i>Allocasuarina decussata</i> (Karri She-oak)			
128.	1732	<i>Allocasuarina humilis</i> (Dwarf Sheoak)			
Celastraceae					
129.	4733	<i>Stackhousia monogyna</i>			
130.	9070	<i>Stackhousia pubescens</i> (Downy Stackhousia)			
Centrolepidaceae					
131.	1117	<i>Aphelia cyperoides</i>			
132.	1121	<i>Centrolepis aristata</i> (Pointed Centrolepis)			
133.	1133	<i>Centrolepis pilosa</i>			
134.	1134	<i>Centrolepis polygyna</i> (Wiry Centrolepis)			
Cephaloziellaceae					
135.		<i>Cephaloziella varians</i>			
Ceramiaceae					
136.	27310	<i>Spyridia filamentosa</i>			
Chenopodiaceae					
137.	2483	<i>Chenopodium album</i> (Fat Hen)	Y		
138.	2494	<i>Chenopodium murale</i> (Nettle-leaf Goosefoot)	Y		
139.	33480	<i>Dysphania pumilio</i> (Clammy Goosefoot)			
140.	2578	<i>Rhagodia baccata</i> (Berry Saltbush)			
141.	11341	<i>Rhagodia baccata</i> subsp. <i>baccata</i>			
142.	48433	<i>Salicornia blackiana</i>			
143.	2644	<i>Threlkeldia diffusa</i> (Coast Bonefruit)			
Colchicaceae					
144.	1385	<i>Burchardia multiflora</i> (Dwarf Burchardia)			
145.	12072	<i>Wurmbea dioica</i> subsp. <i>alba</i>			
146.	1402	<i>Wurmbea sinora</i>			
Convolvulaceae					
147.	6616	<i>Dichondra repens</i> (Kidney Weed)			
148.	6630	<i>Ipomoea indica</i> (Morning Glory)	Y		
Crassulaceae					
149.	3137	<i>Crassula colorata</i> (Dense Stonecrop)			
150.	11563	<i>Crassula colorata</i> var. <i>colorata</i>			
151.	15706	<i>Crassula natans</i> var. <i>minus</i>	Y		
Cyperaceae					
152.	739	<i>Baumea acuta</i> (Pale Twig-rush)			
153.	741	<i>Baumea articulata</i> (Jointed Rush)			
154.	743	<i>Baumea juncea</i> (Bare Twigrush)			
155.	744	<i>Baumea laxa</i>			
156.	745	<i>Baumea preissii</i>			
157.	747	<i>Baumea rubiginosa</i>			
158.	748	<i>Baumea vaginalis</i> (Sheath Twigrush)			
159.	763	<i>Chorizandra enodis</i> (Black Bristlerush)			
160.	768	<i>Cyathochaeta avenacea</i>			
161.	17618	<i>Cyathochaeta equitans</i>			
162.	783	<i>Cyperus congestus</i> (Dense Flat-sedge)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
		Y		
163.	834 <i>Evandra aristata</i>			
164.	20216 <i>Ficinia nodosa</i> (Knotted Club Rush)			
165.	17744 <i>Gahnia sclerioides</i>		P4	
166.	908 <i>Gymnoschoenus anceps</i>			
167.	910 <i>Isolepis cernua</i> (Nodding Club-rush)			
168.	20199 <i>Isolepis cernua</i> var. <i>cernua</i>			
169.	20200 <i>Isolepis cernua</i> var. <i>setiformis</i>			
170.	911 <i>Isolepis congrua</i>			
171.	912 <i>Isolepis cyperoides</i>			
172.	916 <i>Isolepis inundata</i> (Swamp Club Rush)			
173.	917 <i>Isolepis marginata</i> (Coarse Club-rush)			
174.	10831 <i>Isolepis prolifera</i> (Budding Club-rush)	Y		
175.	925 <i>Lepidosperma angustatum</i>			
176.	932 <i>Lepidosperma effusum</i> (Spreading Sword-sedge)			
177.	933 <i>Lepidosperma gladiatum</i> (Coast Sword-sedge, Kerbin)			
178.	934 <i>Lepidosperma gracile</i> (Slender Sword Sedge)			
179.	<i>Lepidosperma</i> sp.			
180.	945 <i>Lepidosperma squamatum</i>			
181.	946 <i>Lepidosperma striatum</i>			
182.	948 <i>Lepidosperma tetraquetrum</i>			
183.	953 <i>Mesomelaena graciliceps</i>			
184.	957 <i>Mesomelaena tetragona</i> (Semaphore Sedge)			
185.	978 <i>Schoenus brevisetis</i>			
186.	979 <i>Schoenus caespititius</i>			
187.	983 <i>Schoenus cruentus</i>			
188.	984 <i>Schoenus curvifolius</i>			
189.	986 <i>Schoenus efoliatus</i>			
190.	992 <i>Schoenus grandiflorus</i> (Large Flowered Bogrush)			
191.	8312 <i>Schoenus maschalinus</i>			
192.	1001 <i>Schoenus multiglumis</i>			
193.	1004 <i>Schoenus nitens</i> (Shiny Bog-rush)			
194.	1006 <i>Schoenus odontocarpus</i>			
195.	1017 <i>Schoenus subbulbosus</i>			
196.	1018 <i>Schoenus subfascicularis</i>			
197.	1020 <i>Schoenus sublatialis</i>			
198.	1021 <i>Schoenus subluxus</i>			
199.	1034 <i>Tetraria capillaris</i> (Hair Sedge)			
200.	1036 <i>Tetraria octandra</i>			
201.	35578 <i>Tetraria</i> sp. <i>Blackwood River</i> (A.R. Annels 3043)		P3	
202.	35579 <i>Tetraria</i> sp. <i>Jarrah Forest</i> (R. Davis 7391)			

Dasypogonaceae

203.	1212 <i>Baxteria australis</i>			
204.	1218 <i>Dasypogon bromeliifolius</i> (Pineapple Bush)			
205.	1221 <i>Kingia australis</i> (Kingia, Pulongok)			

Dennstaedtiaceae

206.	13758 <i>Histiopteris incisa</i>			
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Dicranaceae

207.	32335 <i>Campylopus bicolor</i>			
208.	32461 <i>Campylopus bicolor</i> var. <i>bicolor</i>			
209.	32338 <i>Campylopus introflexus</i>	Y		
210.	32344 <i>Dicranoloma diaphanoneuron</i>			
211.	32400 <i>Leucobryum subchlorophyllosum</i>			

Dilleniaceae

212.	5109 <i>Hibbertia amplexicaulis</i>			
213.	5114 <i>Hibbertia commutata</i>			
214.	5117 <i>Hibbertia cuneiformis</i> (Cutleaf Hibbertia)			
215.	5118 <i>Hibbertia cunninghamii</i>			
216.	5119 <i>Hibbertia depressa</i>			
217.	5126 <i>Hibbertia furfuracea</i>			
218.	5132 <i>Hibbertia grossulariifolia</i>			
219.	5135 <i>Hibbertia hypericoides</i> (Yellow Buttercups)			
220.	19687 <i>Hibbertia notibractea</i>			
221.	5154 <i>Hibbertia perfoliata</i>			
222.	5155 <i>Hibbertia pilosa</i> (Hairy Guinea Flower)			
223.	5159 <i>Hibbertia pulchra</i>			
224.	5162 <i>Hibbertia racemosa</i> (Stalked Guinea Flower)			
225.	5169 <i>Hibbertia serrata</i> (Serrate Leaved Guinea Flower)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
Ditrichaceae				
226.	32462 <i>Ceratodon purpureus</i> subsp. <i>convolutus</i>			
227.	32351 <i>Eccremidium pulchellum</i>			
228.	32478 <i>Pleuridium nervosum</i> var. <i>nervosum</i>			
Droseraceae				
229.	48751 <i>Drosera drummondii</i>			
230.	13218 <i>Drosera erythrogynae</i>			
231.	3095 <i>Drosera erythrorhiza</i> (Red Ink Sundew)			
232.	3096 <i>Drosera fimbriata</i> (Manypeaks Sundew)		P4	
233.	3110 <i>Drosera microphylla</i> (Golden Rainbow)			
234.	3111 <i>Drosera modesta</i> (Modest Rainbow)			
235.	3112 <i>Drosera myriantha</i> (Star Rainbow)			
236.	3118 <i>Drosera pallida</i> (Pale Rainbow)			
237.	3122 <i>Drosera platypoda</i> (Fan-leaved Sundew)			
238.	3124 <i>Drosera pulchella</i> (Pretty Sundew)			
239.	3131 <i>Drosera stolonifera</i> (Leafy Sundew)			
240.	8914 <i>Drosera sulphurea</i> (Sulphur-flowered Sundew)			
Elaeocarpaceae				
241.	4525 <i>Platytheca juniperina</i>			
242.	4526 <i>Tetratheca affinis</i>			
243.	4536 <i>Tetratheca hispidissima</i>			
244.	4547 <i>Tremandra diffusa</i>			
245.	4548 <i>Tremandra stelligera</i>			
Eremosynaceae				
246.	3149 <i>Eremosyne pectinata</i>			
Ericaceae				
247.	6295 <i>Acrotriche cordata</i> (Coast Ground Berry)			
248.	6306 <i>Andersonia caerulea</i> (Foxtails)			
249.	6317 <i>Andersonia micrantha</i>			
250.	18077 <i>Andersonia</i> sp. <i>Frankland</i> (W. Jackson BJ8)			
251.	41741 <i>Andersonia</i> sp. <i>Violens</i> (G.J. Keighery 12000)		P3	
252.	6321 <i>Andersonia sprengelioides</i>			
253.	6325 <i>Astroloma drummondii</i>			
254.	6352 <i>Cosmelia rubra</i> (Spindle Heath)			
255.	40865 <i>Dielsiodoxa lycopodioides</i>			
256.	43301 <i>Erica lusitanica</i>	Y		Y
257.	6360 <i>Leucopogon australis</i> (Spiked Beard-heath)			
258.	6375 <i>Leucopogon cordatus</i>			
259.	6387 <i>Leucopogon distans</i>			
260.	6396 <i>Leucopogon glabellus</i>			
261.	6402 <i>Leucopogon hirsutus</i>			
262.	33380 <i>Leucopogon interstans</i>			
263.	6417 <i>Leucopogon obovatus</i>			
264.	40940 <i>Leucopogon obovatus</i> subsp. <i>obovatus</i>			
265.	40941 <i>Leucopogon obovatus</i> subsp. <i>revolutus</i>			
266.	35499 <i>Leucopogon paradoxus</i>			
267.	6427 <i>Leucopogon parviflorus</i> (Coast Beard-heath)			
268.	6436 <i>Leucopogon propinquus</i>			
269.	6440 <i>Leucopogon racemosus</i>			
270.	6441 <i>Leucopogon reflexus</i> (Heart-leaf Beard-heath)			
271.	10755 <i>Leucopogon rubricaulis</i>			
272.	34718 <i>Leucopogon</i> sp. <i>Southern Forests</i> (B.G. Hammersley 1000)			
273.	19202 <i>Leucopogon</i> sp. <i>Walpole</i> (R.J. Cranfield 10940)			
274.	6453 <i>Leucopogon unilateralis</i>			
275.	6454 <i>Leucopogon verticillatus</i> (Tassel Flower)			
276.	6456 <i>Lysinema ciliatum</i> (Curry Flower)			
277.	6457 <i>Lysinema conspicuum</i>			
278.	34736 <i>Lysinema pentapetalum</i>			
279.	31931 <i>Sphenotoma capitata</i>			
280.	31952 <i>Sphenotoma gracilis</i> (Swamp Paper-heath)			
281.	31951 <i>Sphenotoma parviflora</i>			
282.	31932 <i>Sphenotoma squarrosa</i>			
Euphorbiaceae				
283.	4585 <i>Amperea ericoides</i>			
284.	4587 <i>Amperea protensa</i>			
285.	13101 <i>Amperea simulans</i>			
286.	16493 <i>Calycopseplus oligandrus</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
287.	4636 <i>Euphorbia paralias</i> (Sea Spurge)	Y		
288.	4695 <i>Ricinocarpos glaucus</i>			
Fabaceae				
289.	15429 <i>Acacia alata</i> var. <i>alata</i>			
290.	3247 <i>Acacia browniana</i>			
291.	11731 <i>Acacia browniana</i> var. <i>browniana</i>			
292.	3262 <i>Acacia cochlearis</i> (Rigid Wattle)			
293.	3282 <i>Acacia cyclops</i> (Coastal Wattle)			
294.	3307 <i>Acacia divergens</i>			
295.	3347 <i>Acacia gilbertii</i>			
296.	3363 <i>Acacia hastulata</i>			
297.	18217 <i>Acacia iteaphylla</i>	Y		
298.	3424 <i>Acacia littorea</i>			
299.	3428 <i>Acacia luteola</i>			
300.	3453 <i>Acacia myrtifolia</i>			
301.	35624 <i>Acacia pentadenia</i> subsp. <i>pentadenia</i>			
302.	<i>Acacia provincialis</i>			Y
303.	3502 <i>Acacia pulchella</i> (Prickly Moses)			
304.	15483 <i>Acacia pulchella</i> var. <i>pulchella</i>			
305.	30036 <i>Acacia saligna</i> subsp. <i>stolonifera</i>			
306.	3530 <i>Acacia scalpelliformis</i>			
307.	3576 <i>Acacia tetragonocarpa</i>			
308.	3591 <i>Acacia urophylla</i>			
309.	15487 <i>Acacia varia</i> var. <i>varia</i>			
310.	3689 <i>Aotus intermedia</i>			
311.	3690 <i>Aotus passerinoides</i>			
312.	14397 <i>Bossiaea aquifolium</i> subsp. <i>laidlawiana</i>			
313.	3707 <i>Bossiaea dentata</i>			
314.	3713 <i>Bossiaea linophylla</i>			
315.	14291 <i>Bossiaea praetermissa</i>			
316.	3718 <i>Bossiaea rufa</i>			
317.	3723 <i>Bossiaea webbii</i> (Water Bush)			
318.	10861 <i>Callistachys lanceolata</i> (Wonnich)			
319.	13112 <i>Chorizema aciculare</i> subsp. <i>aciculare</i>			
320.	3754 <i>Chorizema diversifolium</i>			
321.	3757 <i>Chorizema glycinifolium</i>			
322.	3758 <i>Chorizema ilicifolium</i> (Holly Flame Pea)			
323.	3760 <i>Chorizema reticulatum</i> (Showy Flame Pea)			
324.	13107 <i>Chorizema retrorsum</i>			
325.	3761 <i>Chorizema rhombeum</i>			
326.	3811 <i>Daviesia flexuosa</i>			
327.	3817 <i>Daviesia inflata</i>			
328.	3867 <i>Dipogon lignosus</i> (Dolichos Pea)	Y		
329.	20214 <i>Eutaxia myrtifolia</i>			
330.	3879 <i>Eutaxia parvifolia</i>			
331.	3891 <i>Gastrolobium bilobum</i> (Heart Leaf Poison)			
332.	3893 <i>Gastrolobium brownii</i>			
333.	20490 <i>Gastrolobium coriaceum</i>			
334.	20500 <i>Gastrolobium sericeum</i>			
335.	3948 <i>Gompholobium capitatum</i>			
336.	10909 <i>Gompholobium confertum</i>			
337.	3950 <i>Gompholobium knightianum</i>			
338.	3954 <i>Gompholobium polymorphum</i>			
339.	11083 <i>Gompholobium scabrum</i>			
340.	3957 <i>Gompholobium tomentosum</i> (Hairy Yellow Pea)			
341.	3958 <i>Gompholobium venustum</i> (Handsome Wedge-pea)			
342.	11115 <i>Gompholobium villosum</i>			
343.	3961 <i>Hardenbergia comptoniana</i> (Native Wisteria)			
344.	3964 <i>Hovea chorizemifolia</i> (Holly-leaved Hovea)			
345.	3965 <i>Hovea elliptica</i> (Tree Hovea)			
346.	3992 <i>Isotropis cuneifolia</i> (Granny Bonnets)			
347.	4017 <i>Jacksonia horrida</i>			
348.	4028 <i>Jacksonia spinosa</i>			
349.	4036 <i>Kennedia carinata</i>			
350.	4037 <i>Kennedia coccinea</i> (Coral Vine)			
351.	37960 <i>Kennedia coccinea</i> subsp. <i>calcaria</i>			
352.	4039 <i>Kennedia glabrata</i> (Northcliffe Kennedia)		T	
353.	4047 <i>Lathyrus tingitanus</i> (Tangier Pea)	Y		
354.	4048 <i>Latrobea brunonis</i>			
355.	4050 <i>Latrobea genistoides</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
356.	4059	<i>Lotus angustissimus</i> (Narrowleaf Trefoil)	Y		
357.	8564	<i>Lotus subbiflorus</i>	Y		
358.	4063	<i>Lotus uliginosus</i> (Greater Lotus)	Y		
359.	4072	<i>Medicago arabica</i> (Spotted Medic)	Y		
360.	4076	<i>Medicago lupulina</i> (Black Medic)	Y		
361.	4079	<i>Medicago polymorpha</i> (Burr Medic)	Y		
362.	4085	<i>Melilotus indicus</i>	Y		
363.	4096	<i>Mirbelia ovata</i>			
364.	4113	<i>Ornithopus compressus</i> (Yellow Serradella)	Y		
365.	17114	<i>Paraserianthes lophantha</i> subsp. <i>lophantha</i>			
366.	4140	<i>Phyllota barbata</i>			
367.	4155	<i>Psoralea pinnata</i> (African Scurfpea)	Y		
368.	4165	<i>Pultenaea barbata</i>			
369.	4181	<i>Pultenaea reticulata</i>			
370.	4186	<i>Pultenaea tenuifolia</i>			
371.	17020	<i>Robinia pseudoacacia</i>	Y		
372.	17551	<i>Sphaerolobium drummondii</i>			
373.	4204	<i>Sphaerolobium grandiflorum</i>			
374.	20302	<i>Sphaerolobium hygrophilum</i>			
375.	4207	<i>Sphaerolobium medium</i>			
376.	17547	<i>Sphaerolobium pubescens</i>			
377.	17548	<i>Sphaerolobium rostratum</i>			
378.	4256	<i>Templetonia retusa</i> (Cockies Tongues)			
379.	17145	<i>Trifolium angustifolium</i> var. <i>angustifolium</i>	Y		
380.	17542	<i>Trifolium arvense</i> var. <i>arvense</i>	Y		
381.	17763	<i>Trifolium campestre</i> var. <i>campestre</i> (Hop Clover)	Y		
382.	4293	<i>Trifolium cernuum</i> (Drooping Flower Clover)	Y		
383.	4295	<i>Trifolium dubium</i> (Suckling Clover)	Y		
384.	4302	<i>Trifolium ligusticum</i> (Ligurian Clover)	Y		
385.	4312	<i>Trifolium striatum</i> (Knotted Clover)	Y		
386.	4313	<i>Trifolium subterraneum</i> (Subterranean Clover)	Y		
387.	15509	<i>Trifolium tomentosum</i> var. <i>tomentosum</i>	Y		
388.	4317	<i>Ulex europaeus</i> (Gorse)	Y		
389.	4320	<i>Vicia hirsuta</i> (Hairy Vetch)	Y		
390.	11474	<i>Vicia sativa</i> subsp. <i>nigra</i>	Y		

Fabroniaceae

391.	32396	<i>Ischyrodon lepturus</i>			
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Fissidentaceae

392.	32363	<i>Fissidens curvatus</i>			
393.	32369	<i>Fissidens tenellus</i>			

Funariaceae

394.	32354	<i>Entosthodon productus</i>			
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Gentianaceae

395.	6539	<i>Centaureum erythraea</i> (Common Centaury)	Y		
396.	6542	<i>Centaureum tenuiflorum</i>	Y		
397.	6543	<i>Cicendia filiformis</i> (Slender Cicendia)	Y		
398.	41660	<i>Schenkia australis</i>			

Geraniaceae

399.	4340	<i>Geranium retrorsum</i>			
400.	4342	<i>Pelargonium australe</i> (Wild Geranium)			
401.	4343	<i>Pelargonium capitatum</i> (Rose Pelargonium)	Y		
402.	4344	<i>Pelargonium drummondii</i>			
403.	4346	<i>Pelargonium littorale</i>			

Goodeniaceae

404.	7411	<i>Anthotium humile</i> (Dwarf Anthotium)			
405.	7444	<i>Dampiera hederacea</i> (Karri Dampiera)			
406.	7452	<i>Dampiera leptoclada</i> (Slender-shooted Dampiera)			
407.	7454	<i>Dampiera linearis</i> (Common Dampiera)			
408.	7462	<i>Dampiera pedunculata</i>			
409.	7505	<i>Goodenia eatoniana</i>			
410.	7523	<i>Goodenia leptoclada</i> (Thin-stemmed Goodenia)			
411.	7572	<i>Lechenaultia expansa</i>			
412.	7613	<i>Scaevola glandulifera</i> (Viscid Hand-flower)			
413.	7614	<i>Scaevola globulifera</i>			
414.	7624	<i>Scaevola microphylla</i> (Small-leaved Scaevola)			
415.	7626	<i>Scaevola nitida</i> (Shining Fanflower)			
416.	7634	<i>Scaevola phlebopetala</i> (Velvet Fanflower)			

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417.	7646	<i>Scaevola striata</i> (Royal Robe)			
418.	13175	<i>Scaevola striata</i> var. <i>striata</i>			
419.	7651	<i>Selliera radicans</i>		P1	
420.	7662	<i>Velleia macrophylla</i> (Large-leaved Velleia)			
421.	7665	<i>Velleia trinervis</i>			

Gyrostemonaceae

422.	2787	<i>Gyrostemon sheathii</i>
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Haemodoraceae

423.	1407	<i>Anigozanthos flavidus</i> (Tall Kangaroo Paw)
424.	1413	<i>Anigozanthos preissii</i> (Albany Catpaw)
425.	11826	<i>Conostylis aculeata</i> subsp. <i>aculeata</i>
426.	1454	<i>Conostylis setigera</i> (Bristly Cottonhead)
427.	1468	<i>Haemodorum laxum</i>
428.	1474	<i>Haemodorum sparsiflorum</i>
429.	1475	<i>Haemodorum spicatum</i> (Mardja)
430.	1478	<i>Phlebocarya ciliata</i>
431.	1481	<i>Tribonanthes australis</i> (Southern Tiurmdin)

Haloragaceae

432.	16746	<i>Gonocarpus benthamii</i> subsp. <i>benthamii</i>
433.	6183	<i>Haloragodendron racemosum</i> (Shrubby Raspwort)

Hedwigiaceae

434.	32391	<i>Hedwigia ciliata</i>
435.	32392	<i>Hedwigidium integrifolium</i>
436.	32421	<i>Rhacocarpus purpurascens</i>

Hemerocallidaceae

437.	1285	<i>Corynothea micrantha</i> (Sand Lily)
438.	12012	<i>Corynothea micrantha</i> var. <i>panda</i>
439.	1297	<i>Johnsonia lupulina</i> (Hooded Lily)
440.	1260	<i>Stypandra glauca</i> (Blind Grass)
441.	1361	<i>Tricoryne elatior</i> (Yellow Autumn Lily)

Hypnaceae

442.	32394	<i>Hypnum cupressiforme</i>
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Iridaceae

443.	1514	<i>Crocasmia x crocosmiiflora</i>	Y
444.	1524	<i>Gladiolus undulatus</i> (Wild Gladiolus)	Y
445.	1532	<i>Ixia maculata</i> (Yellow Ixia)	Y
446.	1540	<i>Orthrosanthus polystachyus</i> (Many Spike Orthrosanthus)	
447.	1550	<i>Patersonia occidentalis</i> (Purple Flag, Koma)	
448.	1551	<i>Patersonia pygmaea</i> (Pygmy Patersonia)	
449.	14432	<i>Patersonia umbrosa</i> var. <i>umbrosa</i>	

Juncaceae

450.	1177	<i>Juncus articulatus</i> (Jointed Rush)	Y
451.	1178	<i>Juncus bufonius</i> (Toad Rush)	Y
452.	1179	<i>Juncus caespiticius</i> (Grassy Rush)	
453.	1180	<i>Juncus capitatus</i> (Capitate Rush)	Y
454.	11922	<i>Juncus kraussii</i> subsp. <i>australiensis</i>	
455.	1186	<i>Juncus microcephalus</i>	Y
456.	1187	<i>Juncus oxycarpus</i>	Y
457.	1188	<i>Juncus pallidus</i> (Pale Rush)	
458.	1190	<i>Juncus planifolius</i> (Broadleaf Rush)	
459.	1196	<i>Juncus usitatus</i> (Common Rush)	Y

Juncaginaceae

460.	151	<i>Triglochin striata</i>
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Lamiaceae

461.	6855	<i>Hemigenia humilis</i>	
462.	6856	<i>Hemigenia incana</i> (Silky Hemigenia)	
463.	6865	<i>Hemigenia podalyrina</i>	
464.	6883	<i>Mentha pulegium</i> (Pennyroyal)	Y
465.	6927	<i>Prunella vulgaris</i> (Self Heal)	Y
466.	6930	<i>Stachys arvensis</i> (Staggerweed)	Y
467.	6939	<i>Westringia dampieri</i>	

Lauraceae

468.	2951	<i>Cassytha flava</i> (Dodder Laurel)
469.	2952	<i>Cassytha glabella</i> (Tangled Dodder Laurel)
470.	2956	<i>Cassytha pomiformis</i> (Dodder Laurel)

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471.	2957	<i>Cassytha racemosa</i> (Dodder Laurel)			
472.	11799	<i>Cassytha racemosa</i> forma <i>racemosa</i>			
Lentibulariaceae					
473.	7148	<i>Utricularia multifida</i>			
474.	7150	<i>Utricularia simplex</i> (Bluecoats)			
Lepidoziaceae					
475.		<i>Kurzia compacta</i>			
476.		<i>Kurzia hippurioides</i>			
Linaceae					
477.	4363	<i>Linum trigynum</i> (French Flax)	Y		
Lindsaeaceae					
478.	59	<i>Lindsaea linearis</i> (Screw Fern)			
Loganiaceae					
479.	6515	<i>Logania vaginalis</i> (White Spray)			
480.	46255	<i>Orianthera campanulata</i>			
481.	46315	<i>Orianthera serpyllifolia</i> subsp. <i>serpyllifolia</i>			
Lophocoleaceae					
482.		<i>Chiloscyphus semiteres</i> var. <i>semiteres</i>			
Lythraceae					
483.	5281	<i>Lythrum hyssopifolia</i> (Lesser Loosestrife)	Y		
Malvaceae					
484.	48634	<i>Commersonia corniculata</i>			
485.	40863	<i>Commersonia corylifolia</i> (Hazel-leaved Rulingia)			
486.	5033	<i>Lasiopetalum floribundum</i> (Free Flowering Lasiopetalum)			
487.	33498	<i>Lasiopetalum</i> sp. Denmark (B.G. Hammersley 2012)		P3	
488.	36522	<i>Malva pseudolavatera</i>	Y		
489.	4963	<i>Modiola caroliniana</i>	Y		
490.	5091	<i>Thomasia paniculata</i>			
491.	5092	<i>Thomasia pauciflora</i> (Few Flowered Thomasia)			
492.	5094	<i>Thomasia purpurea</i>			
493.	5096	<i>Thomasia quercifolia</i> (Oak Leaved Thomasia)		P4	
494.	5097	<i>Thomasia rhynchocarpa</i>			
495.	5100	<i>Thomasia solanacea</i>		P4	
496.	33488	<i>Thomasia</i> sp. Vasse (C. Wilkins & K. Shepherd CW 581)			
Menyanthaceae					
497.	36180	<i>Liparophyllum latifolium</i>			
498.	36181	<i>Ornduffia pamassifolia</i>			
Montiaceae					
499.	2845	<i>Calandrinia brevipedata</i> (Short-stalked Purslane)			
500.	2848	<i>Calandrinia corrigioloides</i> (Strap Purslane)			
501.	2856	<i>Calandrinia liniflora</i> (Parakeelya)			
Myrtaceae					
502.	5315	<i>Actinodium cunninghamii</i> (Albany Daisy)			
503.	5316	<i>Agonis flexuosa</i> (Peppermint, Wonil)			
504.	17202	<i>Agonis flexuosa</i> var. <i>flexuosa</i>			
505.	17203	<i>Agonis flexuosa</i> var. <i>latifolia</i>			
506.	19789	<i>Agonis theiformis</i>			
507.	20361	<i>Astartea arbuscula</i> (Minute Astartea)			
508.	48190	<i>Astartea arbuscula</i> x <i>corniculata</i>			Y
509.	20125	<i>Astartea corniculata</i>			
510.	20127	<i>Astartea glomerulosa</i> (Early Astartea)			
511.	45213	<i>Astartea pulchella</i>			
512.	20283	<i>Astartea scoparia</i> (Common Astartea)			
513.	5381	<i>Beaufortia decussata</i> (Gravel Bottlebrush)			
514.	5392	<i>Beaufortia sparsa</i> (Swamp Bottlebrush)			
515.	5415	<i>Calothamnus lateralis</i>			
516.	5425	<i>Calothamnus preissii</i>			
517.	5430	<i>Calothamnus schaueri</i>			
518.	5483	<i>Calytrix tetragona</i> (Common Fringe-myrtle)			
519.	17104	<i>Corymbia calophylla</i> (Marri)			
520.	5508	<i>Darwinia citriodora</i> (Lemon-scented Darwinia)			
521.	5519	<i>Darwinia oederoides</i>			
522.	5533	<i>Darwinia vestita</i> (Pom-pom Darwinia)			
523.	5605	<i>Eucalyptus comuta</i> (Yate, Yeid)			
524.	5625	<i>Eucalyptus diversicolor</i> (Karri)			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
525.	5667 <i>Eucalyptus guilfoylei</i> (Yellow Tingle, Dingul Dingul)			
526.	5708 <i>Eucalyptus marginata</i> (Jarrah, Djara)			
527.	13547 <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah)			
528.	5709 <i>Eucalyptus megacarpa</i> (Bullich, Pulidj)			
529.	5739 <i>Eucalyptus patens</i> (Swan River Blackbutt, Dwuda)			
530.	5763 <i>Eucalyptus rudis</i> (Flooded Gum, Kulurda)			
531.	5776 <i>Eucalyptus staeri</i> (Albany Blackbutt)			
532.	19629 <i>Eucalyptus virginea</i>		P4	
533.	5816 <i>Homalospermum firmum</i>			
534.	5818 <i>Hypocalymma cordifolium</i>			
535.	5819 <i>Hypocalymma ericifolium</i>			
536.	43120 <i>Hypocalymma minus</i>			
537.	13106 <i>Hypocalymma scariosum</i>			
538.	5827 <i>Hypocalymma strictum</i>			
539.	17506 <i>Kunzea ericifolia</i> subsp. <i>ericifolia</i>			
540.	5841 <i>Kunzea recurva</i>			
541.	5844 <i>Kunzea sulphurea</i>			
542.	40780 <i>Melaleuca citrina</i>	Y		
543.	5900 <i>Melaleuca cuticularis</i> (Saltwater Paperbark)			
544.	5902 <i>Melaleuca densa</i>			
545.	5922 <i>Melaleuca lanceolata</i> (Rottnest Teatree, Moonah)			
546.	5926 <i>Melaleuca lateritia</i> (Robin Redbreast Bush)			
547.	5938 <i>Melaleuca microphylla</i>			
548.	5946 <i>Melaleuca pauciflora</i>			
549.	5952 <i>Melaleuca preissiana</i> (Moonah)			
550.	5959 <i>Melaleuca raphiophylla</i> (Swamp Paperbark)			
551.	5968 <i>Melaleuca spathulata</i>			
552.	5980 <i>Melaleuca thymoides</i>			
553.	37683 <i>Melaleuca viminalis</i>		P2	
554.	5987 <i>Melaleuca viminea</i> (Mohan)			
555.	11109 <i>Pericalymma crassipes</i>			
556.	20100 <i>Taxandria angustifolia</i>			
557.	20114 <i>Taxandria fragrans</i>			
558.	20115 <i>Taxandria juniperina</i>			
559.	20135 <i>Taxandria linearifolia</i>			
560.	20134 <i>Taxandria marginata</i>			
561.	20133 <i>Taxandria parviceps</i>			
562.	15618 <i>Verticordia plumosa</i> var. <i>plumosa</i>			
Olacaceae				
563.	2365 <i>Olax benthamiana</i>			
564.	2366 <i>Olax phyllanthi</i>			
Onagraceae				
565.	11570 <i>Epilobium billardioreanum</i> subsp. <i>billardioreanum</i> (Smooth Willow Herb)			
566.	11992 <i>Epilobium billardioreanum</i> subsp. <i>intermedium</i>			
567.	18300 <i>Fuchsia magellanica</i>	Y		Y
568.	6139 <i>Oenothera glazioviana</i> (Evening Primrose)	Y		
Orchidaceae				
569.	15328 <i>Caladenia applanata</i> subsp. <i>applanata</i>			
570.	15329 <i>Caladenia applanata</i> subsp. <i>erubescens</i>		P2	
571.	18035 <i>Caladenia bicallata</i> subsp. <i>bicallata</i>			
572.	18036 <i>Caladenia bicallata</i> subsp. <i>cleistogama</i>			
573.	15335 <i>Caladenia brownii</i>			
574.	1580 <i>Caladenia cairnsiana</i> (Zebra Orchid)			
575.	15350 <i>Caladenia flava</i> subsp. <i>sylvestris</i>			
576.	1599 <i>Caladenia latifolia</i> (Pink Fairy Orchid)			
577.	15372 <i>Caladenia nana</i> subsp. <i>unita</i>			
578.	1609 <i>Caladenia pectinata</i> (King Spider Orchid)			
579.	33160 <i>Calochilus uliginosus</i>			
580.	12946 <i>Corybas limpidus</i>		P4	
581.	1627 <i>Cryptostylis ovata</i> (Slipper Orchid)			
582.	10916 <i>Cyrtostylis huegelii</i>			
583.	19649 <i>Disa bracteata</i>	Y		
584.	1632 <i>Diuris emarginata</i> (Tall Donkey Orchid)			
585.	44140 <i>Diuris jonesii</i>			
586.	1633 <i>Diuris laevis</i> (Nannygoat Orchid)			
587.	1636 <i>Diuris pauciflora</i>			
588.	1638 <i>Diuris setacea</i> (Bristly Donkey Orchid)			
589.	1640 <i>Drakaea glyptodon</i> (King-in-his-carriage)			
590.	13635 <i>Drakaea micrantha</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
			T	
591.	1642 <i>Drakaea thynniphila</i>			
592.	1646 <i>Eriochilus dilatatus</i> (White Bunny Orchid)			
593.	15414 <i>Eriochilus helonomos</i>			
594.	1656 <i>Lyperanthus serratus</i> (Rattle Beak Orchid)			
595.	1657 <i>Microtis alba</i> (White Mignonette Orchid)			
596.	34158 <i>Microtis albobiridis</i>			
597.	1658 <i>Microtis atrata</i> (Swamp Mignonette Orchid)			
598.	1659 <i>Microtis globula</i> (South-coast Mignonette Orchid)		T	
599.	10954 <i>Microtis media</i> (Tall Mignonette Orchid)			
600.	12761 <i>Microtis media</i> subsp. <i>densiflora</i>			
601.	15419 <i>Microtis media</i> subsp. <i>media</i>			
602.	1662 <i>Microtis pulchella</i> (Beautiful Mignonette Orchid)		P4	
603.	15424 <i>Praecoxanthus aphyllus</i>			
604.	11066 <i>Prasophyllum cucullatum</i> (Hooded Leek Orchid)			
605.	1670 <i>Prasophyllum drummondii</i> (Swamp Leek Orchid)			
606.	1671 <i>Prasophyllum elatum</i> (Tall Leek Orchid)			
607.	17650 <i>Prasophyllum odoratissimum</i>			
608.	1680 <i>Prasophyllum parvifolium</i> (Autumn Leek Orchid)			
609.	1681 <i>Prasophyllum regium</i> (King Leek Orchid)			
610.	44084 <i>Prasophyllum</i> sp. <i>early</i> (G. Brockman GBB 1626)			
611.	1683 <i>Prasophyllum triangulare</i> (Dark Leek Orchid)			
612.	1698 <i>Pterostylis vittata</i> (Banded Greenhood)			
613.	1716 <i>Thelymitra tigrina</i> (Tiger Orchid)			
Orobanchaceae				
614.	7046 <i>Bellardia trixago</i> (Bellardia)	Y		
615.	48868 <i>Bellardia viscosa</i>	Y		
616.	7122 <i>Orobanche minor</i> (Lesser Broomrape)	Y		
Orthodontiaceae				
617.	32406 <i>Orthodontium lineare</i>			
Orthotrichaceae				
618.	32457 <i>Zygodon intermedius</i>			
Oxalidaceae				
619.	4349 <i>Oxalis corniculata</i> (Yellow Wood Sorrel)	Y		
620.	18331 <i>Oxalis debilis</i> var. <i>corymbosa</i> (Pink Shamrock)	Y		
621.	30375 <i>Oxalis exilis</i>			
622.	4354 <i>Oxalis incarnata</i>	Y		
Pallaviciniaceae				
623.	<i>Symphogygyna podophylla</i>			
Papaveraceae				
624.	2969 <i>Fumaria capreolata</i> (Whiteflower Fumitory)	Y		
625.	31532 <i>Fumaria muralis</i> subsp. <i>muralis</i>	Y		
Passifloraceae				
626.	5225 <i>Passiflora filamentosa</i>	Y		
Philydraceae				
627.	1173 <i>Philydrella pygmaea</i> (Butterfly Flowers)			
Phyllanthaceae				
628.	4675 <i>Phyllanthus calycinus</i> (False Boronia)			
629.	4688 <i>Poranthera drummondii</i>			
630.	4690 <i>Poranthera huegelii</i>			
631.	4691 <i>Poranthera microphylla</i> (Small Poranthera)			
Phytolaccaceae				
632.	2793 <i>Phytolacca octandra</i> (Red Ink Plant)	Y		
Pittosporaceae				
633.	3154 <i>Billardiera coriacea</i>			
634.	25787 <i>Billardiera drummondii</i>			
635.	3157 <i>Billardiera floribunda</i> (White-flowered Billardiera)			
636.	25798 <i>Billardiera fusiformis</i> (Australian Bluebell)			
637.	3159 <i>Billardiera laxiflora</i>			
638.	3165 <i>Billardiera variifolia</i>			
639.	17637 <i>Marianthus candidus</i> (White Marianthus)			
640.	25822 <i>Marianthus sylvaticus</i>			
641.	16322 <i>Pittosporum undulatum</i>	Y		
Plantaginaceae				

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642.	4717	<i>Callitriche stagnalis</i> (Common Starwort)	Y		
643.	14282	<i>Gratiola pubescens</i>			
644.	7303	<i>Plantago lanceolata</i> (Ribwort Plantain)	Y		
645.	7108	<i>Veronica arvensis</i> (Wall Speedwell)	Y		
646.	7109	<i>Veronica calycina</i> (Cup Speedwell)			
Pleurophascaceae					
647.	19062	<i>Pleurophascum occidentale</i>		P4	
Poaceae					
648.	177	<i>Agrostis capillaris</i>	Y		
649.	182	<i>Agrostis stolonifera</i> (Creeping Bent)	Y		
650.	185	<i>Aira cupaniana</i> (Silvery Hairgrass)	Y		
651.	187	<i>Aira praecox</i> (Early Hairgrass)	Y		
652.	35159	<i>Ammophila arenaria</i> subsp. <i>arenaria</i>	Y		
653.	13380	<i>Amphibromus nervosus</i>			
654.	194	<i>Amphipogon amphipogonoides</i>			
655.	197	<i>Amphipogon debilis</i>			
656.	20184	<i>Amphipogon laguroides</i> subsp. <i>laguroides</i>			
657.	202	<i>Anthoxanthum odoratum</i> (Sweet Vernal Grass)	Y		
658.	11542	<i>Arrhenatherum elatius</i> var. <i>bulbosum</i> (Onion Twitch)	Y		
659.	17240	<i>Austrostipa flavescens</i>			
660.	17241	<i>Austrostipa hemipogon</i>			
661.	17245	<i>Austrostipa mollis</i>			
662.	17253	<i>Austrostipa semibarbata</i>			
663.	231	<i>Avellinia michelii</i>	Y		
664.	233	<i>Avena barbata</i> (Bearded Oat)	Y		
665.	20013	<i>Axonopus fissifolius</i>	Y		
666.	244	<i>Briza maxima</i> (Blowfly Grass)	Y		
667.	245	<i>Briza minor</i> (Shivery Grass)	Y		
668.	248	<i>Bromus catharticus</i> (Prairie Grass)	Y		
669.	41564	<i>Cenchrus clandestinus</i> (Kikuyu Grass)	Y		
670.	283	<i>Cynodon dactylon</i> (Couch)	Y		
671.	285	<i>Cynosurus echinatus</i> (Rough Dogstail)	Y		
672.	287	<i>Dactylis glomerata</i> (Cocksfoot)	Y		
673.	299	<i>Deyeuxia quadriseta</i> (Reed Bentgrass)			
674.	306	<i>Dichelachne crinita</i> (Longhair Plumegrass)			
675.	320	<i>Digitaria sanguinalis</i> (Crab Grass)	Y		
676.	11105	<i>Echinochloa crus-galli</i>	Y		
677.	347	<i>Ehrharta calycina</i> (Perennial Veldt Grass)	Y		
678.	349	<i>Ehrharta longiflora</i> (Annual Veldt Grass)	Y		
679.	373	<i>Eragrostis brownii</i> (Brown's Lovegrass)			
680.	376	<i>Eragrostis curvula</i> (African Lovegrass)	Y		
681.	430	<i>Festuca arundinacea</i> (Tall Fescue)	Y		
682.	439	<i>Hemarthria uncinata</i> (Matgrass)			
683.	11451	<i>Hemarthria uncinata</i> var. <i>uncinata</i>			
684.	444	<i>Holcus lanatus</i> (Yorkshire Fog)	Y		
685.	449	<i>Hordeum leporinum</i> (Barley Grass)	Y		
686.	20019	<i>Lachnagrostis filiformis</i>			
687.	467	<i>Lagurus ovatus</i> (Hare's Tail Grass)	Y		
688.	475	<i>Lolium multiflorum</i> (Italian Ryegrass)	Y		
689.	476	<i>Lolium perenne</i> (Perennial Ryegrass)	Y		
690.	478	<i>Lolium rigidum</i> (Wimmera Ryegrass)	Y		
691.	485	<i>Microlaena stipoides</i> (Weeping Grass)			
692.	516	<i>Parapholis incurva</i> (Coast Barbglass)	Y		
693.	527	<i>Paspalum dilatatum</i>	Y		
694.	533	<i>Paspalum vaginatum</i> (Salt Water Couch)			
695.	548	<i>Phalaris aquatica</i> (Phalaris)	Y		
696.	573	<i>Poa drummondiana</i> (Knotted Poa)			
697.	577	<i>Poa poiformis</i> (Coastal Poa)			
698.	578	<i>Poa porphyroclados</i>			
699.	582	<i>Polypogon monspeliensis</i> (Annual Beardgrass)	Y		
700.	40431	<i>Rytidosperma acerosum</i>			
701.	40425	<i>Rytidosperma caespitosum</i>			
702.	40430	<i>Rytidosperma pilosum</i>			
703.	40428	<i>Rytidosperma racemosum</i>			Y
704.	40427	<i>Rytidosperma setaceum</i>			
705.	19453	<i>Setaria parviflora</i>	Y		
706.	8710	<i>Sporobolus africanus</i> (Parramatta Grass)	Y		
707.	635	<i>Sporobolus virginicus</i> (Marine Couch)			
708.	636	<i>Stenotaphrum secundatum</i> (Buffalo Grass)	Y		

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709.	11137	<i>Vulpia fasciculata</i>	Y		
710.	724	<i>Vulpia myuros</i> (Rat's Tail Fescue)	Y		
711.	33101	<i>Vulpia myuros forma myuros</i>	Y		
712.		<i>Vulpia</i> sp.			

Podocarpaceae

713.	86	<i>Podocarpus drouynianus</i> (Wild Plum, Kula)			
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Polygalaceae

714.	4550	<i>Comesperma calymega</i> (Blue-spike Milkwort)			
715.	4552	<i>Comesperma confertum</i>			
716.	4554	<i>Comesperma flavum</i>			
717.	4578	<i>Polygala virgata</i>	Y		

Polygonaceae

718.	2412	<i>Muehlenbeckia adpressa</i> (Climbing Lignum)			
719.	11020	<i>Persicaria hydropiper</i>			
720.	2419	<i>Polygonum aviculare</i> (Wireweed)	Y		
721.	2429	<i>Rumex acetosella</i> (Sorrel)	Y		
722.	2432	<i>Rumex conglomeratus</i> (Clustered Dock)	Y		
723.	2433	<i>Rumex crispus</i> (Curled Dock)	Y		
724.	2437	<i>Rumex frutescens</i>	Y		
725.	12017	<i>Rumex pulcher subsp. pulcher</i> (Fiddle Dock)	Y		
726.	2447	<i>Rumex x pseudopulcher</i>	Y		

Polyphysaceae

727.	13146	<i>Acetabularia peniculus</i>			
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Pottiaceae

728.	32315	<i>Barbula calycina</i>			
729.	32346	<i>Didymodon torquatus</i>			
730.	32390	<i>Gymnostomum calcareum</i>			
731.	36219	<i>Pseudocrossidium hornschurchianum</i>			
732.	32437	<i>Syntrichia antarctica</i>			
733.	32439	<i>Syntrichia papillosa</i>			
734.		<i>Tortula</i> sp.			
735.	32450	<i>Trichostomum eckelianum</i>			
736.	32455	<i>Weissia controversa</i>			

Primulaceae

737.	6483	<i>Samolus junceus</i>			
738.	6484	<i>Samolus repens</i> (Creeping Brookweed)			

Proteaceae

739.	10824	<i>Acidonia microcarpa</i>			
740.	1773	<i>Adenanthos cuneatus</i> (Coastal Jugflower)			
741.	1791	<i>Adenanthos obovatus</i> (Basket Flower)			
742.	1819	<i>Banksia grandis</i> (Bull Banksia, Pulgarla)			
743.	1822	<i>Banksia ilicifolia</i> (Holly-leaved Banksia)			
744.	1830	<i>Banksia littoralis</i> (Swamp Banksia, Pungura)			
745.	1837	<i>Banksia occidentalis</i> (Red Swamp Banksia)			
746.	1844	<i>Banksia quercifolia</i> (Oak-leaved Banksia)			
747.	1848	<i>Banksia seminuda</i> (River Banksia)			
748.	32084	<i>Banksia serra</i> (Serrate-leaved Dryandra)		P4	
749.	32076	<i>Banksia sessilis</i> (Parrot Bush, Pudjak)			
750.	32078	<i>Banksia sessilis</i> var. <i>cordata</i>		P4	
751.	15610	<i>Conospermum caeruleum</i> subsp. <i>caeruleum</i>			
752.	1863	<i>Conospermum capitatum</i>			
753.	1883	<i>Conospermum teretifolium</i> (Spider Smokebush)			
754.	1944	<i>Franklandia fucifolia</i> (Lanoline Bush)			
755.	1977	<i>Grevillea cirsiifolia</i> (Varied-leaf Grevillea)			
756.	13084	<i>Grevillea fuscolutea</i>		T	
757.	2052	<i>Grevillea occidentalis</i>			
758.	15991	<i>Grevillea pulchella</i> subsp. <i>pulchella</i>			
759.	2080	<i>Grevillea quercifolia</i> (Oak-leaf Grevillea)			
760.	2112	<i>Grevillea trifida</i>			
761.	2137	<i>Hakea ceratophylla</i> (Horned Leaf Hakea)			
762.	2150	<i>Hakea cucullata</i> (Hood Leaved Hakea)			
763.	2169	<i>Hakea lasiantha</i> (Woolly Flowered Hakea)			
764.	2174	<i>Hakea linearis</i>			
765.	2191	<i>Hakea oleifolia</i> (Dungyn)			
766.	2197	<i>Hakea prostrata</i> (Harsh Hakea)			
767.	2203	<i>Hakea ruscifolia</i> (Candle Hakea)			
768.	2222	<i>Isopogon attenuatus</i>			

Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
769.	2226 <i>Isopogon cuneatus</i> (Coneflower)			
770.	2253 <i>Lambertia uniflora</i>			
771.	2267 <i>Persoonia longifolia</i> (Snottygobble)			
772.	2282 <i>Petrophile acicularis</i>			
773.	2293 <i>Petrophile diversifolia</i>			
774.	2302 <i>Petrophile media</i>			
775.	2306 <i>Petrophile rigida</i>			
776.	2320 <i>Strangea stenocarpoides</i>			
777.	16859 <i>Synaphea incurva</i>		P3	
778.	16863 <i>Synaphea petiolaris</i> subsp. <i>triloba</i>			
779.	2326 <i>Synaphea polymorpha</i> (Albany <i>Synaphea</i> , <i>Pinda</i>)			
780.	2328 <i>Synaphea reticulata</i>			

Pteridaceae

781.	31 <i>Cheilanthes austrotenuifolia</i>			
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Racopilaceae

782.	32480 <i>Racopilum cuspidigerum</i> var. <i>convolutaceum</i>			
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Radulaceae

783.	<i>Radula buccinifera</i>			
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Ranunculaceae

784.	2929 <i>Clematis pubescens</i> (Common Clematis)			
785.	48904 <i>Ranunculus repens</i>	Y		Y

Restionaceae

786.	17691 <i>Desmocladius fasciculatus</i>			
787.	16595 <i>Desmocladius flexuosus</i>			
788.	1067 <i>Empodisma gracillimum</i>			
789.	1070 <i>Hypolaena exsulca</i>			
790.	19918 <i>Hypolaena grandiuscula</i>			
791.	17841 <i>Hypolaena pubescens</i>			
792.	46376 <i>Leptocarpus denmarkicus</i>			
793.	19833 <i>Leptocarpus laxus</i>			
794.	1080 <i>Leptocarpus scariosus</i>			
795.	1082 <i>Leptocarpus tenax</i> (Slender Twine Rush)			
796.	46379 <i>Leptocarpus thysananthus</i>			
797.	1087 <i>Lepyrodia hermaphrodita</i>			
798.	1089 <i>Lepyrodia monoica</i>			
799.	1090 <i>Lepyrodia muii</i>			
800.	1092 <i>Loxocarya cinerea</i>			
801.	14917 <i>Sporadanthus rivularis</i>			
802.	14915 <i>Sporadanthus strictus</i>			
803.	15827 <i>Taraxis grossa</i>			

Rhamnaceae

804.	4828 <i>Spyridium globulosum</i> (Basket Bush)			
805.	33438 <i>Trymalium odoratissimum</i> subsp. <i>trifidum</i>			
806.	15145 <i>Trymalium venustum</i>			

Ricciaceae

807.	<i>Riccia bifurca</i>			
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Rosaceae

808.	3185 <i>Acaena novae-zelandiae</i>	Y		
809.	18319 <i>Cotoneaster glaucophyllus</i>	Y		
810.	16243 <i>Rosa canina</i>	Y		
811.	20506 <i>Rubus anglocandicans</i>	Y		
812.	3192 <i>Sanguisorba minor</i> (Sheep's Burnet)	Y		

Rubiaceae

813.	7323 <i>Galium murale</i> (Small Goosegrass)	Y		
814.	7348 <i>Opercularia hispidula</i> (Hispid Stinkweed)			
815.	18255 <i>Opercularia vaginata</i> (Dog Weed)			
816.	7354 <i>Opercularia volubilis</i> (Twining Stinkweed)			

Rutaceae

817.	4413 <i>Boronia crenulata</i> (Aniseed Boronia)			
818.	11503 <i>Boronia crenulata</i> subsp. <i>crenulata</i> var. <i>crenulata</i>			
819.	4416 <i>Boronia denticulata</i>			
820.	4422 <i>Boronia gracilipes</i> (Karri Boronia)			
821.	4423 <i>Boronia heterophylla</i> (Kalgan Boronia)			
822.	4426 <i>Boronia juncea</i>			
823.	16631 <i>Boronia juncea</i> subsp. <i>micrantha</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
824.	4429	<i>Boronia molloyae</i> (Tall Boronia)			
825.	4442	<i>Boronia stricta</i>			
826.	4443	<i>Boronia subsessilis</i>			
827.	4447	<i>Boronia virgata</i>		P4	
828.	4448	<i>Chorilaena quercifolia</i> (Chorilaena)			
829.	4451	<i>Crowea angustifolia</i> (Crowea)			
830.	17729	<i>Crowea angustifolia</i> var. <i>platyphylla</i>			
Salviniaceae					
831.	79	<i>Salvinia molesta</i> (Salvinia)	Y		
Santalaceae					
832.	2335	<i>Choretrum lateriflorum</i> (Dwarf Sour Bush)			
833.	10907	<i>Exocarpos odoratus</i> (Scented Ballart)			
834.	10765	<i>Exocarpos sparteus</i> (Broom Ballart, Djuk)			
835.	17703	<i>Leptomeria ellytes</i>			
836.	2350	<i>Leptomeria pauciflora</i> (Sparse-flowered Currant Bush)			
837.	2355	<i>Leptomeria squarrolosa</i>			
Scapaniaceae					
838.		<i>Chaetophyllopsis whiteleggei</i>			
Schizaeaceae					
839.	24	<i>Schizaea fistulosa</i> (Narrow Comb Fern)			
Scrophulariaceae					
840.	7054	<i>Dischisma arenarium</i>	Y		
841.	7292	<i>Myoporum oppositifolium</i> (Twin-leaf Myoporum)			
842.	7295	<i>Myoporum tetrandrum</i> (Boobialla)			
843.	7107	<i>Verbascum virgatum</i> (Twiggy Mullein)	Y		
Sematophyllaceae					
844.	32422	<i>Rhaphidorrhynchium amoenum</i>			
845.	32433	<i>Sematophyllum homomallum</i>			
846.	32483	<i>Sematophyllum subhumile</i> var. <i>contiguum</i>			
Solanaceae					
847.	6949	<i>Anthocercis littorea</i> (Yellow Tailflower)			
848.	16321	<i>Anthocercis sylvicola</i>		P3	
849.	6988	<i>Solanum americanum</i> (Glossy Nightshade)	Y		
850.	7017	<i>Solanum laciniatum</i> (Kangaroo Apple)	Y		
Stylidiaceae					
851.	7676	<i>Levenhookia pusilla</i> (Midget Stylewort)			
852.	39881	<i>Stylidium acuminatum</i> subsp. <i>meridionale</i>			
853.	7678	<i>Stylidium adnatum</i> (Common Beaked Triggerplant)			
854.	7684	<i>Stylidium amoenum</i> (Lovely Triggerplant)			
855.	7695	<i>Stylidium caespitosum</i> (Fly-away Triggerplant)			
856.	7696	<i>Stylidium calcaratum</i> (Book Triggerplant)			
857.	7708	<i>Stylidium crassifolium</i> (Thick-leaved Triggerplant)			
858.	40944	<i>Stylidium decipiens</i>			
859.	7712	<i>Stylidium despectum</i> (Dwarf Triggerplant)			
860.	7718	<i>Stylidium diversifolium</i> (Touch-me-not)			
861.	7734	<i>Stylidium guttatum</i> (Dotted Triggerplant)			
862.	7745	<i>Stylidium junceum</i> (Reed Triggerplant)			
863.	7746	<i>Stylidium laciniatum</i> (Tattered Triggerplant)			
864.	7757	<i>Stylidium luteum</i> (Yellow Triggerplant)			
865.	25851	<i>Stylidium nymphaeum</i>			
866.	7774	<i>Stylidium piliferum</i> (Common Butterfly Triggerplant)			
867.	46517	<i>Stylidium planirosula</i>			
868.	7778	<i>Stylidium pritzelianum</i> (Royal Triggerplant)			
869.	7784	<i>Stylidium pygmaeum</i> (Pygmy Triggerplant)			
870.	7785	<i>Stylidium repens</i> (Matted Triggerplant)			
871.	7787	<i>Stylidium rhynchocarpum</i> (Black-beaked Triggerplant)			
872.	7796	<i>Stylidium scandens</i> (Climbing Triggerplant)			
873.	30272	<i>Stylidium</i> sp. <i>Kordabup</i> (A.R. Annels 1660)		P1	
874.	7799	<i>Stylidium spathulatum</i> (Creamy Triggerplant)			
875.	7802	<i>Stylidium squamosotuberosum</i> (Fleshy-rhizomed Trigger Plant)			
Thuidiaceae					
876.	32442	<i>Thuidium sparsum</i>			
877.	32486	<i>Thuidium sparsum</i> var. <i>hastatum</i>			
Thymelaeaceae					
878.	5239	<i>Pimelea clavata</i>			

	Name ID	Species Name	Naturalised	Conservation Code	¹ Endemic To Query Area
879.	5243	<i>Pimelea ferruginea</i>			
880.	5249	<i>Pimelea hispida</i> (Bristly Pimelea)			
881.	5251	<i>Pimelea imbricata</i>			
882.	5252	<i>Pimelea lanata</i>			
883.	5255	<i>Pimelea longiflora</i>			
884.	5261	<i>Pimelea rosea</i> (Rose Banjine)			
885.	18117	<i>Pimelea rosea</i> subsp. <i>rosea</i>			
886.	5269	<i>Pimelea sylvestris</i>			
887.	5270	<i>Pimelea tinctoria</i>			

Urticaceae

888. 1762 *Parietaria debilis* (Pellitory)

Verbenaceae

889. 36096 *Verbena incompta* (Purple-top Verbena)

Y

Xanthorrhoeaceae

890. 1280 *Chamaesclila corymbosa* (Blue Squill)

891. 1253 *Xanthorrhoea gracilis* (Graceful Grass Tree, Mimidi)

Xyridaceae

892. 1144 *Xyris flexifolia*

893. 1150 *Xyris lanata*

Zamiaceae

894. 85 *Macrozamia riedlei* (*Zamia*, Djiridji)

Conservation Codes

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

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



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: 24/08/20 17:13:09

[Summary](#)

[Details](#)

[Matters of NES](#)

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

[Extra Information](#)

[Caveat](#)

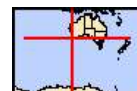
[Acknowledgements](#)



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

Buffer: 10.0Km



Summary

Matters of National Environmental Significance

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

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	57
Listed Migratory Species:	58

Other Matters Protected by the EPBC Act

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

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

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

Commonwealth Land:	1
Commonwealth Heritage Places:	None
Listed Marine Species:	83
Whales and Other Cetaceans:	12
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

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

State and Territory Reserves:	12
Regional Forest Agreements:	1
Invasive Species:	23
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [\[Resource Information \]](#)

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

Name	Status	Type of Presence
Subtropical and Temperate Coastal Saltmarsh	Vulnerable	Community likely to occur within area

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

Name	Status	Type of Presence
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Birds

Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
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Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
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Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
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Calidris tenuirostris Great Knot [862]	Critically Endangered	Species or species habitat known to occur within area
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Calyptorhynchus banksii naso Forest Red-tailed Black-Cockatoo, Karrak [67034]	Vulnerable	Species or species habitat known to occur within area
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Calyptorhynchus baudinii Baudin's Cockatoo, Long-billed Black-Cockatoo [769]	Endangered	Breeding known to occur within area
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Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
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Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
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Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat known to occur within area
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Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
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Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
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Name	Status	Type of Presence
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica baueri Bar-tailed Godwit (baueri), Western Alaskan Bar-tailed Godwit [86380]	Vulnerable	Species or species habitat may occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Bar-tailed Godwit (menzbieri) [86432]	Critically Endangered	Species or species habitat may occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat likely to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Sternula nereis nereis Australian Fairy Tern [82950]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area

Name	Status	Type of Presence
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Fish		
Galaxiella nigrostriata Blackstriped Dwarf Galaxias, Black-stripe Minnow [88677]	Endangered	Species or species habitat may occur within area
Nannatherina balstoni Balston's Pygmy Perch [66698]	Vulnerable	Species or species habitat known to occur within area
Nannoperca pygmaea Little Pygmy Perch [88315]	Endangered	Species or species habitat likely to occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Dasyurus geoffroi Chuditch, Western Quoll [330]	Vulnerable	Species or species habitat likely to occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
Parantechinus apicalis Dibbler [313]	Endangered	Species or species habitat likely to occur within area
Pseudocheirus occidentalis Western Ringtail Possum, Ngwayir, Womp, Woder, Ngoor, Ngoolangit [25911]	Critically Endangered	Species or species habitat may occur within area
Setonix brachyurus Quokka [229]	Vulnerable	Species or species habitat known to occur within area
Other		
Westralunio carteri Carter's Freshwater Mussel, Freshwater Mussel [86266]	Vulnerable	Species or species habitat likely to occur within area
Plants		
Caladenia harringtoniae Harrington's Spider-orchid, Pink Spider-orchid [56786]	Vulnerable	Species or species habitat likely to occur within area
Calectasia cyanea Blue Tinsel Lily [7669]	Critically Endangered	Species or species habitat likely to occur within area
Commersonia apella Many-flowered Commersonia [86877]	Critically Endangered	Species or species habitat likely to occur within area
Conostylis misera Grass Conostylis [21320]	Endangered	Species or species habitat may occur within area

Name	Status	Type of Presence
Drakaea micrantha Dwarf Hammer-orchid [56755]	Vulnerable	Species or species habitat known to occur within area
Isopogon uncinatus Albany Cone Bush, Hook-leaf Isopogon [20871]	Endangered	Species or species habitat likely to occur within area
Kennedia glabrata Northcliffe Kennedia [16452]	Vulnerable	Species or species habitat likely to occur within area
Sphenotoma drummondii Mountain Paper-heath [21160]	Endangered	Species or species habitat likely to occur within area
Verticordia apecta Hay River Featherflower, Scruffy Verticordia [65545]	Critically Endangered	Species or species habitat may occur within area

Reptiles

Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area

Sharks

Carcharias taurus (west coast population) Grey Nurse Shark (west coast population) [68752]	Vulnerable	Species or species habitat likely to occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species [\[Resource Information \]](#)

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

Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [82404]		Foraging, feeding or related behaviour likely to occur within area
Ardenna grisea Sooty Shearwater [82651]		Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Breeding known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophris Black-browed Albatross [66472]	Vulnerable	Species or species habitat may occur within area
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Migratory Marine Species		
Balaena glacialis australis Southern Right Whale [75529]	Endangered*	Breeding known to occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area

Name	Threatened	Type of Presence
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat may occur within area
Manta alfredi Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitat may occur within area
Manta birostris Giant Manta Ray, Chevron Manta Ray, Pacific Manta Ray, Pelagic Manta Ray, Oceanic Manta Ray [84995]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Arenaria interpres Ruddy Turnstone [872]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris alba Sanderling [875]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat known to occur within area
Calidris subminuta Long-toed Stint [861]		Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Calidris tenuirostris Great Knot [862]	Critically Endangered	Species or species habitat known to occur within area
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat known to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Species or species habitat known to occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat known to occur within area
Pluvialis squatarola Grey Plover [865]		Species or species habitat known to occur within area
Tringa glareola Wood Sandpiper [829]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Species or species habitat known 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 -

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
Birds		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba Great Egret, White Egret [59541]		Species or species habitat known to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Arenaria interpres Ruddy Turnstone [872]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris alba Sanderling [875]		Species or species habitat known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis Red-necked Stint [860]		Species or species habitat known to occur within area
Calidris subminuta Long-toed Stint [861]		Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Species or species habitat known to occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area

Name	Threatened	Type of Presence
Charadrius leschenaultii Greater Sand Plover, Large Sand Plover [877]	Vulnerable	Species or species habitat known to occur within area
Charadrius mongolus Lesser Sand Plover, Mongolian Plover [879]	Endangered	Species or species habitat known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Species or species habitat known to occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea dabbenena Tristan Albatross [66471]	Endangered	Species or species habitat may occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Species or species habitat known to occur within area
Glareola maldivarum Oriental Pratincole [840]		Species or species habitat known to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Himantopus himantopus Pied Stilt, Black-winged Stilt [870]		Species or species habitat known to occur within area
Larus pacificus Pacific Gull [811]		Foraging, feeding or related behaviour known to occur within area
Limosa lapponica Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Limosa limosa Black-tailed Godwit [845]		Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat likely to occur within area
Pandion haliaetus Osprey [952]		Species or species habitat known to occur within area
Phoebastria fusca Sooty Albatross [1075]	Vulnerable	Species or species habitat likely to occur within area
Pluvialis fulva Pacific Golden Plover [25545]		Species or species habitat known to occur within area
Pluvialis squatarola Grey Plover [865]		Species or species habitat known to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area
Puffinus assimilis Little Shearwater [59363]		Foraging, feeding or related behaviour known to occur within area
Puffinus carneipes Flesh-footed Shearwater, Fleshy-footed Shearwater [1043]		Foraging, feeding or related behaviour likely to occur within area
Puffinus griseus Sooty Shearwater [1024]		Species or species habitat may occur within area
Recurvirostra novaehollandiae Red-necked Avocet [871]		Species or species habitat known to occur within area
Sterna anaethetus Bridled Tern [814]		Foraging, feeding or related behaviour likely to occur within area
Sterna caspia Caspian Tern [59467]		Breeding known to occur within area
Thalassarche carteri Indian Yellow-nosed Albatross [64464]	Vulnerable	Foraging, feeding or related behaviour may occur within area
Thalassarche cauta Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche impavida Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitat may occur within area
Thalassarche melanophrys Black-browed Albatross [66472]	Vulnerable	Species or species

Name	Threatened	Type of Presence
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	habitat may occur within area Foraging, feeding or related behaviour likely to occur within area
Thinornis rubricollis Hooded Plover [59510]		Species or species habitat known to occur within area
Tringa glareola Wood Sandpiper [829]		Species or species habitat known to occur within area
Tringa nebularia Common Greenshank, Greenshank [832]		Species or species habitat known to occur within area
Tringa stagnatilis Marsh Sandpiper, Little Greenshank [833]		Species or species habitat known to occur within area
Xenus cinereus Terek Sandpiper [59300]		Species or species habitat known to occur within area
Fish		
Acentronura australe Southern Pygmy Pipehorse [66185]		Species or species habitat may occur within area
Campichthys galei Gale's Pipefish [66191]		Species or species habitat may occur within area
Heraldia nocturna Upside-down Pipefish, Eastern Upside-down Pipefish, Eastern Upside-down Pipefish [66227]		Species or species habitat may occur within area
Hippocampus breviceps Short-head Seahorse, Short-snouted Seahorse [66235]		Species or species habitat may occur within area
Histiogamphelus cristatus Rhino Pipefish, Macleay's Crested Pipefish, Ring-back Pipefish [66243]		Species or species habitat may occur within area
Leptoichthys fistularius Brushtail Pipefish [66248]		Species or species habitat may occur within area
Lissocampus caudalis Australian Smooth Pipefish, Smooth Pipefish [66249]		Species or species habitat may occur within area
Lissocampus runa Javelin Pipefish [66251]		Species or species habitat may occur within area
Maroubra perserrata Sawtooth Pipefish [66252]		Species or species habitat may occur within area
Nannocampus subosseus Bonyhead Pipefish, Bony-headed Pipefish [66264]		Species or species habitat may occur within area
Notiocampus ruber Red Pipefish [66265]		Species or species habitat may occur within area
Phycodurus eques Leafy Seadragon [66267]		Species or species

Name	Threatened	Type of Presence
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		habitat may occur within area Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat may occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Vulnerable	Species or species habitat may occur within area
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Breeding likely to occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Whales and other Cetaceans		[Resource Information]
Name	Status	Type of Presence
Mammals		
Balaenoptera acutorostrata Minke Whale [33]		Species or species habitat may occur within area
Balaenoptera edeni Bryde's Whale [35]		Species or species habitat may occur within area
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat likely to occur

Name	Status	Type of Presence
Caperea marginata Pygmy Right Whale [39]		within area Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat known to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Tursiops aduncus Indian Ocean Bottlenose Dolphin, Spotted Bottlenose Dolphin [68418]		Species or species habitat likely to occur within area
Tursiops truncatus s. str. Bottlenose Dolphin [68417]		Species or species habitat may occur within area

Extra Information

State and Territory Reserves	[Resource Information]
Name	State
McIntosh Road	WA
McLean Road	WA
Mount Shadforth	WA
NTWA Bushland covenant (0017)	WA
NTWA Bushland covenant (0096)	WA
NTWA Bushland covenant (0097)	WA
NTWA Bushland covenant (0142)	WA
NTWA Bushland covenant (0143)	WA
Redmond Road	WA
Scotsdale Road	WA
Unnamed WA27398	WA
William Bay	WA

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

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

Name	Status	Type of Presence
Birds		
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur

Name	Status	Type of Presence
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		within area 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
Mammals		
Canis lupus familiaris Domestic Dog [82654]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Feral deer Feral deer species in Australia [85733]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Anredera cordifolia Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine, Potato Vine [2643]		Species or species habitat likely to occur within area
Asparagus asparagoides Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Asparagus scandens Asparagus Fern, Climbing Asparagus Fern [23255]		Species or species habitat likely to occur within area
Cenchrus ciliaris Buffel-grass, Black Buffel-grass [20213]		Species or species habitat may 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

Name	Status	Type of Presence
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		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
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
Ulex europaeus Gorse, Furze [7693]		Species or species habitat likely to occur within area

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-34.98376 117.31631

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.