RECONNAISSANCE FLORA, VEGETATION AND BASIC FAUNA SURVEY REPORT

Line 51, Esperance Branch Line – North of Gibson

Degrussa Road (351.24 to 352.91, Site 8)

Gibson, WA 6448

Final v. 2

03/08/2022

BUSHFIRE | ENVIRONMENTAL | WATER | GIS

DOCUMENT CONTROL

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Table of Contents

LIST OF TABLES

LIST OF FIGURES

APPENDICES

Executive Summary

Arc Infrastructure ("the client") commissioned Bio Diverse Solutions as Environmental Consultants to undertake a spring reconnaissance flora and vegetation survey and a basic (previously reconnaissance) fauna assessment of a total of 1.06 ha along Railway Line 51 in the vicinity of Degrussa Road, in the locality of Gibson within the Shire of Esperance. Specifically, this was located along Railway Kilometre (KM) marking 351 to 353. This corresponded with Site 8 of the 2022 scope of works programme, as instructed by Arc Infrastructure. The reconnaissance survey was required to assess the impact on areas of native vegetation proposed to be cleared for a construction and maintenance project along the railway line. An environmental risk assessment was completed following the commission of the biological survey, to identify where clearing permits or further environmental approvals were required. Some areas within the survey area were assessed as not being exempt, and requires a clearing permit. A finalised report was submitted to Arc Infrastructure for review prior to approval for submission to DWER, as supporting information for a clearing permit application.

Three vegetation units were recorded during the survey, namely Vegetation Unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine Nuyflo SL), Vegetation Unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL) and Vegetation Unit 3: Salt Lake Forbland and Grassland (SL FLGL). These vegetation units broadly align with different habitat types, and are associated at a landscape level with changes in hydrology and soil type. Vegetation Unit 3: SL FLGL is associated with a drainage depression, forming a salt lake with vegetation considered to be riparian vegetation. The condition of the vegetation units ranged from 'Degraded' through to 'Excellent'. A higher level of degradation was observed closer to the railway and access tracks, observed through historical clearing and extensive weed invasion, forming a notable edge effect on the adjacent intact native vegetation within the railway corridor and extended reserve. It is recommended that rigorous biosecurity hygiene principles are applied during proposed operational works to ensure weeds and diseases are not spread within and external to the survey area.

A total of 106 flora species were recorded, comprising of 93 native species and 13 introduced / non-native species. No Weeds of National Significance (IPAC, 2017) or Declared Pests (BAM Act 2007) were present of the non-native species. Two species of priority conservation status were identified within the survey area, namely P2 *Leucopogon ?bossiaea* and P3 *Kunzea salina.* It is noted that specimen submitted to the WA Herbarium for verification of *L. ?bossiaea* was sterile and could not be definitively determined, and hence is marked with '?' prefix as an indication that there is still a level of ambiguity on this identification. Collection of a specimen with flowering material would resolve this taxonomic query. Both *L. ?bossiaea* and *K. salina* consisted of a new population and were located within Vegetation Unit 3: SL FLGL, associated with salt lake drainage depressions. *L. ?bossiaea* population also represents a significant range extension of 300 km from the nearest population in the east, within Cape Arid National Park. 31 plants of *L. ?bossiaea* was detected, with 10 plants proposed to be impacted (32% of known population). 36 plants of *K. salina* was detected, with 8 plants proposed to be impacted (22% of known population). It is noted that the local population has not been quantified, with suitable habitat extending further into adjacent native vegetation that has not been surveyed.

'Proteaceae Dominated Kwongkan Shrublands of the South-east Coastal Botanical Province of Western Australia' (Kwongkan) was the only Threatened (TEC) / Priority (PEC) Ecological Community identified as 'Likely' to occur within the survey area. Whilst all vegetation units present contained Proteaceous species, none were present at high enough densities to be considered as possible TEC / PEC Kwongkan. Therefore, no TEC or PEC's were assessed to be present within the survey area.

During the survey, a relatively low level of fauna diversity was detected with a total of 21 taxa recorded; including eight birds, eight invertebrates, four mammals, one reptile. Of these 21 species, the quenda (P4) was observed within the survey area. No other Threatened or Priority listed species were observed; however, potentially suitable habitat was identified for an additional six species. Of these, five species are considered as 'Possible' to occur: Carnaby's Cockatoo (EN), fork-tailed swift (MI), letter winged kite (P4), western mouse (P4) and the heath mouse (VU).

Quenda (*Isoodon fusciventer*, P4), was determined to be present within the survey area through isolated diggings and suitably sized runnels within vegetation unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine and Nuyflo SL). Other suitable habitat for this species is present within vegetation unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL). Vegetation unit 1 also provides marginally suitable habitat for the western mouse (*Pseudomys occidentalis*, EN) and heath mouse (*Pseudomys shortridgei*, VU). Although there is suitable habitat within the survey area, the vegetation immediately adjacent to the survey area is likely

to hold more value for these species as it appears to be more intact and contiguous In addition, high levels of fox (*Vulpes* vulpes) and rabbit (*Oryctolagus cuniculus*) activity was observed, which is likely a limiting factor to native fauna presence through competition and predation. The clearing of the vegetation within the survey area is unlikely to significantly impact the ability of the quenda and two native mice species to move throughout the immediate landscape if present.

Low quality foraging habitat for Carnaby's Cockatoo (*Calyptorhynchus latirostris*, EN) is present within vegetation unit 1and vegetation unit 2. Given the reduced diversity and overall quantity of forage species (predominantly Proteaceae and Myrtaceae) available the habitat is considered to be low-quality and is unlikely to provide significant foraging opportunities for the species. As no signs of foraging were observed across the survey period, this indicates the area is likely to be opportunistically foraged by transient individuals, however is unlikely at this time to be a favoured feeding site. The *EPBC Act 1999* referral guidelines for the three Threatened black cockatoo species stipulates that a proposal should be referred for assessment if more than 1ha of high-quality habitat is to be removed. Given the habitat present is less than 1 ha (approximately 0.64 ha which is 86.4% of mapped vegetation), and is not of high-quality it is unlikely that works at this location alone would need to be referred for assessment under the EPBC Act 1999. However, the cumulative total and potential impact across the entire Esperance Branch Line project should be taken into consideration.

Low-quality habitat is present for western brush wallaby in vegetation unit 1 and vegetation unit 2. There is suitable vegetation outside of the survey area, and if present it is likely these larger areas of remnant vegetation hold more habitat value than the relatively thin and small linear areas of vegetation existing within the survey area. No indicators of the species' presence were observed, and if present it is likely animals are transient through the survey area. The clearing of the vegetation within the survey area is unlikely to significantly impact the species, or its ability to move throughout the immediate landscape.

Low-quality habitat was detected for two conservation-significant bird taxa including: the fork-tailed swift (*Apus pacificus,* MI) and letter-winged kite (*Elanus scriptus,* P4). Suitable habitat for these species occurs throughout the entire survey area, with areas of native vegetation providing daytime refuge and hunting habitat. Proposed clearing is unlikely to detrimentally affect these species due to adjacent vegetation also providing potential habitat.

1. Introduction, Scope and Background Information

Arc Infrastructure ("the client") commissioned Bio Diverse Solutions as Environmental Consultants to conduct a spring reconnaissance flora and vegetation survey and a basic (previously reconnaissance) fauna assessment of a total of 1.06 ha along Railway Line 51, in the vicinity of Degrussa Road, in the locality of Gibson within the Shire of Esperance. This specifically occurred along Railway Kilometre (KM) marking 351 to 353. The total 1.06 ha consists of two separate 'areas' or zones (laydown areas) and stretches a total distance of 0.96 km along an existing service road for the railway line.

The scope of works included:

- Desktop assessment of the survey area, including all publicly available and Department of Biodiversity, Conservation and Attractions (DBCA) database searches for Threatened flora, vegetation communities and Threatened fauna data;
- A spring reconnaissance flora and vegetation survey across survey area to identify vegetation units, condition, possible ecological communities and conservation significant flora habitat;
- Identification of flora species, including herbarium identification if required;
- Basic fauna survey to map fauna habitat in the area, identify areas likely to provide habitat for conservation significant species and opportunistic sampling of fauna species (including conservation significant);
- GPS and map any populations of Threatened species (if applicable);
- GIS mapping of vegetation units present and their condition;
- GIS mapping of fauna habitat;
- 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. Location and Development Proposal

The 'survey area' is defined as the total area being surveyed, consisting of two linear areas located along Line 51 (351 to 353 km) in the vicinity of Degrussa Road, ~25 km north of the Gibson townsite within the Shire of Esperance. The two areas surveyed were 0.91 ha and 0.14 ha each, the total length of the survey area is approximately 0.96 km (Figure 1). These areas have been earmarked by Arc Infrastructure for clearing as part of the required upgrades and ongoing maintenance of the railway track. Specifically, the survey area correlates with a portion of Site 8 of the 2022 Scope of Works for Arc Infrastructure (Tanna, 2021).

The 'study area' consists of the 30km radius around the survey area, used for indications of likelihood of occurrence for Threatened or Priority flora, fauna and ecological communities. It provides a broader context for assessment of the survey area.

The survey area consists mostly of remnant vegetation, located within the cadastral boundary of the Arc Infrastructure managed railway line. Some areas within the survey area are already cleared for the purpose of safety of the active railway corridor, a maintenance access track or part of existing lay down areas. The surrounding area is dominated by agricultural private properties to the north, east, south and west. A number of areas consisting of intact, remnant vegetation are present adjacent to the survey area.

Following the commission of a biological survey, an environmental risk assessment was completed in tandem with Arc Infrastructure Project Team and Kathryn Kinnear (Principle Environmental Consultant) of Bio Diverse Solutions. This identified within Arc Infrastructure's Site 8 (2022 Scope of Works) the operational footprint of construction works required a clearing permit or further environmental approvals. The risk assessment categorised operational space into a 'traffic light' system, as outlined below:

a) Red – further biological surveys or other surveys required;
b) Yellow – clearing permit to be applied for in 2022 (pending application submission to DWER, no CPS number currently assigned); and
c) Green – valid exemptions apply or 'Cleared' areas with no native vegetation remaining.

The environmental risk assessment that corresponds with the survey area is outlined in Figure 17 (Appendix A), illustrating how large areas within the survey area were considered previously cleared or exempt from a clearing permit (Regulation 5,

Item 22 of the EP Act 1986). A linear corridor on the eastern side of the railway and one laydown area for storage of machinery and construction materials were identified as 'yellow' and a clearing permit will be applied for specifically these areas, as this is considered to be new clearing for the project rail reconstruction works. This reconnaissance flora and vegetation and basic fauna survey provides base-line data for the approval of this clearing permit and generalised environmental data for Arc Infrastructure.

1.2. Alignment to Legislation, Guidelines and Policies

This survey and subsequent report are aligned to the following legislation, guidelines and policies:

- *Environmental Protection and Biodiversity Conservation Act 1999* (EP Act). Administered by the Australian Government Department of Agriculture, Water and Environment (DAWE);
- *Biodiversity Conservation Act 2016* (BC Act). Administered by the Western Australian Department of Biodiversity, Conservation and Attractions (DBCA);
- *Environmental Protection Act 1986* (EP Act). Administered by the Western Australian Department of Water and Environmental Regulations;
- *Biosecurity and Agriculture Management Act 2007* (BAM Act);
- EPA (2016) Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment;
- EPA (2020) Technical Guidance – Terrestrial Vertebrate Fauna Surveys for Environmental Impact;
- CoA (2013) Draft Survey guidelines for Australia's Threatened Orchids*;*
- DEWHA (2010) Survey Guidelines for Australia's Threatened Birds;
- DSEWPaC (2011) Survey Guidelines for Australia's Threatened Mammals; and
- DSEWPaC (2012) Referral Guidelines for Three Threatened Black Cockatoo Species.

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BIO DIVERSE SOLUTIONS

Scale
1:225,000@ A3
GDA MGA 94 Zone 51

Legend

- Survey Area
- 30km Study Area Buffer
- Rail Kilometer Points

Overview Map Scale 1:1,250,000

CLIENT: Arc Infrastructure Line 51 (351.24 to 352.91 KM), North of Gibson Site 8 - Degrussa Road Gibson, WA 6448		
Figure 1: Survey Area Locality		
	QA Check: **MLH**	Drawn by: **BMT**
STATUS: **FINAL**	FILE: **AI005-009**	DATE: **9/06/2022**

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

1.3. Geology and soils

Database searches shows the survey area lies within the Esperance System (245Es). The Esperance System is described as *"Level to gently undulating mid-level plain with poor external drainage. Incised by river valleys (mapped as Young System). The southern boundary is defined by a low escarpment which forms a boundary to the Gore System below."* (DPIRD, 2021).

The Esperance Sandplain Zone is described as "Level to gently undulating plain dissected by a number of short rivers flowing south. Formed on Eocene marine sediments overlying Proterozoic granitic and metamorphic rocks. Soils are grey fine sandy duplex soils and fine sands." (DPIRD, 2018a). The soil type within the application area is mapped as the Esperance 1a Phase (245Es_1E1a), Esperance 3sd (245Es_3sd) and the Esperance 3s Phase (245Es_3s). The Esperance 1a Phase is described as "*Gravelly, yellow mottled duplex soil with < 30 cm of sand over gravel layer (Fleming (shallow)), Dy5.82, on level plain, <1% slope"* and the Esperance 3sd Phase is described as *"Saline drainage lines."* The Esperance 3s Phase is described as "Salt scalds and salt affected lands" (DPIRD, 2019a).

1.4. Climate

The closest Bureau of Meteorology (BoM) site is Esperance Aero (009542). The average annual temperature ranges from 11.3 – 22.3°C. The average summer temperature ranges between 13.4-27.9°C, whilst average winter temperatures range between 7.6-17.4°C. The annual mean rainfall is 569 mm (BoM, 2022). On average the months of May – September are the months with the highest rainfall (Figure 2). There was higher than average rainfall recorded in the months of April, May, June and October 2021, and in November 2020 (Figure 2). The total rainfall in the year previous to the survey (November 2020 – October 2021) was 646.4mm which is 77.4 mm above average and equates to 13.60% increase in average rainfall.

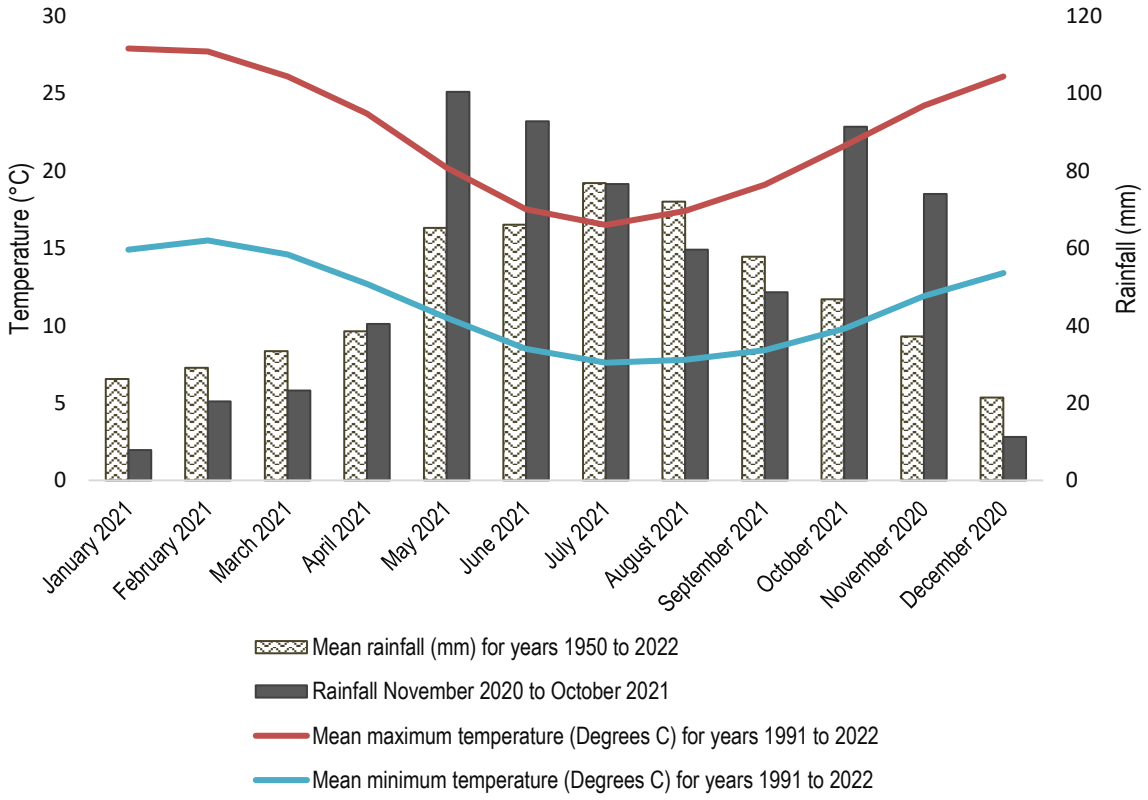

Figure 2: Temperature and Rainfall Data for Esperance BoM Weather Station No. 009542.

1.5. Habitat Connectivity

Habitat connectivity assessments rely on a bioregional and landscape-scale approach to evaluate habitat for fauna movement and ecological linkage across a region. Habitat connectivity is largely reliant on remnant vegetation, recognising it plays a very important role in developing corridors between protected areas to assist in achieving long-term biodiversity management

outcomes (Wilkins et al. 2006). The survey area lies within a highly modified landscape consisting of agricultural properties. The Helms Arboretum is located approximately 7.3 km to the south and there are other small to large areas of remnant bushland located to the north, south, east and east of the survey area (Table 1). Immediately adjacent to the survey area (east and west) is undeveloped road reserve. No other reserves are immediately adjacent to the survey area, however there are two approximately 427 m to the south (Table 1). The survey area is ultimately linked to these surrounding areas of vegetation through the existing road reserves, and vegetation within private property.

Table 1: Reserve Details (GoWA, 2022).

Reserve Number	Responsible Agency	Current Purpose
14554	Main Roads Western Australia	Gravel
26047	Main Roads Western Australia	Gravel

1.6. Water and Wetlands

The survey area does not lie within any Public Drinking Water Source areas (DWER, 2020a). The survey area lies within the Esperance Sandplain (HZ25_ES) Hydrological Zone (DPIRD, 2018b). The Esperance Sandplain zone is described as "*Level to gently undulating plain dissected by a number of short rivers flowing south. Formed on Eocene marine sediments overlying Proterozoic granitic and metamorphic rocks. Soils are grey fine sandy duplex soils and fine sands*" (DPIRD, 2018b). The survey area lies within the Lake Gore Catchment (DWER, 2018a) and within the Dalyup River Hydrographic Subcatchment (DWER, 2018b). It also lies within the Gibson Groundwater Area (DWER, 2018c).

No RAMSAR wetlands, or significant wetlands are located within the survey area. However, the desktop survey did identify that the Lake Gore RAMSAR wetland and the Lake Warden RAMSAR system is within the study area (DAWE, 2021). The survey area is not present within the catchment of Lake Gore or Lake Warden RAMSAR system, with Lake Gore situated 30km south-west of the survey area and Lake Warden situated 25km south of the survey area.

1.7. Environmentally Sensitive Areas

The survey area does not contain any DWER listed Environmentally Sensitive Areas (ESA; DWER, 2020b). A portion of the survey area is located, on the eastern railway corridor immediately south of the Degrussa Road railway crossing.

1.8. Remnant Vegetation

The survey area lies within the Esperance Plains (ESP) Bioregion and Recherche (ESP02) subregion. Comer *et al* (2001) describes the Esperance bioregion as "characterised by proteaceous scrub and mallee heaths on sandplain overlying Eocene sediments; rich in endemics. Herbfields and heaths (rich in endemics) on abrupt granite and quartzite ranges that rise from the plain. Eucalypt woodlands occur in gullies and alluvial foot-slopes. ESP2 Subregion has variable relief, comprising the Quaternary coastal sandplains and dunes overlying Proterozoic gneiss and granite as well as Eocene and more recent coastal limestones. Numerous granitic islands occur in the near shore area of this subregion. Vegetation comprises heath, coastal dune scrub, mallee, mallee-heath and granite heath."

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 Vegetation Association (DPIRD, 2019b). Refer to Figure 16 in Appendix A:

- **System Association Name**: Esperance.
- **Vegetation Association Number:** 47.
- **Structure Description:** Mallee-heath.
- **Floristic Description:** Mixed heath with scattered mallee e.g., tallerack *Eucalyptus tetragona.*
- **Remnant Vegetation by Beard Association Rarity in LGA:** 13.43% remaining (GoWA, 2019).
- **Remnant Vegetation by Beard Association Rarity in IBRA Region:** 35.05% remaining (GoWA, 2019).

1.9. Heritage

The survey is located within the Wudjari Nyungar nation, and are not located within a registered heritage site (DPLH, 2022). It is recognised that there has been a large scale of loss of cultural knowledge and information, and the survey area may contain heritage values that are not recognised through DPLH (2022).

2. Methodology – Desktop Assessment

2.1. Flora and Vegetation

Desktop inventory of potential conservation significant flora species likely to occur within 30 km of the survey area was undertaken using the following databases:

- Nature Map Database Search (combined data from DBCA, WA Museum and WA Herbarium; DBCA, 2007 -; WAH 1998 -);
- Protected matters search tool (DAWE 2021);
- Flora DBCA database records (DBCA, 2021a); and
- TEC/PEC DBCA database records (DBCA, 2021b).

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);
- DBCA Priority and Threatened ecological community list (DBCA, 2021d). A non-legislative list maintained by DBCA for management purposes; and
- DBCA Priority Flora list. A non-legislative list maintained by DBCA for management purposes.

2.2. Fauna

A desktop inventory of conservation significant fauna species known to occur within 30 km 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, 2021); and
- Fauna DBCA database records (DBCA, 2021c).

The conservation significance of fauna 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); and
- *Biodiversity Conservation Act 2016* (BC Act). Administered by the Western Australian Department of Biodiversity Conservation and Attractions (DBCA);

Desktop assessment for the Black Cockatoo habitat consisted of reviewing DBCA locational records and a range of publicly available datasets relevant to Black Cockatoo breeding, roosting and foraging areas. These included:

- Carnaby's Cockatoo Confirmed (DBCA_050; DBCA, 2018b) and Unconfirmed Roost Sites (DBCA_051; DBCA, 2018c).
- Carnaby's Cockatoo Confirmed (DBCA_52; DBCA, 2018d) and Unconfirmed Roost Sites Buffered 6km (DBCA-053; DBCA, 2018e).
- Carnaby's Cockatoo Confirmed Breeding Areas within the Swan Coastal Plain and Jarrah Forest IBRA Regions (DBCA_054; DBCA, 2018f).
- Carnaby's Cockatoo Unconfirmed Breeding Areas within the Swan Coastal Plain and Jarrah Forest IBRA Regions (DBCA-055; DBCA, 2018g).
- Black Cockatoo Breeding Sites - Buffered DBCA_063 (DBCA, 2019a).
- Black Cockatoo Roosting Sites – Buffered DBCA_064 (DBCA, 2019b).

3. Methodology – Field Survey

3.1. Flora and Vegetation

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 and vegetation units present within the survey area.

A spring / out-of-season season reconnaissance level flora and vegetation survey was undertaken on the 5th of November 2021 by Katie White (Botanist) and Kimberly Jenkins (Technical Assistant) of Bio Diverse Solutions. The survey area was surveyed on foot using traverses and relevés. The intent of the traverses was to identify and map the different vegetation types, their condition category and to undertake more intensive targeted surveys within suitable habitat for conservation significant species.

Three relevés were systematically surveyed within representative vegetation types to enable thorough recording of species occurrence and representative vegetation unit descriptions regarding composition and structure (Appendix D).. The flora was systematically recorded within the relevés, with collections of plant specimens made where further identification was required, using Katie White's Regulation 60 Flora Taking Licence FTB62000237. 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 units were described based on structure, dominant taxa and cover characteristics as defined by relevé data and field observations, as both Muirs (1977) and NVIS Level 5 (sub-association; DoEE, 2017) description methods.

Analysis of vegetation units identified during the field survey occurred to determine whether those present bore similarities to the TEC / PEC 'Proteaceae Dominated Kwongkan Shrublands of the Southeast Botanical Province' (Kwongkan), and whether further quadrat analysis was required. Whilst all vegetation units present contained Proteaceous species, none were present at high enough density's to be considered as possible TEC/PEC Kwongkan. Therefore, no further quadrat analysis occurred.

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.

3.2. Flora and Vegetation Survey Limitations and Constraints

An assessment of potential survey limitations was undertaken as per the EPA (2016) document *Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment* (Table 2). Several limitations were present, primarily relating to a single Orchid species not flowering at the time of survey, P3 *Pterostylis faceta.* Minor limitations related to small, obscure shrubs not flowering at the time of the survey, species flowering on the periphery of the survey or a lack of taxonomic information on species within the desktop, primarily undescribed informal species.

Table 2: Assessment of potential survey limitations for flora and vegetation.

Limitation	Significance of limitation	Comment
Experience of personnel	Nil	Katie White has over 5 years' experience at conducting targeted, reconnaissance and detailed flora surveys within the Esperance sandplains bioregion and is competent in taxonomic identification and assessment of vegetation in the area. Additionally, she has conducted targeted flora surveys and worked alongside the DBCA Flora Conservation Officer for a large number of flora species listed on the 10 km desktop analysis.

Table 2 continued.

Limitation	Significance of limitation	Comment
Experience of personnel Continued.	Nil	Kimberly Jenkins has 10 years' experience of working various technical assistant, field survey, education and other scientific roles. A single species of bryoflora was identified within the desktop assessment (Table 11, Appendix B), namely P2 *Fabronia hampeana.* This is outside the expertise of surveyors. However, a risk assessment was completed on suitable habitat present and was determined to be 'Unlikely' to occur.
Survey timing	Minor Major – *Pterostylis faceta*	The client requested a spring flora and vegetation survey, consistent with peak flowering times for the majority of species in the area. Timing of survey occurred towards the end of the peak flowering period in this locale, and was undertaken on the 5th of November 2021. It was noted that many annual and herbaceous species, such as Orchid species were not present and are under-represented within the diversity of this report due to the survey being conducted at the end of flowering season. A significant limitation was present for one species identified as 'Possible' to occur in the LOO due to being a herbaceous annual species flowering and present outside the survey period. This applied to P3 *Pterostylis faceta.* If present within the survey area, this species would not have been detectable. Three species were identified as 'Likely' (P1 *Darwinia* sp. Gibson [R.D. Royce 3569], P2 *Hibbertia turleyana* and P3 *Brachyloma mogin)* and two species as 'Possible' (P1 *Beyeria physaphylla, Leucopogon remotus*) to occur in the LOO are recorded as flowering outside of the survey season. These plants are all smaller, obscure shrubs. Whilst detectable, there is a minor limitation and visibility. Additionally, a minor limitation was present for species identified in the LOO as flowering on the periphery of the survey time. This specifically occurred for one species identified as 'Likely' to occur, namely P2 *Hydrocotyle tuberculata,* and three species as 'Possible' to occur, namely P1 *Cyathostemon* sp. Esperance (A. Fairall 2431), P2 *Comesperma griffinii* and P3 *Styphelia rotundifolia*. It is possible that early or late blooms were present. Due to being a minor limitation, cautionary principles were applied when identifying specimens within this genera, and multiple specimens submitted to the WA Herbarium as a precaution. Five species were recorded as flowering outside the survey period but had nil limitation due to being large, distinctive shrubs or plants that retained their fruit, that did not require flowering to be recognisable.
Access restrictions	Nil	No access restrictions were encountered during the survey.
Availability of contextual information	Minor	Publicly available desktop and background information was readily available to give a broad contextual understanding of the site. Database searches were conducted through DBCA (DBCA, 2021a; DBCA, 2021b) providing a more comprehensive context. However, it must be noted that the Esperance area is highly understudied.

Table 2 continued.

Limitation	Significance of limitation	Comment
Availability of contextual information Continued.	Minor	Three species were identified in the desktop assessment (Table 10, Appendix B) as 'Possible' to occur with very limited information present taxonomically. This primarily related to undescribed, informal phrase names, such as P1 *Baeckea* sp. Gibson (K.R. Newbey 11084), *Cyathostemon* sp. Esperance (A. Fairall 2431), and *Schoenus* sp. Grey Rhizome (K.L. Wilson 2922). Precautionary principles were applied for any species within these genera during identification.
Survey effort and extent	Nil Minor - Orchids	106 species were identified during the survey, and three relevé data sets collected to gain as complete a picture as possible of flora species present at the site. Following the CoA (2013) *Draft Survey guidelines for Australia's Threatened Orchids,* it is recognised that due to the complex nature of Orchid phenology and physiology, more intensive survey transects and surveys over multiple time periods may be required. Two Orchid species were identified within the desktop assessment as 'Possible' to occur, namely P2 *Paracaleana parvula* and P3 *Pterostylis faceta*. Whilst the survey intensity was appropriate at a reconnaissance level (EPA, 2016), it was recognised that it likely did not meet requirements for sampling Orchids (CoA, 2013), which may represent a minor limitation.
Disturbances that may affect results	Nil Major – fire ephemeral species	The primary form of disturbance was the presence of access tracks adjacent to the railway line that were effectively cleared. No fires had previously occurred and the native vegetation showed indications of being long unburnt (density of leaf litter, age and height of obligate seeders, height of Mallee re-sprouters). This is a significant limitation for P3 *Adelphacme minima* and *Trachymene anisocarpa* var *trichocarpa*, identified as 'Possible' in the LOO assessment. It is therefore possible to be present through viable soil seed bank, but would not have been captured through this survey.
Identification issues	Nil	The survey was undertaken on 5th of November, during the peak flowering period for many great southern 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 locate or identify in the field than others. Of the 106 species present within the survey area, the vast majority contained sufficient taxonomic information for identification (such as nuts, fruit, leaf structure or flowers). It is estimated that 70-75% of species present were flowering. Six species could not be identified, primarily relating to being sterile at the time of the survey. These bore no similarities to species identified as 'Likely' or 'Possible' to occur in the LOO assessment. A single species was present that bore similarities to a P2 species, *Leucopogon bossiaea.* This was confirmed by the WA Herbarium to be the most likely species but noted remained ambiguus due to the sterile specimen collected from lack of flowering. It is therefore discussed as '*Leucopogon ?bossiaea'* for the remainder of the report.

3.3. Basic Fauna Survey Methodology

Field survey work was carried out by Dr. Karlene Bain (Wildlife Ecologist / Zoologist) and Bianca Theyer (Conservation and Wildlife Biologist / Ecologist) on the 23rd November 2021, in accordance with Guidance Statement 56: *Terrestrial Fauna Surveys* (EPA 2020).

Fauna surveys were carried out on foot using traverses and targeted survey techniques 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;
- DSEWPaC (2011) Survey guidelines for Australia's Threatened mammals; and
- DSEWPaC (2012) Referral Guidelines for Three Threatened Black Cockatoo Species.

The vegetation units described in Section 5.2 broadly define habitat types across the survey area. The aim of the basic fauna survey was to assess and map the fauna habitat within the survey area, assess the likelihood of significant fauna species utilising the general area and/or particular vegetation units, record the actual presence of conservation significant taxa, and undertake an opportunistic inventory of fauna species encountered whilst traversing the survey area on foot.

3.4. Targeted Black Cockatoo Habitat Assessment

Carnaby's Cockatoo have a wide-spread distribution across Western Australia extending from Kalbarri and Geraldton in the northwest of the state, inland to Morawa, Dowerin and Merredin and to the east of Esperance (DSEWPaC, 2012). The survey area lies within the known foraging range of the Carnaby's Cockatoo, but is outside of the modelled predicted breeding area (DSEWPaC, 2012).

Baudin's Cockatoo is most commonly found in forested areas, but is also found in the open agricultural areas within the southwest (DEC, 2008). The survey area falls outside the known distribution area for Baudin's Cockatoo, which extends from Mundaring south to Kojonup and Albany, and inland to the Stirling Ranges (DEC, 2008; DSEWPaC, 2012). Based on modelled predicted breeding areas contained within the guidelines (DSEWPaC, 2012), the survey area does not lie within the breeding distribution for this species.

Forest Red-tailed Black Cockatoo occur within the south-west humid and sub-humid zones of Western Australia, in the dense Jarrah, Karri and Marri forests that receive more than an average of 600mm annual rainfall (DEC, 2008). Their distribution extends from Perth, east to Wundowie and south through to Narrogin, Kojonup, Cranbrook and Albany (DSEWPaC, 2012). The survey area is not located within the known distribution for this species (DSEWPaC, 2012).

Cockatoo surveys targeted Carnaby's Cockatoo and potential habitat for this species, and consisted of a systematic traverse-based assessment of hollow-bearing trees, foraging habitat, feeding activity and roosting sites as described in sections 3.4.1-3.4.3.

3.4.1. Surveys for Breeding Hollows

Carnaby's Cockatoo breed within the inland parts of its distribution, in areas with 300-750 mm annual average rainfall (DPaW, 2013). This breeding range has expanded in recent years to extend further south into Jarrah-Marri forests and the coastal Tuart forests south of Perth (Johnstone and Storr 1998; Johnstone *et al*. 2011). Although the survey area does not fall within the modelled predicted breeding area, there is potential for suitable breeding habitat to be present, and as such an assessment of all trees onsite was undertaken.

The aim of the black cockatoo habitat assessment was to identify all potential breeding trees (Table 3) with a diameter, measured at 1.5 m from the base of the tree, of 500 millimetres or greater and that contained one or more hollows of potential suitability for breeding by Carnaby's Cockatoo. These trees are referred to hereafter as significant trees.

If present, significant trees were GPS located, the diameter of the tree measured at breast height (1.5 m above the ground; DBH) using a diameter tape, photographed, and the presence or absence of potential breeding hollows determined. Where present, hollows were photographed, the entrance type (chimney, side or elbow) and dimensions of the hollow were recorded

and hollows were assessed for signs of use by cockatoos, based on evidence such as chewing around the hollow entrance, and activity at the base of the tree, e.g., feathers, faecal material, feeding debris.

Long term studies on Carnaby's Cockatoos have shown that they utilise tree hollows ranging from 100 mm – 650 mm (average 260 mm) in diameter and a hollow with a depth more than 300 mm (Saunders et al. 2014a, 2014b). Based on this information, hollows with an entrance diameter larger than 100 mm x 100 mm that occurred in branches or trunks with the capacity for deep hollows were recorded as potential cockatoo breeding hollows. Smaller hollows with the potential to develop into suitable nesting hollows were also recorded.

3.4.2. Surveys for Foraging Habitat and Feeding Activity

The *EPBC Guidelines for Black Cockatoos* (DSEWPaC, 2012) outline general criteria for identifying foraging habitat for black cockatoos (Table 3) but do not provide detailed criteria for assessing quality. In this instance, the quantity of feeding evidence, overall health of trees (dead, presence of disease), presence of fruiting material, and diversity of known foraging species was taken into account when assessing the quality of foraging habitat. Vegetation units that do not contain known foraging species were not considered to contain foraging habitat.

Assessment of foraging habitat was based on published ecological information for Carnaby's Cockatoo, which documents that this species prefers Kwongkan heathland, shrublands and woodlands dominated by Proteaceous species as foraging habitat but will feed on individual Eucalypts and small stands of Eucalypt woodland or forest (Table 3). The presence of foraging habitat was mapped in the field, and individual locations where feeding activity was encountered were GPS'd.

3.4.3. Targeted Black Cockatoo Habitat Assessment

There is currently an absence of criteria within the EPBC Guidelines (DSEWPaC, 2012) for assessing roosting habitat. In this survey, the presence of cockatoo feathers and faecal material were used as indicators of roosting activity.

The presence of roosting habitat if present was mapped in the field, and individual locations where roosting activity was encountered were GPS'd.

Table 3: Habitats used by Carnaby's Cockatoo (DSEWPaC, 2012).

Habitat	Carnaby's Cockatoo
Breeding	Generally, in woodland or forest, but also breeds in former woodland or forest now present as isolated trees. Nest in hollows in live or dead trees of salmon gum (*E. salmonophloia*), wandoo, tuart, jarrah (*E. marginata*), flooded gum (*E. rudis*), york gum (*E. loxophleba* subsp. *loxophleba*), powder bark (*E. accedens*), karri and marri.
Roosting	Generally, in or near riparian environments or natural and artificial permanent water sources. Flat-topped yate (*E. occidentalis*), salmon gum, wandoo, marri, karri, blackbutt, tuart, introduced eucalypts (i.e. blue gum) and introduced pines.
Foraging	Native shrubland, Kwongkan heathland and woodland dominated by Proteaceous plant species such as *Banksia* spp. (including *Dryandra* spp.), *Hakea* spp. and *Grevillea* spp. Forages in Pine plantations (*Pinus* spp.), eucalypt woodland and forest that contains foraging species. Also, individual trees and small stands of these species.
Foraging: common food items	Seeds, flowers and nectar of native Proteaceous plant species (for example, *Banksia* spp., *Hakea* spp., *Dryandra* spp., and *Grevillea* spp.), eucalypts and Callistemon. Also seeds of introduced species including *Pinus* spp., *Erodium* spp., wild radish, canola, almonds and pecan nuts; insects and insect larvae; occasionally flesh and juice of apples and persimmons.

3.5. Fauna Survey Limitations and Constraints

An assessment of potential survey limitations was undertaken as per the EPA (2020) document *Technical Guidance Fauna Surveys for Environmental Impact Assessment* (Table 4).

Table 4: Fauna survey limitations and constraints.

Limitation	Constraint	Comment
Scope	Nil	The scope was a basic fauna survey to generally assess the presence / evidence of fauna species within the survey area, map the fauna habitat, undertake opportunistic inventory of species including Threatened and Priority listed and other conservation-significant species.
Disturbances that may affect results	Nil	No recent disturbances which may affect results of the survey were identified, e.g., recent fire or grazing. Historical and ongoing disturbances from the existing operational activities along the railway line may impact the presence of fauna within the survey area. However, given these disturbances are long-term and continuous, they are unlikely to have resulted in a significant limitation on detection probability or species occurrence during the survey period (i.e., activities would result in some fauna moving away / not utilising the survey area at all times).
Intensity of survey	Nil	The intensity of the basic fauna survey and targeted components of the survey were deemed appropriate given the scope.
Sources of information (recent or historic) and availability of contextual information	Minor	Publicly available desktop, background and ecological data were readily available to provide a contextual understanding for the site and the survey. DBCA data were also acquired (not publicly available) to provide a more detailed understanding of potential conservation significant fauna in the survey area.
Remoteness or access issues	Nil	No access restrictions were encountered.
Species detection probability (e.g., as a result of seasonal activity, fauna movement patterns and cryptic behaviours)		Cockatoo breeding periods affect the ability of surveys to detect breeding individuals, however assessment of the suitability of breeding habitat based on the presence of potentially suitable hollows negates this limitation. Spatiotemporal patterns of foraging and roosting by Carnaby's Cockatoo result in varied and sometimes sporadic use of some areas, which affects direct detection. The use of activity indicators such as feeding debris (nuts) and faecal material that persist onsite negate this limitation and enable determination of the regularity with which an area is visited. Cryptic species such as the western mouse (*Pseudomys occidentalis*, EN), and heath mouse (*Pseudomys shortridgei*, VU) and are unlikely to have been detected within the parameters of this survey. The presence of potential habitat was used as an indication of their likelihood of occurrence, and the possible need for follow up targeted surveys. The conclusions presented in this report are based upon field data collected over a limited period of time. The results are therefore indicative of the environmental condition of the site at the time and the survey timing. E.g., some species are more likely to use seasonally inundated areas when they are dry, transient wide-ranging species may not have been present during the survey period, some cryptic species are less detectable particularly when they are inactive. Species-level detection probabilities are dealt with in the Threatened fauna LOO in Table 12, Appendix B. Species-level detection probabilities are dealt with in the Threatened fauna LOO in Table 12, Appendix B.

Table 4 continued.

Limitation	Constraint	Comment
Survey technique limitations	Minor	Identifying hollows from the ground has limitations, as the full characteristics of a hollow are not evident (e.g., internal dimensions such as depth). The entrance dimensions and size of the branch / trunk into which the hollow was forming were used as indicators of the potential internal dimensions. The relative visibility of the canopy can also be limiting in identifying potential hollows, particularly where hollows are upward facing or obscured by foliage.
Experience of personnel	Nil	Bianca Theyer has 6 years of fauna survey experience through her role at Bio Diverse Solutions and has been mentored by Dr Karlene Bain (Wildlife Ecologist) during this time. She has experience assisting other Zoologists (Bush Heritage, Australian Wildlife Conservancy and DBCA) in a voluntary capacity with fauna monitoring surveys. Dr Karlene Bain has 26 years of fauna survey experience through roles in biodiversity survey, research and management working with State Government, State Natural Resource Management groups, Regional NRM groups, Research Institutions, and Private Industry.

4. Results – Desktop Assessment

4.1. Threatened and Priority Flora

The full species list compiled from all available data (Table 10 in 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. Conservation categories for Threatened and Priority flora are presented in Tables 13 and 14 in Appendix C. NatureMap and Protected matters search tool database searches are provided in Appendix F.

As a result of the above-mentioned database searches 7 Threatened and 68 Priority species were identified within the study area (30km buffer). Of these, 11 were assessed to be "Likely" to occur and 27 as "Possible" to occur. Refer to Table 10 in Appendix B for LOO analysis. Species that have previously been recorded within a 10 to 30 km radius of the survey area are shown in Figure 3.

4.2. Threatened and Priority Ecological Communities

Desktop Assessment of Threatened (TEC) or Priority (PEC) ecological communities identified two TEC / PEC, namely '*Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia* (Kwongkan)*'* and *Subtropical and Temperate Coastal Salt Marsh*, which are outlined in further detail below. Kwongkan was assessed as 'Likely' to occur and CSM as 'Unlikely'.

Conservation categories for Threatened and Priority ecological communities are presented in Tables 15 and 16 in Appendix D. NatureMap and Protected matters search tool database searches are provided in Appendix F. Refer to Table 11 in Appendix B for LOO analysis. Species that have previously been recorded within a 10 to 30 km radius of the survey area are shown in Figure 3.

Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia (Kwongkan)

Kwongkan is listed as Priority 3 (P3) PEC within WA under the *BC Act 2016* and as an Endangered TEC under the *EPBC Act 1999*. The survey area lies within the southeast botanical province of Western Australia (Hopper and Gioia, 2004), which is the geographical location of Kwongkan. It is defined and assessed in the conservation advice as generally Kwongkan shrubland, ranging from sparse to dense, thicket-forming, where Proteaceous species form a significant component (DoE, 2015). It is confined to the southeast botanical province of Western Australia (Hopper and Gioia, 2004) and primarily occurs on sandplains and marine plains and lower to upper slopes and ridges, as well as uplands across this region. Multiple other ecological communities are listed under the *BC Act 2016* also meet criteria of Kwongkan TEC and should be considered when assessing whether Kwongkan is present.

Kwongkan is recognised by the below key diagnostic features and minimum condition thresholds outlined in the Approved Conservation Advice Guidelines (DoE, 2015):

1) Occurs within the South Coastal Floristic Province (Hopper and Gioia, 2004); relating to south west phytogeographic boundaries. Includes Island of the Recherche Archipelago.
2) a) Characterised by Proteaceae species having 30% or greater cover of Proteaceae species across all layers of where shrubs occur (crowns measured as if opaque). OR;
   b) Two or more diagnostic Proteaceae species are present that are likely to form a significant vegetative component when regenerated. The use of diagnostic species is for situations in which the cover or Proteaceae species is reduced due to recent disturbance (e.g., fire).

Condition thresholds for the ecological community are described in Table 5.

Table 5: Condition thresholds and minimum patch size analysis for Kwongkan PEC/TEC diagnostic criteria.

Condition category	Minimum patch size	Weeds	Dieback
High	1 ha	<30% perennial weed cover	No known Dieback infestation
Moderate	0.5 ha	<70% perennial weed cover	May be present or unknown

The approved conservation advice, available spatial mapping for the ecological community, and description above indicates that this TEC/PEC is likely to occur within the survey area.

Subtropical and Temperate Coastal Saltmarsh (CSM)

CSM is listed as a P3 PEC within WA under the *BC Act 2016* and as a Vulnerable TEC under the *EPBC Act 1999*. The community "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)". CSM is recognised by the below key diagnostic features and minimum condition thresholds outlined in Approved Conservation Advice Guidelines (DoE, 2015a), which are outlined further below. Refer to Table A3 in Appendix B for further information.

1) Occurs south of 23°37'S latitude, from the central Mackay coast on the east coast of Australia, southerly around to Shark Bay on the west coast of Australia (26° latitude), including the Tasmanian coast and islands within the above range;
2) Occurs on the coastal margin, along estuaries and coastal embayment's and on low wave energy coasts;
3) Occurs in places with at least some tidal connection, including rarely-inundated supratidal areas, intermittently opened or closed lagoons, and groundwater tidal influences, but not areas receiving only aerosol spray;
4) Occurs on sandy or muddy substrate and may include coastal clay pans (and the like);
5) Consists of dense to patchy areas of characteristic coastal saltmarsh species (i.e., salt-tolerant herbs, succulent shrubs or grasses, that may also include bare sediment as part of the mosaic); and
6) Proportional cover by tree canopy such as Mangroves, *Melaleucas* or *Casuarinas* is not greater than 50%, nor is proportional ground cover by seagrass greater than 50%.

Condition thresholds for the ecological community are described in Table 6.

Table 6: Minimum patch size analysis for CSM PEC/TEC diagnostic criteria.

Patch size	Condition category	Inclusion in community
<0.1ha and occur in isolation	Patches or areas >50% weeds	**Do not** form part of the CSM TEC/PEC
<0.1ha patches within 30m of each other collectively forming 0.1ha, considered as a mosaic	Patches or areas <50% weeds	**Do** form part of the CSM TEC/PEC

The approved conservation advice, available spatial mapping for the ecological community, and description above indicates that this PEC is unlikely to occur within the survey area, being 25 km away from the coastline or distinct hydrological features that would allow for tidal interaction.

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BIO DIVERSE SOLUTIONS

Scale
1:225,000@ A3
GDA MGA 94 Zone 51

CLIENT Arc Infrastructure
Line 51 (351.24 to 352.91 KM), North of Gibson
Site 8 - Degrussa Road
Gibson, WA 6448

Figure 3: Desktop Flora & TEC/PEC Data (DBCA, 2021a; 2021b).

	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	9/06/2022

Legend

- Survey Area
- 30km Study Area Buffer

Ecological Communities

State, Commonwealth

- Priority 3, Endangered
- Priority 3, Vulnerable

59-0921FL_WAHerb

- T
- P1
- P2
- P3
- P4

59-0921FL_TPFL

- T, CR
- T, EN
- T, VU
- P1
- P2
- P3
- P4

Overview Map Scale 1:1,250,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

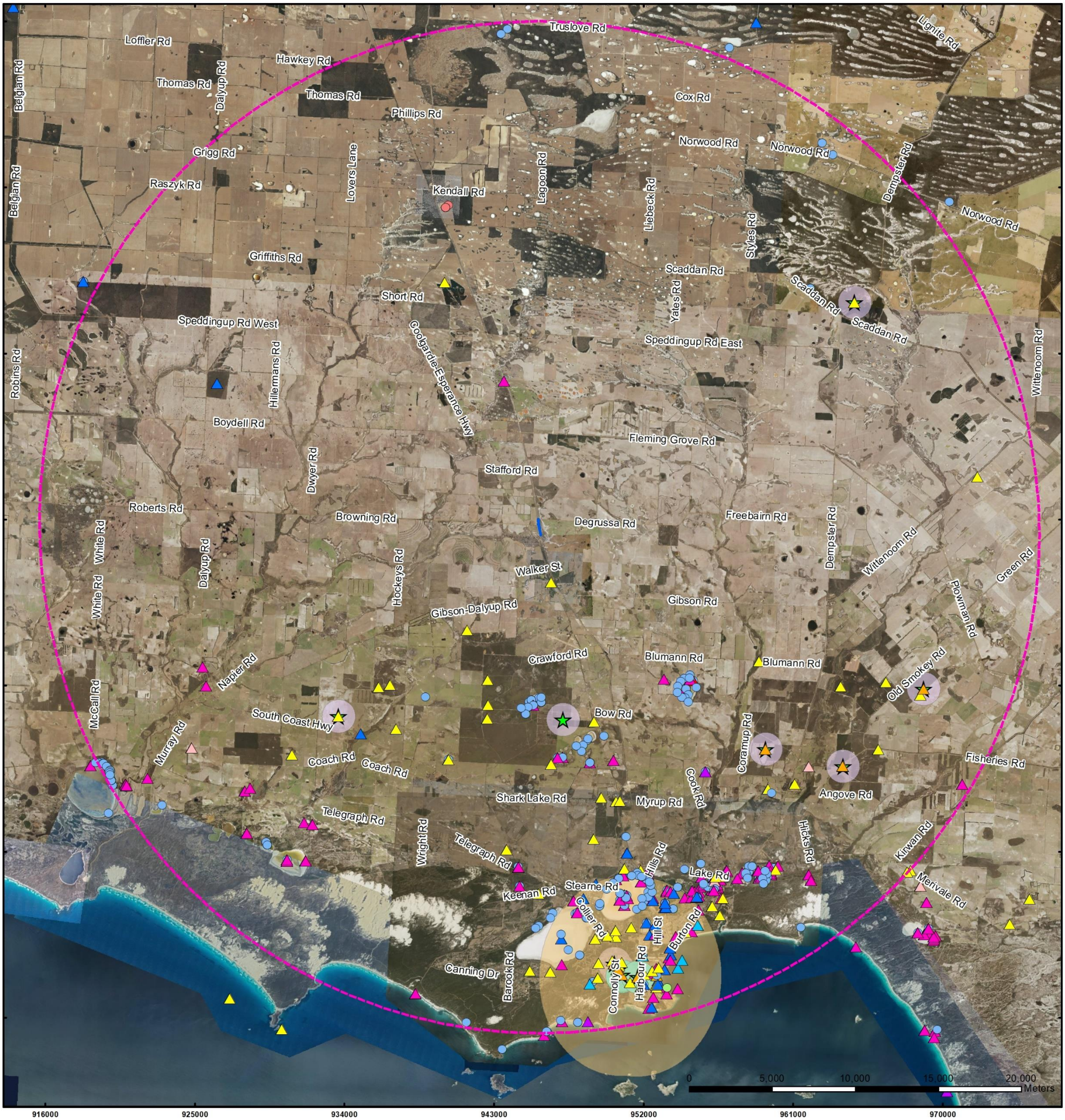
4.3. Fauna

The desktop assessment identified 80 species of conservation significance within 30 km of the survey area. Of these, 43 were Threatened taxa under the BC Act 2016 and / or EPBC Act 1999 (critically endangered, endangered or vulnerable), 12 were Priority listed or specially protected taxa and 25 were migratory species protected under international agreements. Of the 43 Threatened taxa and 12 Priority taxa, 21 are also migratory species protected under international agreements (Table 12, Appendix B). Of these 80 species, 14 species are assessed as 'Possible' to occur in the pre-field LOO analysis (Table 13, Appendix B). Conservation categories for Threatened and Priority fauna are presented in Tables 13 and 14 in Appendix C. NatureMap and Protected Matters Search Tool database searches are provided in Appendix F.

The list of species with the potential to occur within the survey area is compiled from all available data (Table 12, Appendix B) and is based on observations from a broader area than the survey area. As a result, this list is likely to include species that would not occur in the 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.

4.3.1. Potential Breeding, Foraging and Roosting Habitat for Black Cockatoos

There are no known confirmed breeding sites within a 30 km range of the survey area, and the area is outside of the modelled breeding range for black cockatoos. DBCA data supplied by Arc Infrastructure indicates there are 10 black cockatoo roost sites that have been located within 30 km of the survey area, the closest being approximately 11 km to the south (DBCA, 2021c; Figure 4). Publicly available DBCA black cockatoo databases also indicate there are confirmed roosting sites within 30 km of the survey area (DBCA, 2018a; 2018c; 2019b).



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Scale
1:225,000@ A3
GDA MGA 94 Zone 51

CLIENT Arc Infrastructure
Line 51 (351.24 to 352.91 KM), North of Gibson
Site 8 - Degrussa Road
Gibson, WA 6448

Figure 4: Desktop Fauna Data (DBCA, 2022c).

	QA Check	Drawn by
	MLH	**BMT**
STATUS	FILE	DATE
FINAL	**AI005-009**	**9/06/2022**

Legend

DBCA Fauna Data

WA Status, EPBC Status

- CR, CR
- EN, EN
- EN, MI
- EN,
- VU,
- VU, EN
- VU, VU
- VU, MI
- MI, MI
- OS,
- P1,
- P2,
- P3,
- P4,
- P4, MI

- Survey
- 30km Study Area
- DBCA Black Cockatoo Roosting Data
- Carnabys Cockatoo Confirmed Roost Sites (DBCA_050)
- Carnabys Cockatoo Confirmed Roost Sites Buffered 6km (DBCA_052)
- Black Cockatoo Roosting Sites Buffered (DBCA_064)

Overview Map Scale 1:1,250,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

5. Results – Field Survey

5.1. Flora Diversity

During the survey 106 flora species, consisting of 31 families and 81 genera were found. The most commonly occurring families were Asteraceae and Myrtaceae. The flora list includes 93 native species and 13 introduced / alien species (refer to Table 18 Appendix D). The vegetation units identified across the survey area are described in Section 5.2. Due to the survey being conducted at the end of the spring season, it was observed that a lower number of Orchids and annuals / herbs were present. The diversity is likely to be significantly higher for within these groups than what has been captured within this survey.

Plant identification was undertaken through the most relevant, current and available taxonomic literature, keys and herbarium reference specimens available (Archer, 2016; Barrett & Pin Tay, 2016; Bell, 2018; Blackall & Grieve, 1975; Blackall & Grieve 1980; Brittan, 1987; Brophy *et al.,* 2013; Brundrett; 2014; Euclid, n.d -; George, 2002; Hollister *et al.,* n.d.-; ICPS, 2021; JSTOR, 2000-; Marchant *et al.* 1987; Maslin, 2018 - ; Ng, 2022; Rye, 2021; WAH 1998 -; Weber, 2007; Williams, 2022). All resources used were the most current to knowledge. Nomenclature used through this report follows the most recent scientific names through the Western Australian Herbarium (WAH, 1998-).

5.2. Vegetation Units

Three vegetation units were identified during the survey period, vegetation descriptions can be found in the following sections, with relevé data presented in Appendix D. Refer to Figures 5 – 7 for photographs of vegetation units and Figure 8a and 8b for extent and distribution within the survey area.

A portion of the survey area (0.313ha, 29.6%) was also historically cleared, consisting of bare ground or entirely non-native invasive species (mostly agricultural grasslands).

1. Vegetation Unit: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine and Nuyflo SL)

Vegetation Unit 1: Lamine and Nuyflor SL has extremely high alpha and beta diversity, with the species change highly variable naturally. It is characterised by a tall open shrubland primarily of *Lambertia inermis,* with scattered *Nuytsia floribunda.* A lower shrubland forms the midstorey and is extremely variable in structure and species composition, primarily mixed of Myrtaceae and to a lesser extent Proteaceae species. A dense sedgeland dominates the understorey, primarily dominated by *Hypolaena humilis.* Where disturbance has occurred (for example slashed adjacent to the railway access tracks for sight line), the dominance of sedges is much higher and a loss of mid and upperstorey is experienced.

Vegetation Description (NVIS; DoEE, 2017): U ^^*Lambertia inermis* var *inermis*, *Acacia cyclops*, *+/-Nuytsia floribunda*\shrub\4\i; M ^^*Melaleuca scabra*, *Adenanthos cuneatus, Micromyrtus elobata* subsp *elobata*\shrub\2\r; G+ ^*Hypolaena humilis*, *+/-Caustis dioica, Stylidium repens*\sedge, herb\1\d.

Vegetation Description (Muirs, 1977): *Lambertia inermis* var *inermis, Acacia cyclops* and *Nuytsia floribunda* Scrub, over *Melaleuca scabra, Adenanthos cuneatus* and *Allocasuarina humilis* Open Low Scrub A and B, over *Micromyrtus elobata* subsp *elobata, Verticordia minutifolia* and *Darwinia vestita* Open Dwarf Scrub C, over *Caustis dioica* Dense Tall Sedge, over *Hypolaena humilis* Dense Low Sedge.

Area: 0.527ha.

Site description: Flat sandplain, with light grey sand. Good drainage.

Condition: Degraded, Good, Very Good, Excellent.

Represented in R1 (refer to Appendix D).

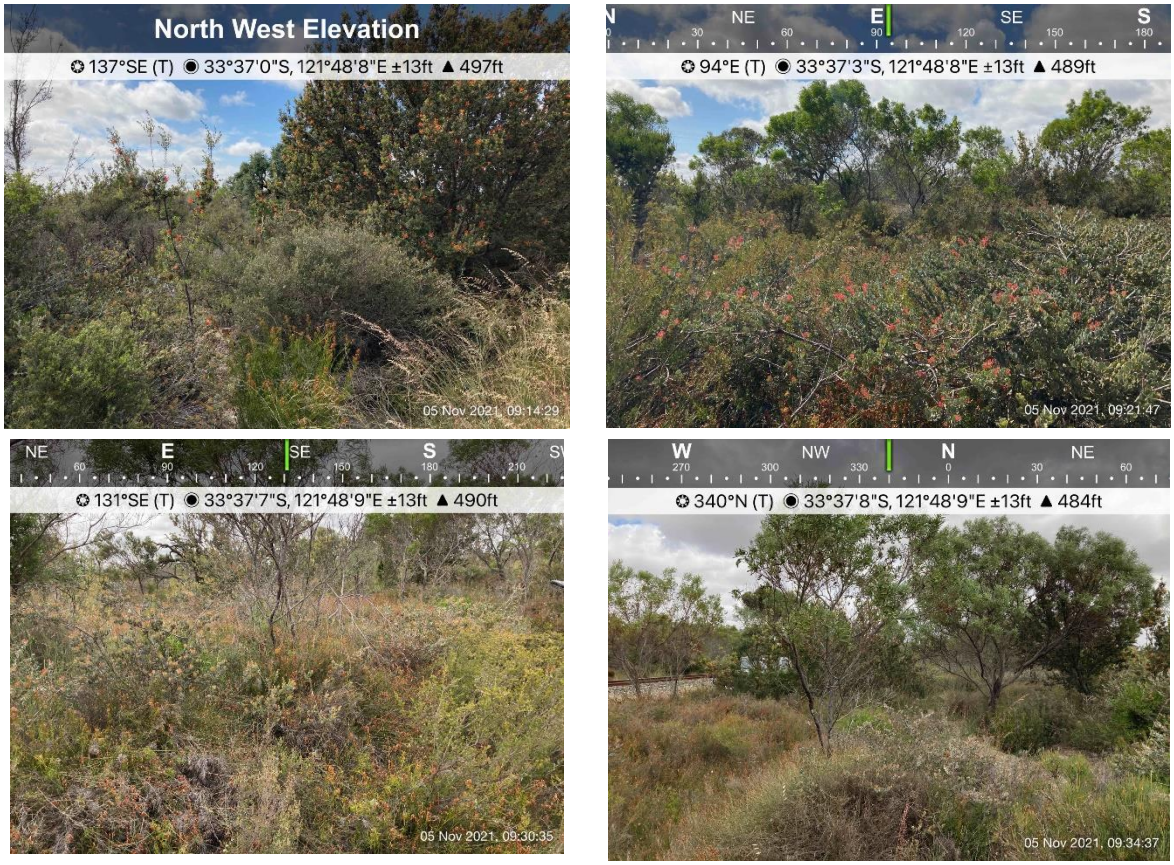

Figure 5: Vegetation Unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland present within the survey area.

2. Vegetation Unit: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL)

Vegetation Unit 2: Hakcin Melcut ShL and Hyphum SeL was characterised for a mixed shrubland and dense sedgeland associated with the periphery/lower slopes adjacent to salt lakes. Soil was damper, with a higher level of clay. Common shrubs present included *Hakea cinerea, Melaleuca cuticularis, Acacia cyclops* and *Austrobaeckea latens.* The sedgeland was dominated by *Hypolaena humilis* and *Gahnia trifida.*

Vegetation Description (NVIS; DoEE, 2017): U ^*Hakea cinerea, +/-Melaleuca cuticularis, Acacia cyclops*\shrub\4\bc; M ^^*Austrobaeckea latens, Verticordia minutifolia, +/-Verticordia plumosa* var *grandiflora*\shrub\2\r; G+ ^*Hypolaena humilis*, *+/-Gahnia trifida*, *Caustis dioica*\sedge\2\d.

Vegetation Description (Muirs, 1977): *Hakea cinerea, Melaleuca cuticularis* and *Acacia cyclops* Open Scrub, over *Austrobaeckea latens, Verticordia minutifolia* and *Verticordia plumosa* var *grandiflora* Very Open Low Scrub A and B, over *Gahnia trifida* and *Caustis dioica* Dense Tall Sedge, over *Hypolaena humilis* Dense Low Sedge.

Area: 0.117ha.

Site description: Gentle slope on lower slopes of drainage depression. Poor drainage. Light grey sand, with clay layer below.

Condition: Very Good.

Represented in R2 (refer to Appendix D).

Figure 6: Vegetation Unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland present within the survey area.

3. Vegetation Unit: Salt Lake Forbland and Grassland (SL FLGL)

Vegetation Unit 3: Salt Lake Forbland was characterised by the open salt lake bed, with large areas of open ground that is seasonally inundated. Scattered between were salt-tolerant herbs, forming a forbland. Scattered shrubs were also present. This vegetation type has a high reliance on specific hydrological regimes and is considered to be riparian vegetation. It is also a highly unique and localised habitat, with salt lakes consisting of this specific habitat only within a small surrounding area. Therefore, there is a large number of conservation-significant flora recorded within the vicinity, including P2 *Leucopogon ?bossiaea* and P3 *Kunzea salina*.

Vegetation Description (NVIS; DoEE, 2017): M ^^*Melaleuca brevifolia*, *Leucopogon ?bossiaea, Kunzea salina*\shrub\2\i ; G+ ^*Austrostipa juncifolia*, ^^*Gunniopsis glabra*, *Stylidium insensitivum*\grass, herb\1\c.

Vegetation Description (Muirs, 1977): *Melaleuca brevifolia* and *Austrobaeckea latens* Low Scrub A and B, over *Leucopogon ?bossiaea* and *Kunzea salina* Open Dwarf Scrub D, over *Austrostipa juncifolia* Tall Grass, over *Gunniopsis glabra* and *Stylidium insensitivum* Open Herbs.

Area: 0.101ha.

Site description: Base of drainage depression, seasonally inundated salt lake. White Sand-clay.

Condition: Very Good.

Represented in R3 (refer to Appendix D).

Figure 7: Vegetation Unit 3: Salt Lake Forbland and Grassland present within the survey area.

5.3. Vegetation Condition

The vegetation condition for the survey area (Table 7) has been mapped using the condition rating scale (adapted from Keighery 1994) outlined in *EPA Flora and Vegetation Survey Technical Guidance* (2016).

The vegetation ranged from Degraded to Excellent condition throughout the survey area. These classification levels are related to degradation of structure and vegetation integrity by processes such as clearing, fire, weeds, grazing, Phytophthora Dieback and vehicle tracks. Specifically, degradation was primarily caused by edge effects from the historical clearing and access tracks, introducing non-native species that have displaced native communities. Vegetation Unit 1: Lamine SL contained vegetation in Degraded, Good, Very Good and Excellent condition. Vegetation Unit 2: Hakcin Melcut ShL and Hyphum SeL and Vegetation Unit 3: SL Forb contained native vegetation in only Very Good condition.

Table 7: Vegetation condition rating.

Vegetation unit	Condition rating	Area (ha)
Vegetation Unit 1: Lamine SL	Degraded	0.249
	Good	0.127
	Very Good	0.209
	Excellent	0.06
Vegetation Unit 2: Hakcin Melcut ShL and Hyphum SeL	Very Good	0.272
Vegetation Uni 3: SL Forb	Very Good	0.101

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Scale
1:2,000 @ A3
GDA MGA 94 Zone 51

Legend

- Survey Area
- Cadastre
- 2m Contours

Sample Sites

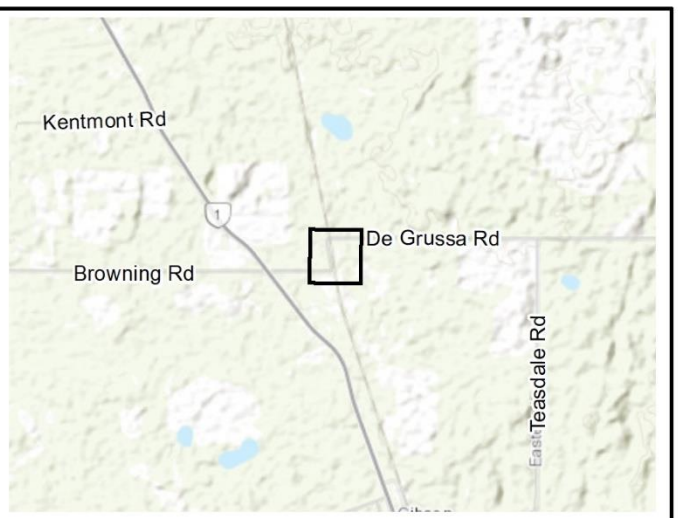
- Releve

Vegetation Units

- 1: Lamine and Nuyflo SL
- 2: Hakcin Melcut ShL and Hyphum SeL
- 3: SL Forb
- Cleared

Vegetation Condition

- Very Good
- Good
- Degraded



Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

CLIENT Arc Infrastructure
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Site 8 - Degrussa Road
Gibson, WA 6448

Figure 8A: Vegetation Units & Condition.

	QA Check	*Drawn by*
	MLH	**BMT**
STATUS	*FILE*	*DATE*
FINAL	**AI005-009**	**15/07/2022**

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Figure 8B: Vegetation Units & Condition.

	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	15/07/2022

Legend
- Survey Area
- Cadastre
- 2m Contours

Sample Sites
- Releve

Vegetation Units
- 1: Lamine and Nuyflo SL
- 2: Hakcin Melcut ShL and Hyphum SeL
- 3: SL Forb
- Cleared

Vegetation Condition
- Excellent
- Very Good

Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

5.4. Weeds and disturbance

Of the 106 flora species recorded within the survey area, 13 species are introduced. The full suite of weed species recorded is listed below in Table 7, with their corresponding ratings under the Australian Weed Strategy (IPAC, 2017), WA Weed Strategy (CALM, 1999) and the *BAM Act* (2007). The ratings given under the WA Weed Strategy relate to determining the significance of a weed, based on the criteria of invasiveness, impacts, potential for spread and socioeconomic and environmental values, and can be either 'High', 'Moderate', 'Mild', or 'Low' (CALM, 1999).

All species are classed as 'Permitted – s11' under the *Biosecurity and Agriculture Management Act 2007.* Under the Environmental Weeds Strategy for Western Australia (CALM, 1999) African Lovegrass is listed as 'High', while Cape Weed, Smooth Cats-ear, Common Sowthistle, Ursinia, Wild Oat and Blowfly Grass are rated as 'Moderate'. The remaining species are either rated 'Low' or are not listed (Table 8).

It is strongly recommended that all machinery entering the survey area (if clearing is approved in the future) has rigorous and thorough biosecurity hygiene applied to limit the introduction of invasive species infestation and the potential to significant degrade the surrounding reserve in pristine to excellent condition.

Table 8: Weed species recorded from the survey area.

Family	Species	Vernacular	WA Weed Strategy rating (CALM 1999)	BAM Act (2007)	Australian Weed Strategy (IPAC, 2017)
Asteraceae	*Arctotheca calendula*	Cape Weed	Moderate	Permitted (s11)	
Asteraceae	*Hypochaeris glabra*	Smooth cats-ear	Moderate	Permitted (s11)	
Asteraceae	*Hypochaeris radiata*	Flat Weed		Permitted (s11)	
Asteraceae	*Sonchus oleraceus*	Common Sowthistle	Moderate	Permitted (s11)	
Asteraceae	*Ursinia anthemoides*	Ursinia	Moderate	Permitted (s11)	
Campanulaceae	*Monopsis debilis*		Low	Permitted (s11)	
Iridaceae	Freesia sp	Freesia			
Poaceae	*Avena fatua*	Wild Oat	Moderate	Permitted (s11)	
Poaceae	*Briza maxima*	Blowfly Grass	Moderate	Permitted (s11)	
Poaceae	*Eragrostis curvula*	African Lovegrass	High	Permitted (s11)	
Poaceae	*Lolium perenne*	Annual Ryegrass	Low	Permitted (s11)	
Poaceae	*Vulpia muralis*	Fox Grass	Low	Permitted (s11)	
Primulaceae	*Lysimachia arvensis*	Pimpernel		Permitted (s11)	

5.5. Presence of Conservation Significant Flora

In total, two species of Priority conservation status were identified within the survey area directly, namely P2 *Leucopogon ?bossiaea* and P3 *Kunzea salina*. Both of these species were considered to be new populations, and as such a specimen was collected under Katie White's Regulation 60 FTB2000327 Flora Taking licence that was submitted to the WA Herbarium for confirmation of a new Priority population (Accession 9281; Hislop, 2022). Further details on presence of conservation significant flora are displayed in Table 9 and in species specific sections below. A Threatened and Priority Report Form (TPFL) was submitted to DBCA Species district Flora Conservation Office (Emma Adams) and Species and Communities Branch on the 05/01/2022, also a licence requirement under FTB2000327 (Appendix E).

Additionally, numerous non-Threatened species were identified with close similarities to conservation listed species that were identified in the 30 km radius survey. Key rationale behind identification as non-Threatened are listed below, and are further expanded in Table 10 of Appendix B:

- *Leucopogon carinatus* – bears similarities to numerous Ericaceae species identified in the LOO as 'Likely' or 'Possible' to occur, such as P2 *Leucopogon corymbiformis*. Due to numerous of these having minor limitations in detection due to unknown taxonomy or timing of flowering, specimen was submitted to the WA Herbarium and confirmed as non-Threatened *S. breviflora* (KW180, Accession 9281, specimen not retained; Hislop, 2022).
- *Leucopogon assimilis* – bears similarities to numerous Ericaceae species identified in the LOO as 'Likely' or 'Possible' to occur. Due to numerous of these having minor limitations in detection due to unknown taxonomy or timing of flowering, specimen was submitted to the WA Herbarium and confirmed as non-Threatened *L. assimilis* (KW179, Accession 9281, specimen not retained; Hislop, 2022).
- *Frankenia sessilis* var *sessilis* – bears similarities to P4 *Frankenia glomerata,* identified as 'Possible' in the LOO. Determined as non-Threatened *F. sessilis* var *sessilis* due to specimens having solitary flowers, opposed to cyme and lack of bracts.
- *Oxymyrrhine gracilis* and *Austrobaeckea latens* – bears similarities to P2 *Baeckea* sp. Gibson (K.W. Newbey 11084) identified on LOO as 'Possible' to occur, but was determined as non-Threatened *O. gracilis* or *A. latens* due to length and width of leaves and the lack of pustules/glands along leaves.
- *Micromyrtus elobata* subsp. *Elobata* – bears similarities to P3 *Micromyrtus* subsp. *Scopula*, but was determined as being the non-Threatened subspecies, as the leaves were too long at 4-5mm length, opposed to 1.2-1.5 mm of the P3 *M. elobata* subsp. *Scopula.*
- *Tecticornia pergranulata* subsp *pergranulata* and *Tecticornia pterygosperma* subsp *pterygosperma* – bears similarities to P2 *Tecticornia indefessa,* but was determined as non-threatened species due to form, branching structure and leaf patterns.

Table 9: Conservation significant flora identified within the survey area.

Family	Species	Cons Code	Vegetation Units Present	Abundance	Impact	Railway KM of population
Ericaceae	*Leucopogon ?bossiaea*	P2	3: SL Forb	31	10 – 32%	353.074 to 353.154
Myrtaceae	*Kunzea salina*	P3	3: SL Forb	36	8 – 22%	353.115 – 353.172

***Leucopogon bossiaea*, P2**

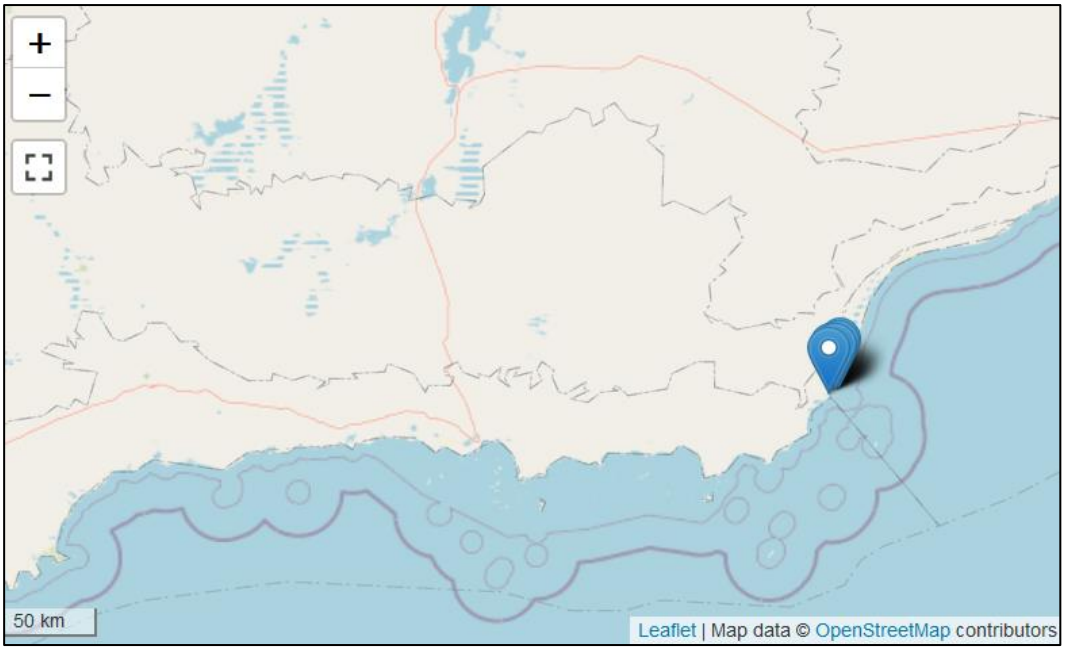
A new population of *Leucopogon bossiaea* (P2) was detected within the survey area Figure 9). It had not been identified on the desktop assessment, due to the nearest population occurring in Cape Arid, 300km to the east of the survey area (Figure 10). The plants detected therefore represent a significant range extension. It was noted by the WA Herbarium at time of verification (Accession 9281, Hislop, 2022; KW178, not retained) that the specimen was sterile and identification could not be formally completed, it is therefore referenced through the report as *L. ?bossiaea* as indication that verification is still required. Collection of a flowering specimen would resolve the identification query, occurring between May and July.

The population of *L. ?bossiaea* was detected at approximately 670 m south of the Degrussa Road railway crossing at 353.074 to 353.154KM, adjacent to a salt lake typical of the north-Gibson area. Only the eastern railway corridor was included within the survey area so it is unknown if occurs on the western railway corridor. The population coincided with the mapping Vegetation Unit 3: SL Forb, which is considered to be a different associated vegetation, soil type or habitat from where the species has previously been recorded. A total of 31 plants were recorded within the survey area, with 10 plants (32% of counted plants) proposed to be impacted via the proposed works. A summary is presented in Table 9. The plants formed dense colonies and aggregated together, with often 2-3 plants growing in a clump.

The plants of *L. ?bossiaea* counted represent an edge survey, with only plants directly located within the survey area counted. It is likely that the population extends more broadly into the surrounding suitable habitat of the adjacent reserve within the vicinity, and the total population number is much higher. Further surveys may be required to quantify impact of proposed clearing of areas identified in the survey area, within the context of the total population.

The known distribution and records of *L. ?bossiaea* within the Australasian Virtual Herbarium (AVH, n.d.) and Florabase (WAH, 1998-) indicate that *L. ?bossiaea* has a total of 16 records, located in 200km north-south and 400km east-west distribution. It has been recorded within the Local Government Areas of Esperance, and IBRA regions of Esperance Plains and Mallee. See Figure 21 for the species known distribution.

Figure 9: Scan of specimen of *Leucopogon ?bossiaea* within the Survey Area.



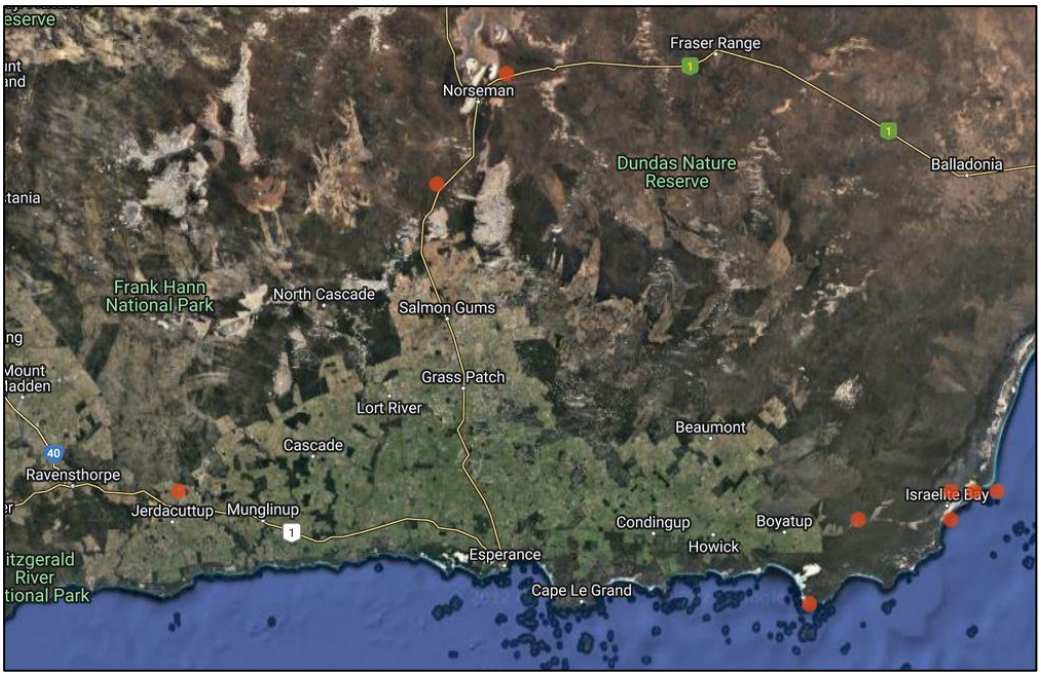


Figure 10: Regional distribution of *Leucopogon ?bossiaea* (WAH, 1998 - ; AVH, n.d.).

***Kunzea salina*, P3**

A new population of *Kunzea salina* (P3) was detected within the survey area, after being identified as 'Likely' to occur in the 10 km desktop analysis. Rationale behind assessment due to nearby records and suitable soil type and habitat present, of salt lake peripheries in low shrubland margins and winter wet lowlands with grey sands (Figure 11; Table 10, Appendix B). It was detected within Vegetation Uni 3: SL Forb, which is consistent with the known habitat of the species. Due to being a new population recorded, a specimen was collected and submitted to the WA Herbarium for verification of identification (KW181, Accession 9281, not retained by WA Herbarium; Hislop, 2022). The population of *K. salina* was detected at approximately 730 m south of the Degrussa Road railway crossing. Only the eastern railway corridor was included within the survey area so it is unknown if occurs on the western railway corridor. A total of 36 plants were recorded within the survey area, and a proposed 8 (22%) plants to be impacted. A summary is provided in Table 9.

The plants of *K. salina* counted represent an edge survey, with only plants directly located within the survey area counted. It is likely that the population extends more broadly into the surrounding suitable habitat of the adjacent reserve within the vicinity, and the total population number is much higher. Further surveys may be required to quantify impact of proposed clearing of areas identified in the survey area, within the context of the total population.

The known distribution and records of *K. salina* within the Australasian Virtual Herbarium (AVH, n.d.) and Florabase (WAH, 1998 -) indicate that *K. salina* has a total of 22 records, located in 60km north-south and 80km east-west distribution. It has been recorded within the Local Government Areas of Esperance, and IBRA regions of Esperance Plains and Mallee. See Figure 12.

Figure 11: Photos of *Kunzea salina* within the Survey Area.

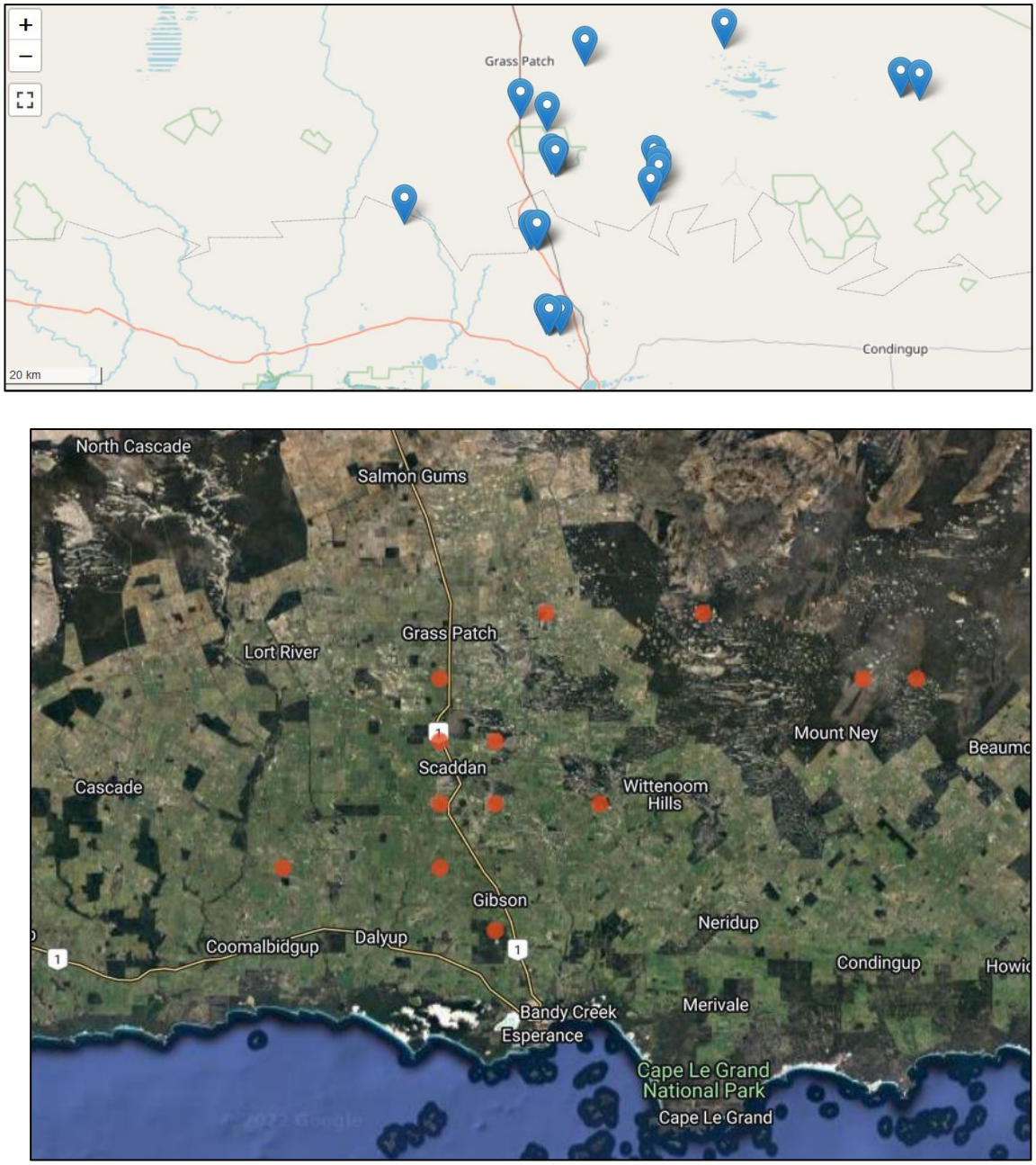


Figure 12: Regional distribution of *Kunzea salina* (AVH, n.d.; WAH, 1998-).

5.6. Threatened and Priority Ecological Communities

One Threatened (TEC) and Priority (PEC) Ecological Community was identified as 'Likely' to occur in the 30 km desktop assessment, 'Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia (Kwongkan)' (Table 11, Appendix B; Section 4.2). Whilst all vegetation units present contained Proteaceous species, none were present at high enough density's to be considered as possible TEC / PEC Kwongkan. Therefore, no TEC or PEC's were assessed to be present within the survey area.

6. Fauna Survey Results

6.1. Basic Fauna Survey

A description of the four vegetation units identified during the survey is given in Section 5.2, which correlate with fauna habitat types (refer to Figure 8 in Section 5).

During the survey, fauna were observed either directly (sighted) or indirectly via calls, or signs of presence such as tracks, runnels, scats, diggings, bones, feeding remains or tree scratching. A total of 21 taxa were recorded; eight birds, eight invertebrates, four mammals, one reptile. Refer to full fauna species list in Table 20 in Appendix D. Of these 21 species, quenda (*Isoodon fusciventer*, P4) was observed within the survey area. No other Threatened or Priority listed species were observed, however potentially suitable habitat was identified for an additional six species. All of these six species are considered as 'Possible' to occur in the survey area, including Carnaby's Cockatoo (*Calyptorhynchus latirostris*, EN), fork-tailed swift (*Apus pacificus*, MI), letter winged kite (*Elanus scriptus*, P4), western mouse (*Pseudomys occidentalis*, P4), heath mouse (*Pseudomys shortridgei*, VU) and western brush wallaby (*Notamacropus irma,* P4).

Vegetation unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine and Nuyflo SL) and vegetation unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL) provides suitable habitat for quenda, which was detected in the north of the survey area, as evidenced through the presence of isolated diggings and suitably sized runnels (Figure 13a, b & c and 15a&b). The relatively high occurrence of rabbit (*Oryctolagus cuniculus*) activity suggests that the runnel network is primarily being utilised by rabbits and that, where present, quenda are likely to be transient. There is suitable habitat for this species outside of the survey area within remnant vegetation on private property to the east and a linear corridor that runs parallel with the survey area. This linear corridor ultimately connects to surrounding vegetation to the north and south.

Vegetation unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine and Nuyflo SL) also provides low quality habitat for the heath mouse (VU), western mouse (P4), and western brush wallaby (P4), as well as low-quality foraging habitat for Carnaby's Cockatoo. Refer to Figure 14 for images of suitable habitat for these species. No evidence of these species was detected within the survey area. Refer to section 6.2 for detailed foraging habitat assessment for Carnaby's Cockatoo.

Marginally suitable shelter and feeding habitat is also present for the western brush wallaby in vegetation unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL), and for the fork-tailed swift (MI) and letter-winged kite (P4) throughout the entire survey area. No evidence of these species was detected.

High levels of activity from the introduced fox (*Vulpes vulpes*) and rabbit were observed throughout the survey area, as evidenced from diggings / scrapes, scats, tracks, and rabbit warrens (Figure 13 and 15). It was noted that fox activity present within the survey area was from both mature and juvenile individuals, suggesting there is an active den nearby. The high levels of activity for these two species is likely to be a limiting factor for the occupancy of habitat by native fauna, especially small ground dwelling mammals, as a result of competition and predation.

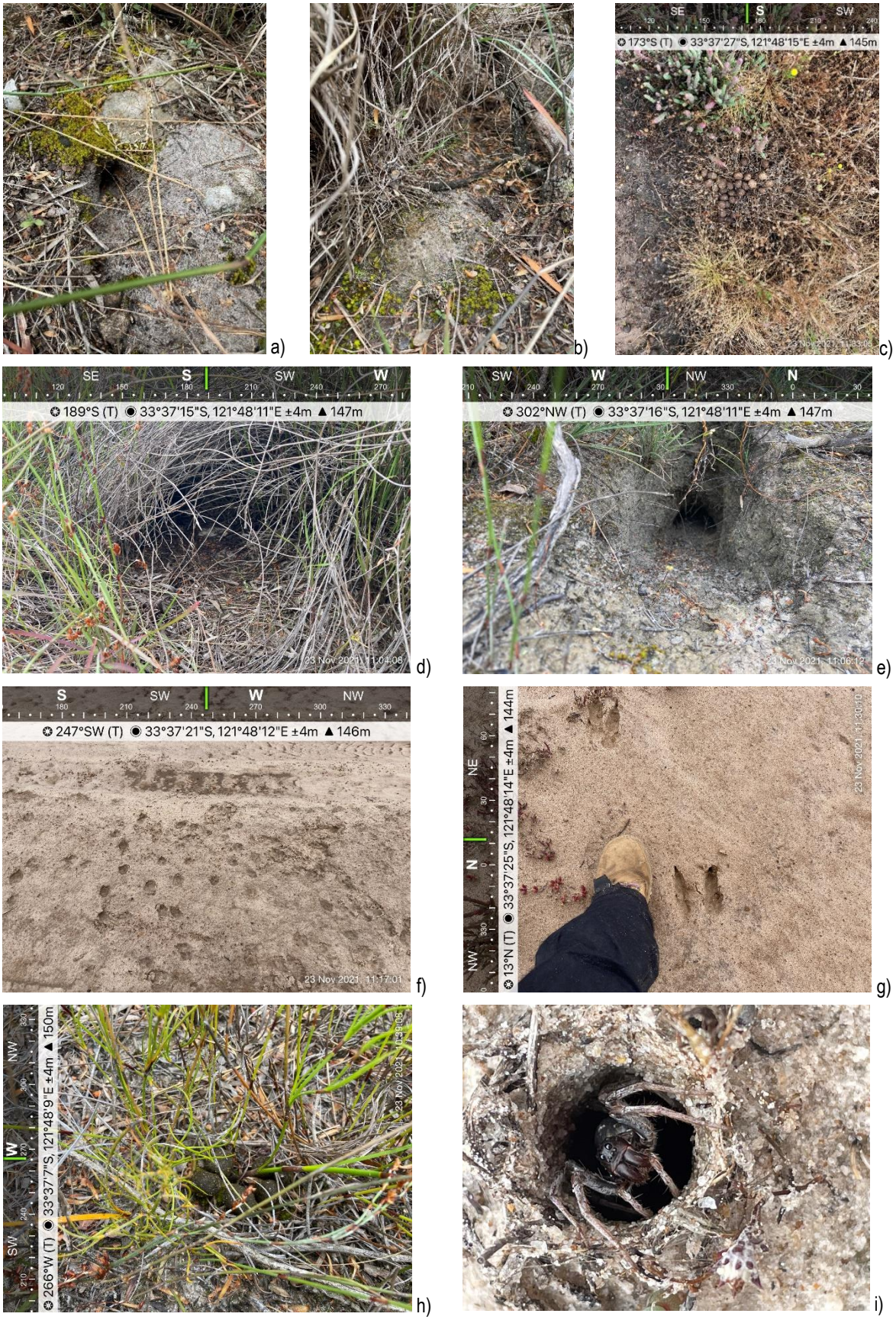


Figure 13: Photographs of evidence of fauna presence within the survey area.
a) and b) quenda digging and runnel; c) rabbit scats; d) rabbit / quenda sized runnel; e) rabbit warren entrance; f) fox prints (juvenile); g) and h) kangaroo print and scat; i) *Hogna crispipes* (wolf spider).

Figure 14: Photographs of suitable habitat for fauna within the survey area.
a) to c) vegetation present within vegetation unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine and Nuyflo SL) providing habitat for quenda, low quality foraging habitat for Carnaby's Cockatoo, marginal habitat for western and heath mouse and day time refuge and hunting habitat for letter winged kite and fork tailed swift; d) vegetation unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL) providing habitat for quenda and potential hunting habitat for letter winged kite and fork tailed swift; e) and f) vegetation unit 3 Salt Lake Forbland and Grassland (SL FLGL) providing potential hunting habitat for letter winged kite and fork tailed swift.

6.2. Targeted Black Cockatoo Assessment

6.2.1. Breeding Habitat

No significant trees containing hollows suitable for use by Carnaby Cockatoo for breeding were observed within the survey area.

6.2.2. Foraging and Roosting Habitat

Carnaby's Cockatoo feed predominately on native shrubland, Kwongkan heathland and woodland dominated by proteaceous plant species such as *Banksia*, *Hakea*, and *Grevillea*, as well as in eucalypt woodlands and forest that contain food plants (DSEWPaC, 2012). There is low-quality foraging habitat present within vegetation unit 1: *Lambertia inermis* and Nu*ytsia floribunda* Shrubland (Lamine and Nuyflo SL)], and vegetation unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL). No signs of foraging were observed suggesting the site is not a frequently visited / favoured feeding area.

Overall, the survey area contains low quality foraging habitat due to the low diversity and overall low quantity of feed species available. The potential foraging habitat available for Carnaby's Cockatoos equates to approximately 0.64 ha which is 86.4% of mapped vegetation identified within the survey area.

No signs of roosting (accumulated scats or feathers) were observed within the survey area, and the strip of pine trees present is unlikely to be utilised as roosting habitat as Carnaby's Cockatoo prefer to roost within or on the edge of forest in large groups (DSEWPaC, 2012).

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Figure 15A: Fauna & Fauna Habitat Observed

	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	22/06/2022

Legend

- Survey Area
- Cadastre
- 2m Contours

Vegetation Units

- 1: Lamine and Nuyflo SL
- 2: Hakcin Melcut ShL and Hyphum SeL
- 3: SL Forb
- Cleared

Fauna Habitat

- Amphibian Burrow
- Rabbit pad
- Runnel
- Carnaby's Cockatoo Foraging Habitat - Marginal / Low Quality

Fauna Observed

- *Anthochaera carunculata*
- *Corvus coronoides*
- *Isoodon fusciventer*, P4
- *Macropus fuliginosus*
- *Manorina flavigula*
- *Myiagra inquieta*
- *Oryctolagus cuniculus*
- *Phylidonyris novaehollandiae*
- *Tiliqua rugosa*

Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

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Scale
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Site 8 - Degrussa Road
Gibson, WA 6448

Figure 15B: Fauna & Fauna Habitat Observed

	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	22/06/2022

Legend

- Survey Area
- Cadastre
- 2m Contours

Vegetation Units

- 1: Lamine and Nuyflo SL
- 2: Hakcin Melcut ShL and Hyphum SeL
- 3: SL Forb
- Cleared

Fauna Habitat

- Palisade burrow
- Rabbit pad
- Rabbit warren
- Runnel
- Carnaby's Cockatoo Foraging Habitat - Marginal / Low Quality

Fauna Observed

- *Macropus fuliginosus*
- *Oryctolagus cuniculus*
- *Tiliqua rugosa*
- *Vulpes vulpes*

Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

7. Discussion

7.1. Vegetation, Threatened and Priority Flora and Ecological Communities

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 subject site, as well as Threatened / Priority ecological communities, and to provide an assessment on vegetation types and their general condition. A significant limitation was present for the detection of a single Orchid species identified as 'Possible' to occur within the survey area that was not flowering at the time of the survey, P3 *Pterostylis faceta.* Numerous other minor limitations were present for the detection of species identified in the Likelihood of Occurrence, relating to species that were small, obscure / cryptic shrubs not flowering at the time of survey, flowering on the periphery of the survey period or are poorly understood and studied.

Three vegetation units were recorded during the survey, namely Vegetation Unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland (Lamine Nuyflo SL), Vegetation Unit 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL) and Vegetation Unit 3: Salt Lake Forbland and Grassland (SL FLGL). These vegetation units broadly align with different habitat types, and are associated at a landscape level with changes in hydrology and soil type. Vegetation Unit 3: SL FLGL is associated with a drainage depression, forming a salt lake and considered to be riparian vegetation. The condition of the vegetation units ranged from 'Degraded' through to 'Excellent'. A higher level of degradation was observed closer to the railway and access tracks, observed through historical clearing and extensive weed invasion, forming a notable edge effect on the adjacent intact native vegetation within the railway corridor and extended reserve. It is recommended that rigorous biosecurity hygiene principles are applied during proposed operational works to ensure weeds and diseases are not spread within and external to the survey area.

A total of 106 flora species were recorded, comprising of 93 native species and 13 introduced / non-native species. No Weeds of National Significance (IPAC, 2017) or Declared Pests (BAM Act 2007) were present of the non-native species. Two species of priority conservation status were identified within the survey area, namely P2 *Leucopogon ?bossiaea* and P3 *Kunzea salina.* It is noted that specimen submitted to the WA Herbarium for verification of *L. ?bossiaea* was sterile and could not be definitively determined, and hence is marked with '?' prefix as an indication that there is still a level of ambiguity on this identification. Collection of a specimen with flowering material during the species' flowering season of May-July would resolve this taxonomic query. Both *L. ?bossiaea* and *K. salina* consisted of a new population and were located within Vegetation Unit 3: SL FLGL, associated with salt lake drainage depressions. *L. ?bossiaea* population also represents a significant range extension of 300 km from the nearest population in the east, within Cape Arid National Park. 31 plants of *L. ?bossiaea* was detected, with 10 plants proposed to be impacted (32% of known population). 36 plants of *K. salina* was detected, with 8 plants proposed to be impacted (22% of known population). It is noted that the local population has not been quantified, with suitable habitat extending further into adjacent native vegetation.

'Proteaceae Dominated Kwongkan Shrublands of the South-east Coastal Botanical Province of Western Australia' (Kwongkan) was the only Threatened (TEC)/ Priority (PEC) Ecological Community identified as 'Likely' to occur within the survey area. Whilst all vegetation units present contained Proteaceous species, none were present at high enough density's to be considered as possible TEC/PEC Kwongkan. Therefore, no TEC or PEC's were assessed to be present within the survey area.

7.2. Basic Fauna Survey and Significant Tree Survey

The aim of the basic fauna and targeted black cockatoo habitat survey was to assess and map the fauna habitat within the survey area, assess the likelihood of conservation significant fauna being present within the survey area and/or particular vegetation units, record actual presence of Threatened and Priority listed species, and undertake opportunistic inventory of fauna encountered whilst traversing the survey area on foot. The vegetation present within the survey area runs parallel to the railway line, and thus provides an ecological linkage within the broader landscape. However, the relatively small areas that are proposed to be cleared as part of this proposal would not be expected to significantly affect the ability of fauna to move between existing vegetated areas.

During the survey, a relatively low level of fauna diversity was detected with a total of 21 taxa recorded; including eight birds, eight invertebrates, four mammals, one reptile (Table 20, Appendix D). Quenda (P4) was the only listed species observed within the survey area. No other Threatened or Priority listed species were observed, however potentially suitable habitat was identified for an additional six species. Low quality habitat was identified for all of these species, including Carnaby's Cockatoo

(EN), fork-tailed swift (MI), letter-winged kite (P4), western mouse (P4), heath mouse (VU) and western brush wallaby (P4), and all are considered as 'Possible' to occur within the survey area.

The quenda prefers areas of dense heath and coastal scrub vegetation that is often swampy. Suitable habitat for this species was identified within vegetation unit 1 and vegetation unit 2. Vegetation unit 3 is unlikely to hold significant habitat value for quenda due to the more open and discontinuous understorey structure of the vegetation and the associated lack of protective cover from predators. Activity detected for this species in the northern portion of the survey area was relatively low and consisted of isolated diggings and runnels. It is likely that individuals are transient through the area or temporary visitors from adjoining areas outside of the survey area. The high level of fox activity observed within the survey area is likely to be a limiting factor for this species. The vegetation immediately adjacent to the survey area is of varying quality, and composition, but does provide a larger area of remnant vegetation and is likely to be more suitable for quenda. The removal of the vegetation within the survey area is unlikely to significantly affect this species given its relative mobility and the availability of alternative and higher quality habitat outside of the survey area.

The western and heath mouse both prefer habitats that are long unburnt, are floristically rich, and dense in nature. The survey area appears to be long unburnt with no evidence of recent fire observed. No murid sized runnels or mounds (expressions of underground tunnels) were observed within the survey area and the habitat present is of low-quality for these two species. Given they are both cryptic species and potential habitat is present, they have been assessed as "Possibly" occurring or moving through the survey area. The presence of rabbit and fox are likely to be limiting factors for these two species due to competition and predation. As for the quenda, the clearing of vegetation within the survey area is unlikely to significantly affect the ability of either species to move through the immediate landscape, if present.

No evidence for the presence of Carnaby's Cockatoo was observed during the survey. There is low quality foraging habitat present within vegetation unit 1and vegetation unit 2. Carnaby's Cockatoo feed predominately on Proteaceous species such as *Banksia*, *Hakea*, and *Grevillea* dominating shrublands, Kwongkan heathland and woodland, and Myrtaceous and other forage species in eucalypt woodlands and forests (DSEWPaC, 2012). Given the low diversity and overall low quantity of feed species available, the habitat is considered to be low-quality and is unlikely to provide significant foraging opportunities for the species. The lack of any foraging evidence (new or old) suggests that the area is not a favoured feeding site and is most likely to offer opportunistic foraging opportunities to transient individuals. The *EPBC Act 1999* referral guidelines for the three Threatened black cockatoo species stipulate that a proposal should be referred for assessment if more than 1 ha of high-quality habitat is to be removed. Given the habitat present is less than 1 ha and is not of high-quality it is unlikely that works at this location alone would need to be referred for assessment under the EPBC Act 1999. However, the cumulative total and potential impact across the entire Esperance Branch Line project should be taken into consideration.

Low quality habitat is present for western brush wallaby in vegetation unit 1and vegetation unit 2. No indicators of species presence were observed, however it remains likely that the wallaby is transient through the survey area. There is suitable vegetation outside of the survey area, and given the relative mobility of this species, the clearing of the vegetation within the survey area is unlikely to significantly affect the species, or its ability to move throughout the immediate landscape.

Low quality habitat is present for the fork-tailed swift and letter-winged kite throughout the survey area, with areas of native vegetation providing daytime refuge and hunting habitat. Proposed clearing is unlikely to detrimentally affect these species due to adjacent vegetation also providing potential habitat.

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9. Appendices

Appendix A – Maps

Appendix B – Conservation Significant Values Likelihood of Occurrence Analysis

Appendix C – Conservation Status Definitions and Condition Scale

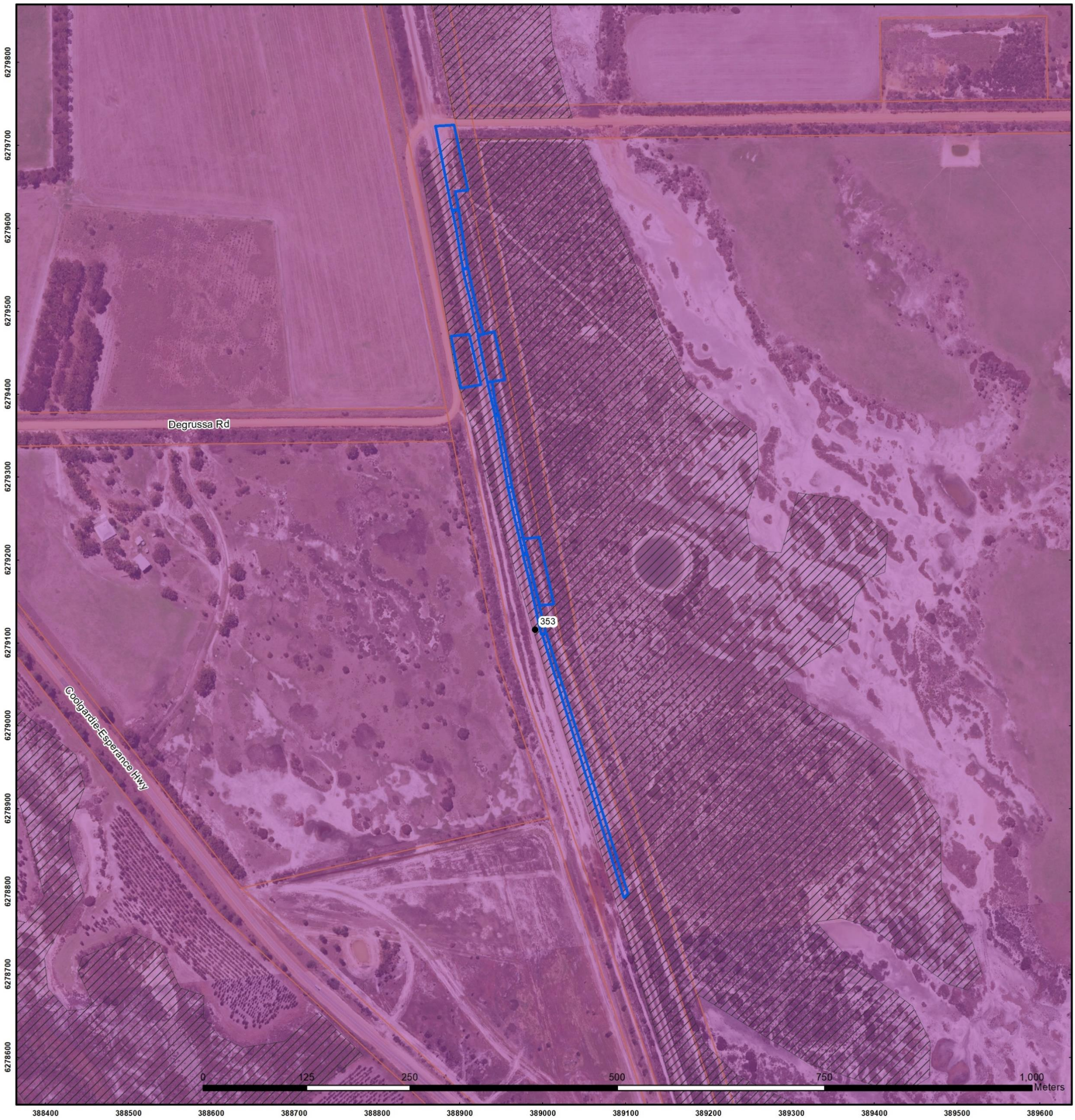
Appendix D – Species Lists and Relevé Data

Appendix E – Threatened and Priority Reporting Forms

Appendix F - NatureMap and EPBC Act PMST reports

Appendix A

Maps



Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
(08) 9848 1309

Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BIO DIVERSE SOLUTIONS

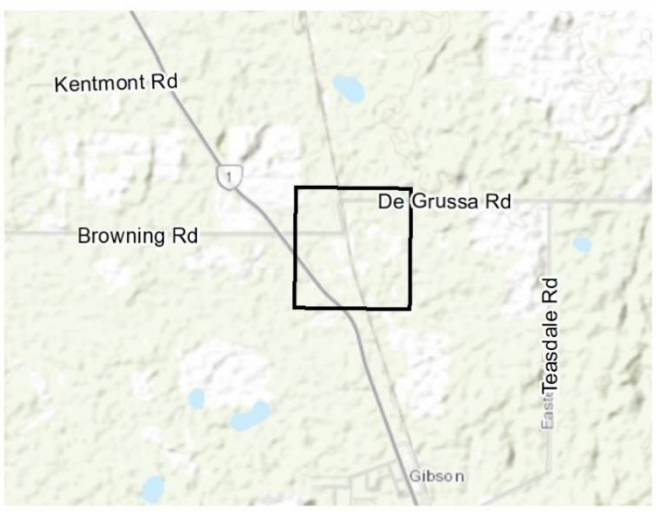
Scale
1:4,500 @ A3
GDA MGA 94 Zone 51

Legend

- Survey Area
- Rail Kilometer Points
- Native Vegetation Extent (DPIRD_005)

Pre European Vegetation (DPIRD_006)

- ESPERANCE_47



Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

CLIENT Arc Infrastructure
Line 51 (351.24 to 352.91 KM), North of Gibson
Site 8 - Degrussa Road
Gibson, WA 6448

Figure 16: Desktop Historical Vegetation

	QA Check	*Drawn by*
	MLH	**BMT**
STATUS **FINAL**	*FILE* **AI005-009**	*DATE* **9/06/2022**

Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
(08) 9848 1309

Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BIO DIVERSE SOLUTIONS

Scale
1:2,000 @ A3
GDA MGA 94 Zone 51

Legend

- Survey Area
- Cadastre
- Railway KM

Environmental Risk Assessment

- Green
- Red
- Yellow

Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

CLIENT Arc Infrastructure
Line 51 (351.24 to 352.91 KM), North of Gibson
Site 8 - Degrussa Road
Gibson, WA 6448

Figure 17A: Environmental Risk Assessment Maps

	QA Check	*Drawn by*
	MLH	**BMT**
STATUS **FINAL**	*FILE* **AI005-009**	*DATE* **9/06/2022**

Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
(08) 9848 1309

Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BIO DIVERSE SOLUTIONS

Scale
1:2,000 @ A3
GDA MGA 94 Zone 51

CLIENT Arc Infrastructure
Line 51 (351.24 to 352.91 KM), North of Gibson
Site 8 - Degrussa Road
Gibson, WA 6448

Figure 17B: Environmental Risk Assessment Maps

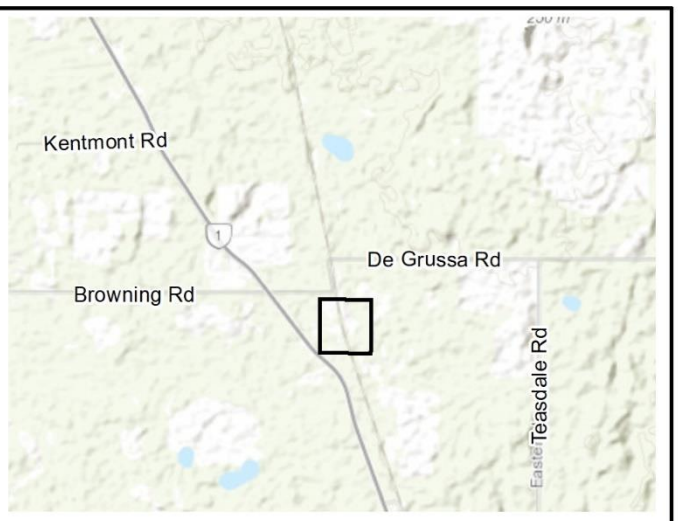
	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	9/06/2022

Legend

- Survey Area
- Cadastre
- Railway KM

Environmental Risk Assessment

- Green
- Red
- Yellow



Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

Albany Office:
29 Hercules Crescent
Albany, WA 6330
(08) 9842 1575

Denmark Office:
7/40 South Coast Highway
Denmark, WA 6333
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Esperance Office:
2A/113 Dempster Street
Esperance, WA 6450
(08) 9072 1382

BIO DIVERSE SOLUTIONS

Scale
1:2,000 @ A3
GDA MGA 94 Zone 51

CLIENT Arc Infrastructure
Line 51 (351.24 to 352.91 KM), North of Gibson
Site 8 - Degrussa Road
Gibson, WA 6448

Figure 18A: Survey Effort

	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	9/06/2022

Legend

- Survey Area
- Rail Kilometer Points
- Cadastre

Survey Effort

- Terrestrial Flora and Vegetation
- Terrestrial Vertebrate Fauna

Overview Map Scale 1:100,000

Data Sources
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GDA MGA 94 Zone 51

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Gibson, WA 6448

Figure 18B: Survey Effort

	QA Check	Drawn by
	MLH	BMT
STATUS	FILE	DATE
FINAL	AI005-009	9/06/2022

Legend

- Survey Area
- Rail Kilometer Points
- Cadastre

Survey Effort

- Terrestrial Flora and Vegetation
- Terrestrial Vertebrate Fauna

Overview Map Scale 1:100,000

Data Sources
Aerial Imagery: WA Now, Landgate Subscription Imagery
Cadastre, Relief Contours and Roads: Landgate 2021
IRIS Road Network: Main Roads Western Australia 2017
Overview Map: World Topographic map service, ESRI

Appendix B

Conservation Significant Values Likelihood of Occurrence Analysis

Table 10: Criteria for assessing the likelihood of occurrence of Threatened or Priority flora and fauna 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	The species has been recorded locally through database searches. However, 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. Species is unlikely to occur due to the site lacking critical habitat, only containing marginally suitable habitat, and/or the survey area is considerably degraded. The species has not been recorded in the survey area despite adequate survey effort.
Highly Unlikely	No suitable habitat within the survey area or the survey area is outside the species' natural distribution.

Table 1: Potential conservation significant flora located within 10 (NatureMap and PMST) to 30 (DBCA) km of the survey area and likelihood of occurrence analysis (post survey).
NB - Species are sorted by likelihood of presence. Numerous resources specific to Threatened and Priority flora listed below were used in the likelihood assessment (Archer, 2016; Brophy, 2013; Euclid, n.d.; Hislop, 2009; Hislop, 2014; JSTOR, 2000 - ; Maslin, 2018; WAH, 1998 - ; WANOSCG, 1974 - ; Wheeler, 2004).

Family	Species	Vernacular	Status (WA)	Description- Species	Description - Habitat	Peak Flowering period	Pre-Survey Likelihood of Occurrence Analysis	Post-Survey Likelihood of Occurrence Flora Survey Outcome
Myrtaceae	*Kunzea salina*		P3	Low shrub <1 m. Very small leaves. Spreading shrub. Flowers white.	Adjacent to Salt Lake periphery in low shrub margin. Winter wet lowlands with grey/white and sands and clay. Saline water bodies. Low heathland.	Dec to Jan	Likely	**Detected**
Orchidaceae	*Pterostylis faceta*	Bird Orchid	P3	Annual herb. Flowers green.	Mallee dominated shrubland, dense low heath. Mixed soil types.	Aug to Sept	Possible	Possible - survey conducted during non-flowering season. Significant limitation.
Loganiaceae	*Adelphacme minima*		P3	Annual.	Small post fire.	Sept -Oct; Nov-Jan	Possible	Possible - significant limitations due to being a fire ephemeral species.
Fabroniaceae	*Fabronia hampeana*		P2	Moss species. Silver green species.	Often growing on Macrozamia species. Mixed woodlands.		Outside of Expertise of Surveyors.	Unlikely - no Macrozamia species present within survey area, and therefore lack of suitable habitat.
Myrtaceae	*Darwinia* sp. Gibson (R.D. Royce 3569)		P1	Compact shrub to 0.4 m high. Flowers yellow/orange. Small succulent looking shrub.	Grey-brown sandy clay and white sand on margins of salt lakes and road verges. Common on sandy rises immediately around normally dry lakes.	Jun to July	Likely	Unlikely - not detected.
Araliaceae	*Hydrocotyle tuberculata*	Bumpy fruited Pennywort	P2	Small herb, 1-3 cm high, 2-4 cm wide, reddish green colour. Simple umbel flowers.	Low shrubs and Samphire with Disphyma and *Wilsonia humilis*. Full sun area.	Oct	Likely	Unlikely - not detected.
Dilleniaceae	*Hibbertia turleyana*		P2	Procumbent shrub to 0.2 m high, to 0.35 m wide. Flowers yellow.	Dry white sand. Flats, seasonally wet areas.	August	Likely	Unlikely - not detected.
Ericaceae	*Brachyloma mogin*		P3	Compact shrub, 0.4 m high. Flowers red/pink/white.	Grey clayey sand. Swamp flat. Open woodland in areas that become inundated in winter. Field observations occur on sand banks surrounding salt lakes.	Jun	Likely	Unlikely - not detected. Ericaceae species not easily identifiable sent to WA Herbarium for confirmation.
Ericaceae	*Conostephium marchantiorum*		P3	Erect, much branched shrub. 0.4-1.8 m high. Red, purple, brown and yellow flower. Bright green and hairy leaves.	White/grey or light yellow sand. Plains on edges of salt lakes, plains, creeklines. Open Mallee and scrub heath communities.	Mar or Jul or Nov	Likely	Unlikely - not detected.
Goodeniaceae	*Dampiera sericantha*		P3	Erect, slender perennial, herb, 0.05-0.3 (-0.6) m high, stems with blunt angles. Flowers blue.	Sand, sometimes with gravel. Plains. Associated with disturbance.	May or Aug to Dec.	Likely	Unlikely - not detected.
Myrtaceae	*Eucalyptus foliosa*		P3	Mallee to 4 m high, bark smooth.	Grey/white sandy clay. Flats adjacent to salt lake. Distribution between Grass Patch and Gibson.		Likely	Unlikely - not detected.
Polygalaceae	*Comesperma calcicola*		P3	Soft perennial herb, to 0.3 m high. Flowers pink.	Calcareous or semi-saline clay loams, limestone. Areas around saline water.	Oct to Dec or Jan	Likely	Unlikely - not detected.
Myrtaceae	*Melaleuca fissurata*		P4	Shrub, 0.5-2 (4) m. Flowers white/yellow.	White/grey sand or aeolian loamy sand, well drained. Margins of salt lakes, samphire flats, drainage lines, and salt pans. Open shrub Mallee and tall Shrubs.	Jul to Aug	Likely	Unlikely - not detected.
Proteaceae	*Grevillea baxteri*	Cape Arid Grevillea	P4	Erect to spreading shrub. 0.8-4 m high. Large and bushy form. Toothbrush grevillea form, flower colour yellow-orange-brown-red.	Sand, sandplains, often acidic soils. Wide associated vegetation type; scrubby heathland. Often associated with gravel or overlying heavier soils.	Feb or May to Jul or Sept to Dec	Likely	Unlikely - not detected.
Scrophulariaceae	*Eremophila glabra subsp. Scaddan (C. Turley* s.n. 10/11/2005)		T - Cr En	Large shrub, flowers green.	Associated with habitat for salt lakes in the Scaddan/Esperance region.	August to November	Possible	Unlikely - not detected.
Euphorbiaceae	*Beyeria physaphylla*		P1	Shrub, to 0.5 m high. Scraggly. Flowers axial, separate male and female flowers.	Restricted to Scaddan. Grows in Mallee Eucalypt with Melaleuca, Hakea and Leptospermum sp. On grey sandy soil on edge of salt lakes.	Sept	Possible - distribution tends to be further north but suitable habitat present.	Unlikely - not detected.

Table 11 continued.

Family	Species	Vernacular	Status (WA)	Description- Species	Description - Habitat	Peak Flowering period	Pre-Survey Likelihood of Occurrence Analysis	Post-Survey Likelihood of Occurrence Flora Survey Outcome
Myrtaceae	*Cyathostemon* sp. Esperance (A. Fairall 2431)		P1	Shrub, 2-4 m tall. Leaves pointed. Flowers white; free part of stamens longer than fused part.	Shrubland. Salt Lake Margin. Sandy gravel.	Sept - Oct	Possible - poorly understood.	Unlikely - not detected.
Cyperaceae	*Schoenus* sp. Grey Rhizome (K.L. Wilson 2922)		P1	Grass-like or herb (sedge), 0.06-0.08 m high.	Sandy clay, sand. Scattered subcoastal (<30 km of coastline) from Cape Arid to Albany.		Possible	Unlikely - not detected.
Ericaceae	*Leucopogon remotus*		P1	Woody shrub of 1 m high x 8 m wide.	Associated with mixed woodlands and variety of soil types. Sand or sandy loam. Slopes, flats or edges of plains near salt lakes.	Jul	Possible	Unlikely - not detected. Ericaceae species not easily identifiable sent to WA Herbarium for confirmation.
Goodeniaceae	*Goodenia turleyae*		P1	Annual herb, 0.03-0.04 m high. White or grey-brown sand over clay, yellow-brown gravelly clay and granite.	Moist sheltered areas near salt lakes.	Sept to Nov	Possible	Unlikely - not detected.
Myrtaceae	*Baeckea* sp. Gibson (K.R. Newbey 11084)		P1	Spreading, erect, mid-dense shrub, to 2 m high. Flowers pink.	Brown sandy loam over laterite & granite. Moderately exposed hills, cleared bushland.	Jun or Nov to Dec.	Possible	Unlikely - not detected. Similar non-threatened species *Austrobaeckea latens* determined due to size of leaf and lack of glands/pustules on leaves.
Araliaceae	*Hydrocotyle asterocarpa*	Starry Pennywort	P2	Small annual herb, trilobed and toothed leaves. Bright green with purple stem.	Sandy loam soils on margins of inland salt lakes, in low open shrubland often in sheltered positions of Tecticornia and Frankenia sp. Common on salt lakes and winter-wet flats between Salmon Gums and Scaddan.	Winter annual - Sept to Nov	Possible	Unlikely - not detected.
Asparagaceae	*Thysanotus brachiatus*		P2	Rhizomatous, leafless perennial, herb, to 0.3 m high. Flowers purple.	Grey sand.	Nov - dec	Possible	Unlikely - not detected.
Polygalaceae	*Comesperma griffinii*		P2	Annual or perennial herb to 0.15 m high. Flowers white.	Yellow or grey sands, plains. Very wide and scattered distribution from Geraldton to Esperance.	Oct	Possible	Unlikely - not detected.
Chenopodiaceae	*Tecticornia indefessa*		P2	Prostrate, perennial shrub, 0.05-0.15 m high.	White to brown-grey sand. Near the edges of salt lakes.		Possible	Unlikely - not detected. Tecticornia species present identified to be non-threatened common species.
Goodeniaceae	*Goodenia exigua*		P2	Perennial, prostrate, compact and rhizomatous shrub. 3 cm high x 4 cm wide. Yellow flowers. Perennial herb, ground hugging, flowers white with purplish brown markings.	Edge of salt lakes or seasonally inundated plains. Grey clay. Occurs in the Stirling Ranges and at Moirs Inlet, W.A. Grows in saline clays.	Jan, Oct to Nov	Possible	Unlikely - not detected.
Rhamnaceae	*Spyridium mucronatum* subsp. *multiflorum*		P2	Erect or spreading shrub, 0.15-0.6 m high. Flowers white-cream-yellow.	Gravelly loam or clay.	Oct to Dec or Jan.	Possible	Unlikely - not detected.
Myrtaceae	*Astartea reticulata*		P3	Single-stemmed or basally branched shrub 0.7–1.5 m tall. Flowers pale pink or white.	Occurs in winter-wet depressions or near watercourses along the coastal plain, commonly associated with the paperbark species *Melaleuca cuticularis*.	late November to January.	Possible	Unlikely - not detected.
Restionaceae	*Desmocladus biformis*		P3	Rhizomatous, densely tufted perennial, herb (sedge-like), 0.1-0.2 m high.	Sand, sandy clay, lateritic soils. Dry sites.	Sep to Oct.	Possible	Unlikely - not detected.
Anarthriaceae	*Hopkinsia adscendens*		P3	Rhizomatous, perennial, herb to 0.4 m high.	Sand. Dry or seasonally damp habitats along streams.	Oct	Possible	Unlikely - not detected.
Brassicaceae	*Lepidium fasciculatum*	Bundled Peppercress	P3	Erect annual, herb, (0.1-)0.3-0.6 m high.	Widespread but scattered. Across southern Australia.	Flowers mostly spring.	Possible	Unlikely - not detected.
Ericaceae	*Styphelia rotundifolia*		P3	Erect, compact shrub to 1.5 m high x 1.5 m wide. Flowers cream and erect.	Mixed heath and shrublands. Mostly recorded in coastal areas.	April	Possible	Unlikely - not detected. Ericaceae species not easily identifiable sent to WA Herbarium for confirmation.

Table 11 continued.

Family	Species	Vernacular	Status (WA)	Description- Species	Description - Habitat	Peak Flowering period	Pre-Survey Likelihood of Occurrence Analysis	Post-Survey Likelihood of Occurrence Flora Survey Outcome
Fabaceae	*Acacia euthyphylla*		P3	Shrub, 0.7-2 m high. Flowers yellow.	Grey/white sand, clay loam. Margins of salt lakes and marshes. Seasonal swamps in tall Myrtaceous shrubland and Mallee Woodland.	Aug to Sept	Possible	Unlikely - not detected.
Fabaceae	*Daviesia pauciflora*		P3	Diffuse, many stemmed, sprawling shrub. 0.3-0.8 m high. Lacking formal leaves. Flowers Yellow and red.	White or grey sand over laterite or limestone. Flats. Associated with deep sands, often with *Banksia speciosa* or Kwongkan shrublands.	Oct to Dec or Jan	Possible	Unlikely - not detected.
Goodeniaceae	*Dampiera triloba*		P3	Erect, perennial herb or shrub to 0.5 m high. Flowers blue.	Lowlands or semi-wet areas, slopes on edge of lakes.	Aug to Dec	Possible	Unlikely - not detected.
Myrtaceae	*Melaleuca dempta*		P3	Shrub, 0.2-0.6 m high. White cream flowers. Rounder and more circular leaves to similar non-threatened *Melaleuca calycina.*	Shrubland and Mallee. White clayey soils. Sometimes recorded on salt lakes.	Aug	Possible	Unlikely - not detected.
Proteaceae	*Isopogon alcicornis*	Elkhorn Coneflower	P3	Low, lignotuberous shrub, 0.3-0.5 m high to 0.6 m wide. Flowers yellow, white, pink. Distinctive shaped leaves forming cluster. No distinct stems.	Sandy soils, skeletal loam, sandhills, sandplains.	Oct to Dec or Feb	Possible	Unlikely - not detected.
Proteaceae	*Persoonia scabra*		P3	Clumped, spreading shrub. Flowers yellow.	Gravelly loam, sandy soils. Slopes. Mixed soil types. Eucalyptus, Allocasuarina or Agonis woodlands.	Sep to Nov.	Possible	Unlikely - not detected.
Frankeniaceae	*Frankenia glomerata*		P4	Prostrate shrub. Flowers pink-white.	White sand.	Nov	Possible	Unlikely - not detected. Similar non-threatened species *Frankenia sessilis* var *sessilis* confirmed due to flower structure.
Proteaceae	*Lambertia echinata* subsp. *echinata*	Prickly Honeysuckle	T-En	Prickly, much branched, non-lignotuberous shrub. 1.5 m high. Flower orange, red to pink. Leaves with tridentate shape.	Gravely sandy loam, brown sandy loam, white grey sand, granite, laterite. Entirely restricted or known from Cape Le Grand National Park.	Sept to Oct	Unlikely	Unlikely - lack of suitable habitat.
Haemodoraceae	*Anigozanthos bicolor* subsp. *minor*	Little Kangaroo Paw, Two-coloured Kangaroo Paw, Small Two-colour Kangaroo Paw	T - En	Rhizomatous, perennial, herb, 0.05-0.2 m high. Flowers green & red.	White Sand. Well-watered or winter-wet sites. Subcoastal freshwater sumps, off granite. Moist sandy soils in heath communities dominated by Thryptomene, Borya sp, Leptospermum sp. And *Diuris laxiflora* and in shallow soils over granite.	Aug to Oct	Unlikely	Unlikely - lack of suitable habitat.
Haemodoraceae	*Conostylis lepidospermoides*	Sedge Conostylis	T - En	Rhizomatous, tufted perennial, grass-like or herb, 0.17-0.36 m high. Flowers yellow.	Grey or yellow-brown sand over laterite.	Sep to Oct	Unlikely	Unlikely - lack of suitable habitat.
Myrtaceae	*Eucalyptus merrickiae*	Goblet Mallee	T - Vu	Mallee, 2-4(6) m high. Bark rough and flaky. Distinguished by extremely red bud caps. Silver sheen to leaves.	Sandy clay, grey sand. Associated strongly with salt lakes in the Scaddan to Salmon Gums area, Esperance.	Aug to Nov	Unlikely - salt lakes present within survey area not characteristic of suitable habitat of *E. merrickiae.*	Unlikely - lack of suitable habitat.
Ericaceae	*Leucopogon* sp. Lake Magenta (K.R. Newbey 3387)		P1		Uplands; sand or sand over laterite.	Nov	Unlikely	Unlikely - lack of suitable habitat.
Goodeniaceae	*Scaevola archeriana*		P1	Erect, resprouting, multi-stemmed, clonal herb, to 0.45 m high.	Sandy and sandy-clay loam soils. Sandplains, road verges.	Jan- Feb	Unlikely	Unlikely - lack of suitable habitat.
Thymelaeaceae	*Pimelea pelinos*		P1	Erect, scraggly shrub, 0.3-0.6 m high. Flowers cream.	Sandy clay, salt lakes.	Jun to Jul	Unlikely	Unlikely - lack of suitable habitat.
Myrtaceae	*Eucalyptus misella*		P1	Mallee, 1-3 m high. Bark smooth. Flowers cream.	White, yellow or grey sand. Low lying sandplain.	Nov	Unlikely	Unlikely - lack of suitable habitat.
Haloragaceae	*Myriophyllum muelleri*	*Hooded Water Milfoil*	P1	Slender, aquatic annual, herb. Stems to 0.6 m long. Flowers red.	Lagoons. Two records - Nambung River near Gingin and pond off South Coast Hwy.		Unlikely - no standing water present within survey area.	Unlikely - lack of suitable habitat.

Table 11 continued.

Family	Species	Vernacular	Status (WA)	Description- Species	Description - Habitat	Peak Flowering period	Pre-Survey Likelihood of Occurrence Analysis	Post-Survey Likelihood of Occurrence Flora Survey Outcome
Ericaceae	*Astroloma* sp. Grass Patch (A.J.G. Wilson 110)		P2	Multi-stemmed, domed shrub. 0.2-0.4 m high. Red flowers. Flowers facing upwards, very skinny leaves.	White/grey sand, edge of salt lake in Melaleuca thickets.	June to August	Unlikely - salt lakes present within survey area not characteristic of suitable habitat of *A.* sp. Grass Patch (A.J.G Wilson 110).	Unlikely - lack of suitable habitat.
Ericaceae	*Leucopogon corymbiformis*		P2	Open or erect low shrub with white flowers. <0.5 m high.	Associated with *Banksia speciosa* woodland and deep white sands.	Aug to Sept	Unlikely	Unlikely - lack of suitable habitat.
Frankeniaceae	*Frankenia brachyphylla*	Short Leaved Frankenia	P2	Small, decumbent shrub. Flower white/pink.	Salt Lake margins.	Nov	Unlikely	Unlikely - lack of suitable habitat.
Iridaceae	*Patersonia inaequalis*	Unequal Bract Patersonia	P2	Rhizomatous, tufted perennial, herb, 0.2-0.4 m high. Flowers white.	Sandy clay, lateritic or granitic sand.	Aug to Oct.	Unlikely	Unlikely – lack of suitable habitat.
Myrtaceae	*Eucalyptus sweedmaniana*	Cape Arid Four Winged Mallee	P2	Prostrate Mallee, smooth silver grey bark, large winged and pink fruit. Flowers red to pink.	Restricted to east of Esperance in coastal habitat.	Sporadic	Unlikely	Unlikely - lack of suitable habitat.
Orchidaceae	*Paracaleana parvula*		P2	Perennial, herb to 0.18 m high. Flowers yellow/green.	Deep white sands, plains. Distribution clustered towards Cape Arid and only single record in Esperance townsite vicinity.		Unlikely	Unlikely – lack of suitable habitat.
Araliaceae	*Trachymene anisocarpa* var. *trichocarpa*	Native Parsnip	P3	Upright, spreading annual, herb, 0.3-1.5 m high. Peduncles up to 140 mm long. Distinguished by hairlike bristles on the fruits. Flowers blue-white.	Flat, dry, brown sand loam. Potentially on granite. Eucalyptus woodland with mixed shrub understorey. Associated species of Acacia, *Melaleuca uncinata*, Pimelea, Dodonaea and Cassytha sp. Often associated with recently burnt or disturbed.	Oct to Nov.	Unlikely	Unlikely - lack of suitable habitat.
Poaceae	*Austrostipa mundula*		P3	Perennial caespitose grass to 0.5 m.	Sandy to clay loams and limestone in grassland, heathland, shrubland and mallee.		Unlikely	Unlikely – lack of suitable habitat.
Lamiaceae	*Pityrodia chrysocalyx*		P3	Erect, branched shrub, 0.3-0.75(-1) m high. Flowers white.	Sandy soils.	Aug to Oct.	Unlikely	Unlikely - lack of suitable habitat.
Malvaceae	*Commersonia rotundifolia*		P3	Shrub to 1.5 m high. Semi-erect. Cream flowers, white calyx with green base. Petals cream, ligule on green base, staminodes white. Dull green leaves.	Open Eucalyptus woodland and shrubs, with *Eucalyptus platypus* or other Mallee or Mallet species. Well drained grey brown loams.		Unlikely	Unlikely - lack of suitable habitat.
Goodeniaceae	*Goodenia laevis subsp. Laevis*		P3	Erect, woody shrub or subshrub. 0.1-0.25 m high. Largest leaves 15-25 x 1-3 mm, entire. Flowers yellow.	Brown sandy loam or clay, underlying geology of limestone, Gypsum content or laterite. On flats or plains. Often associated strongly with disturbance and road verges. Often associated with Acacia, *Bossiaea leptacantha, Eucalyptus dissimulata* and *Grevillea huegelii.*	Aug to Dec	Unlikely	Unlikely – lack of suitable habitat.
Fabaceae	*Bossiaea flexuosa*		P3	Compact shrub to 0.6 m high. Flower yellow-orange-red-brown.	Deep sandy soil.	Sept to Nov	Unlikely	Unlikely - lack of suitable habitat.
Haloragaceae	*Gonocarpus pycnostachyus*		P3	Erect annual herb, 0.1-0.15 m high. Flowers green-red.	Sand or clay soils. Wet depressions, granite rock.		Unlikely	Unlikely – lack of suitable habitat.
Myrtaceae	*Eucalyptus semiglobosa*		P3	Mallee to 6 m, bark smooth grey over tan. Flowers cream-white-yellow.	White sand over laterite, silty sand on edge of granite shelf, limestone. Hillslopes, gullies, cliffs.		Unlikely	Unlikely - lack of suitable habitat.
Proteaceae	*Persoonia cymbifolia*		P3	Erect, spreading shrub, 0.20.6 (1) m high. Flowers yellow.	Sandy soils. On flats or in rock crevices.	Dec or Jan	Unlikely	Unlikely – lack of suitable habitat.

Table 11 continued.

Family	Species	Vernacular	Status (WA)	Description- Species	Description - Habitat	Peak Flowering period	Pre-Survey Likelihood of Occurrence Analysis	Post-Survey Likelihood of Occurrence Flora Survey Outcome
Scrophulariaceae	*Eremophila chamaephila*	Earth Loving Eremophila	P3	Low, dome shaped Shrub, 0.1-0.25 m high. 0.2-0.8 m wide. Flowers blue-purple.	White sand, clay or sandy clay. Sandplains, flats and disturbed road verges. Sometimes winter wet. Associated with Eucalyptus woodlands.	Nov to Dec	Unlikely	Unlikely - lack of suitable habitat.
Fabaceae	*Acacia bartlei*		P3	Erect shrub or tree from 1.5-7 m tall. Narrow phyllodes, oblong to elliptic. Glabrous. Pods linear 20-65 mm long, 2.5-3.5 mm wide.	Uncommon, around Esperance. Flat or gently undulating landscape. Waterlogged depressions in brown or grey, sandy loam or clay-loam or in grey sand over clay adjacent to depressions. Tolerates level of salinity.	Late June ot Mid Oct	Unlikely - distribution further north of Grass Patch region.	Unlikely - lack of suitable habitat.
Euphorbiaceae	*Stachystemon vinosus*		P4	Compact shrub, to 0.1 m high. Flowers purple -red/white.	Fine loamy sand, stony soils. Sandplains, rock crevices on breakaways.	Sep to Nov	Unlikely	Unlikely - lack of suitable habitat.
Myrtaceae	*Eucalyptus dolichorhyncha*	Fuschia Mallee	P4	Mallee or tree, 1-5 m high. Flowers yellow. Distinct elongated operculum bud caps, differentiating from non-threatened *Eucalyptus forrestiana*.	White or yellowish sandy clay or clay. Flats or slightly rising ground. Mallee Woodlands.	Jan to Mar or May	Unlikely	Unlikely - lack of suitable habitat.
Myrtaceae	*Eucalyptus preissiana subsp. lobata*		P4	Mallee to 2.5 m high. Bark smooth. Flowers yellow.	Sand. Coastal limestone rises and sand dunes.	Nov	Unlikely	Unlikely - lack of suitable habitat.
Myrtaceae	*Eucalyptus x missilis*		P4	Mallee to 3 m high. Bark smooth. Flowers yellow / cream-white.	Sand over limestone or granite. Coastal sites.	Jan-Apr	Unlikely	Unlikely - lack of suitable habitat.
Proteaceae	*Banksia prolata subsp. calcicola*		P4	Non-lignotuberous shrub, 0.4-1 m high. Flowers yellow.	White sand over limestone. Coastal areas.	Jul to Sep.	Unlikely	Unlikely - lack of suitable habitat.
Fabaceae	*Acacia diminuta*		P1	Intricately branched, spreading or glabrous shrub to 0.2 m high. Flowers yellow-cream.	Sandy clay or sandy loam. Sometimes over shallow ironstone gravel. Occurs 200km from West River to west of Truslove Nature Reserve. Shrub Mallee.	Oct to Nov	Unlikely - distribution significantly further north of survey area.	Unlikely - lack of suitable habitat.
Myrtaceae	*Darwinia polycephala*		P4	Diffuse shrub, 0.1-0.5 m high. Flowers red-purple.	Sand, clay or clayey sand. Flats near Salt Lakes, edges or dunes upslope of salt lakes. Shrub and Mallees, with herbs and sedges.	Mar or May to Jul or Sept	Unlikely - salt lakes present within survey area not characteristic of suitable habitat of *D. polycephala*.	Unlikely - lack of suitable habitat.
Euphorbiaceae	*Ricinocarpos trichophorus*	Barrens Wedding Bush	T - En	Erect, openly branching shrub, 0.3-1 m high. Flowers white.	Sandy clay, loam. Breakaways, among sandstone rocks.	May or Aug to Sep	Highly Unlikely	Unlikely - lack of suitable habitat.
Fabaceae	*Kennedia glabrata*	Northcliffe Kennedia	T - Vu	Prostrate shrub, 0.05-0.5 m high, to 5 m wide. Flowers red.	Soil pockets, sandy soils. Granite outcrops.	Aug to Nov.	Highly Unlikely - Distribution significant far away.	Unlikely - lack of suitable habitat.
Proteaceae	*Conospermum quadripetalum*		P2	Diffuse, straggly shrub, 0.3-1 m high. Flower blue/white.	Sandy clay, grey sand. Flats behind coastal hills.	Sept-Nov	Highly Unlikely	Unlikely - lack of suitable habitat.

Table 2: Conservation Code definitions for Threatened and Priority Ecological Communities located within 30 km of the survey area.

Community Name	Status	Description	Pre-Survey Likelihood of Occurrence	Post Survey Likelihood of Occurrence
Subtropical and Temperate Coastal Saltmarsh	Priority 3 (WA) VU (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 23oS latitude). The habitat is coastal areas under tidal influence. In southern latitudes saltmarsh are the dominant habitat in the intertidal zone and often occur in association with estuaries. It is typically restricted to the upper intertidal environment, generally between the elevation of the mean high tide, and the mean spring tide. The community consists mainly of salt-tolerant vegetation (halophytes) including: grasses, herbs, reeds, sedges and shrubs. Succulent herbs and grasses generally dominate and vegetation is generally <0.5m tall with the exception of some reeds and sedges. Many species of non-vascular plants are also found in saltmarsh, including epiphytic algae, diatoms and cyanobacterial mats. Saltmarsh consists of many vascular plant species but is dominated by relatively few families. There is also typically a high degree of endemism at the species level. The two most widely represented coastal saltmarsh plant families are the Chenopodiaceae and Poaceae. Four structural saltmarsh forms are currently recognised based on dominance of a particular vegetation type: • dominance by succulent shrubs (e.g., Tecticornia) • dominance by grasses (e.g., Sporobolus virginicus) • dominance by sedges and grasses (e.g., Juncus kraussii, Gahnia trifida) • dominance by herbs (e.g., low-growing creeping plants such as Wilsonia backhousei, Samolus repens, Schoenus nitens).	Unlikely – survey area 25km north of the coast.	Not detected
Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia	Priority 3 (WA) EN (EPBC Act)	Consists of predominantly obligate seeding proteaceous shrubland and heath (kwongkan) and mallee heath on sandplain, duplex sand/clay and gravels overlying Eocene sediments, quartzite, schist, Yilgarn and Albany Fraser granite and greenstone ranges. Its flora is characterised by high species diversity and a high degree of endemism, particularly in the Stirling Range, Fitzgerald River National Park, Ravensthorpe Range and Russell Ranges. Due to the high levels of endemism, there are few species that exist across the entire range of the dense, obligate seeding Proteaceae dominated shrublands and kwongkan of the Esperance Sandplains, however particular species have been identified as common dominant species in each of its ecodistricts (DBCA, 2017a).	Likely	Not detected – no vegetation units contained Proteaceous species at high enough densities to be considered possible Kwongkan.

Table 3: Potential conservation significant fauna located within 30 km of the survey area and likelihood of occurrence analysis (post survey).
Note: Species are presented based on likelihood of occurrence. Habitat information taken from publicly available resources such as: DSEWPaC (2011) Survey guidelines for Australia's Threatened mammals; DEWHA (2010) Survey guidelines for Australia's Threatened birds; SPRAT profiles and species-specific recovery plans.

Family	Scientific Name	Vernacular	Status (WA) / EPBC Act	Habitat Description	Likelihood of Occurrence (Pre Survey)	Likelihood of Occurrence (Post Survey)	Habitat Present (Y/N)	Likelihood of Detection if Present	Species Present (Y/N)	Comment
Peramelidae	*Isoodon fusciventer*	Quenda, southwestern brown bandicoot	P4 / -	Scrubby, often swampy, vegetation with dense cover up to 1 m high, often feeding in adjacent forest and woodland that is burnt on a regular basis. Forest, woodlands, heath and coastal scrub, usually on sandy combination soils.	Possible	Present	Yes	HIGH	Yes	Diggings observed in the north of the survey area within vegetation unit 1: *Lambertia inermi*s and *Nuytsia floribunda* Shrubland. Suitable habitat also in vegetation unit 2: 2: Salt Lake *Hakea cinerea* and *Melaleuca cuticularis* Shrubland and *Hypolaena humilis* Sedgeland (Hakcin Melcut ShL and Hyphum SeL).
Apodidae	*Apus pacificus*	Fork-tailed Swift	MI / MI	Dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. Almost exclusively aerial, flying from less than 1 m to at least 300 m above ground over inland plains but sometimes above foothills or in coastal areas.	Possible	Possible	Yes	HIGH	No	Marginal daytime refuge and hunting habitat across entire survey area.
Cacatuidae	*Calyptorhynchus latirostris*	Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo	EN / EN	Eucalypt woodlands, especially those that contain salmon gum and wandoo, and in shrubland or kwongan heathland dominated by hakea, dryandra, banksia and grevillea species. It also occurs in remnant patches of native vegetation on land otherwise cleared for agriculture. It also forages in forests containing marri, jarrah or karri.	Possible	Possible	Yes	HIGH	No	Marginal, low-quality foraging habitat present within vegetation units 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland and 2: Salt Lake Hakea cinerea and Melaleuca cuticularis Shrubland and Hypolaena humilis Sedgeland (Hakcin Melcut ShL and Hyphum SeL).
Cacatuidae	*Calyptorhynchus* sp.	White-tailed Black Cockatoo	EN / EN	Same as above.	Possible	Possible	Yes	HIGH	No	Same as above.
Accipitridae	*Elanus scriptus*	Letter-winged kite	P4 / -	Semi-desert and desert along tree-lined creeks; hunts over grasslands and other low vegetation.	Possible	Possible	Yes	HIGH	No	Marginal daytime refuge and hunting habitat across entire survey area.
Muridae	*Pseudomys occidentalis*	Western Mouse	P4 / -	Historical distribution. Preference for long unburnt habitat (between 30 and 50 yrs) on sandy clay loam or sandy loam. Vegetation in suitable habitats is variable and includes sparse low shrubland, tall dense shrubland, sparse to dense shrub mallee and mid-dense woodland. All sites where the western mouse has been collected have had patches of extremely dense vegetation.	Possible	Possible	Yes - Marginal	LOW	No	Marginal habitat present within vegetation unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland.
Muridae	*Pseudomys shortridgei*	Heath mouse, Dayang	VU/EN	Historical distribution. Closest recent record Ravensthorpe. Floristically-rich, dry heathland in long unburnt vegetation.	Possible	Possible	Yes - Marginal	LOW	No	Marginal habitat present within vegetation unit 1: *Lambertia inermis* and *Nuytsia floribunda* Shrubland.
Macropodidae	*Notamacropus irma*	Western Brush Wallaby	P4 / -	Preferred habitat includes open forest or woodland, particularly open, seasonally-wet flats with low grasses and open scrubby thickets.	Possible	Possible	No	HIGH	No	Marginal habitat present within vegetation units 1: Lambertia inermis and Nuytsia floribunda Shrubland and 2: Salt Lake Hakea cinerea and Melaleuca cuticularis Shrubland and Hypolaena humilis Sedgeland (Hakcin Melcut ShL and Hyphum SeL).
Elapidae	*Acanthophis antarcticus*	Southern Death Adder	P3 / -	Mallee and coastal vegetation. Prefers sites with deep fixed leaf litter.	Possible	Unlikely	No	LOW	No	
Scolopacidae	*Actitis hypoleucos*	Common Sandpiper	MI / MI	Almost entirely coastal, coastal wetlands and some inland wetlands, with varying levels of salinity, and is mostly found around muddy margins or rocky shores and rarely on mudflats.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Arenaria interpres*	Ruddy Turnstone	MI / MI	Prefers coastal regions with exposed rock coast lines or coral reefs, platforms and shelves, often with shallow tidal pools and rocky, shingle or gravel beaches. Occasionally been sighted in estuaries, harbours, bays and coastal lagoons, among low saltmarsh or on exposed beds of seagrass, around sewage ponds and on mudflats.	Unlikely	Unlikely	No	HIGH	No	

Table 13 continued.

Family	Scientific Name	Vernacular	Status (WA) / EPBC Act	Habitat Description	Likelihood of Occurrence (Pre Survey)	Likelihood of Occurrence (Post Survey)	Habitat Present (Y/N)	Likelihood of Detection if Present	Species Present (Y/N)	Comment
Iulomorphidae	*Atelomastix anancita*	Cape Arid atelomastix millipede	VU/-	Currently known from Le Grand National Park within the soil and beneath rocks in montane habitat.	Unlikely	Unlikely	No	LOW	No	
Iulomorphidae	*Atelomastix brennani*, sp. *nov*	Brennan's atelomastix millipede	VU/-	Currently known from the soil or under granite rocks within Le Grand National Park.	Unlikely	Unlikely	No	LOW	No	
Iulomorphidae	*Atelomastix grandis*	Le Grand atelomastix millipede	VU/-	Currently known from Le Grand National Park under rocks or in soil on granite outcrops and within Agonis heath.	Unlikely	Unlikely	No	LOW	No	
Iulomorphidae	*Atelomastix melindae*	Moir's atelomastix millipede	VU/-	Currently known from the rocky outcrops and heath near the summit of Mount Arid in the Cape Arid National Park, and granite outcrop and eucalypt forest of Mount Belches, near the Duke of Orleans Bay.	Unlikely	Unlikely	No	LOW	No	
Iulomorphidae	*Atelomastix sarahae*	Comer's atelomastix millipede	VU/-	Currently only known from rocky outcrops near the summit of Mount Arid in the Cape Arid National Park.	Unlikely	Unlikely	No	LOW	No	
Ardeidae	*Botaurus poiciloptilus*	Australasian Bittern	EN / EN	Wetlands, permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and reeds (e.g., Phragmites, Cyperus, Eleocharis, Juncus, Typha, Baumea, Bolboschoenus) or cutting grass (Gahnia) growing over a muddy or peaty substrate.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris acuminata*	Sharp-tailed Sandpiper	MI / MI	Muddy edges of shallow fresh or brackish wetlands, with inundated or emergent sedges, grass, saltmarsh or other low vegetation.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris canutus*	Red Knot, knot	EN / EN & MI	Intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris canutus* subsp. *rogersi*	Red Knot (north-eastern Siberia)	CR / CR & MI	Intertidal mudflats and sandflats in sheltered coasts, including bays harbours and estuaries.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris ferruginea*	Curlew Sandpiper	CR / CR & MI	Intertidal mudflats in sheltered coastal areas, non-tidal swamps, lakes and lagoons near the coast, and occasionally around ephemeral and permanent lakes and dams with bare edges of mud or sand.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris melanotos*	Pectoral Sandpiper	MI / MI	Shallow fresh to saline wetlands.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris ruficollis*	Red-necked Stint	MI / MI	Coastal areas, including sheltered inlets, bays, lagoons and estuaries with intertidal mudflats; ephemeral or permanent shallow wetlands near the coast or inland, and sometimes flooded paddocks or damp grasslands (Higgins & Davies 1996).	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Calidris tenuirostris*	Great Knot	CR / CR & MI	Intertidal mudflats and sandflats in sheltered coasts, including bays harbours and estuaries.	Unlikely	Unlikely	No	HIGH	No	
Anatidae	*Cereopsis novaehollandiae*	Cape Barren Goose	VU / VU	It occurs on offshore islands and rocks, and at adjacent sites on the mainland. It inhabits grasslands and low fields of succulent herbs (comprised of *Carpobrotus sp.*), and occasionally occurs in open areas in taller and denser vegetation.	Unlikely	Unlikely	No	MODERATE	No	
Anatidae	*Cereopsis novaehollandiae* subsp. *grisea*	Recherche Cape Barren Goose	VU / VU	It occurs on offshore islands and rocks, and at adjacent sites on the mainland. It inhabits grasslands and low fields of succulent herbs (comprised of Carpobrotus sp.), and occasionally occurs in open areas in taller and denser vegetation.	Unlikely	Unlikely	No	MODERATE	No	
Charadriidae	*Charadrius bicinctus*	Double-banded Plover	MI / MI	littoral, estuarine and fresh or saline terrestrial wetlands and also saltmarsh, grasslands and pasture. It occurs on muddy, sandy, shingled or sometimes rocky beaches, bays and inlets, harbours and margins of fresh or saline terrestrial wetlands such as lakes, lagoons and swamps, shallow estuaries and rivers. The species is sometimes associated with coastal lagoons, inland salt lakes and saltworks. It is also found on seagrass beds, especially Zostera, which, when exposed at low tide, remain heavily saturated or have numerous water-filled depressions. This species sometimes utilises kelp beds found on open grassy areas including short pasture, ploughed or newly cropped paddocks, swards, airstrips, and sports grounds such as golf courses or race-tracks near the coast and further inland.	Unlikely	Unlikely	No	HIGH	No	

Table 13 continued.

Family	Scientific Name	Vernacular	Status (WA) / EPBC Act	Habitat Description	Likelihood of Occurrence (Pre Survey)	Likelihood of Occurrence (Post Survey)	Habitat Present (Y/N)	Likelihood of Detection if Present	Species Present (Y/N)	Comment
Dasyuridae	*Dasyurus geoffroii*	Chuditch, Western Quoll	VU / VU	Woodland or forest. Logs must have a diameter > 30 cm and a hollow with 7–20 cm diameter and 1 m length (Dunlop and Morris 2012). Burrows are constructed beneath habitat features such as stumps, logs, trees or rock outcrops.	Unlikely	Unlikely	No	HIGH	No	
Falconidae	*Falco hypoleucos*	Grey Falcon	VU / -	Usually in lightly timbered country, especially stony plains and lightly timbered acacia shrublands.	Possible	Unlikely	No	HIGH	No	
Falconidae	*Falco peregrinus*	Peregrine Falcon	OS / -	It requires abundant prey and secure nest sites, and prefers coastal and inland cliffs or open woodlands near water.	Possible	Unlikely	No	HIGH	No	
Scolopacidae	*Gallinago megala*	Swinhoe's Snipe	MI / MI	Dense clumps of grass and rushes round the edges of fresh and brackish wetlands. This includes swamps, billabongs, river pools, small streams and sewage ponds. They are also found in drying claypans and inundated plains pitted with crab holes.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Gallinago stenura*	Pin-tailed Snipe	MI / MI	Occurs most often in or at the edges of shallow freshwater swamps, ponds and lakes with emergent, sparse to dense cover of grass/sedge or other vegetation.	Unlikely	Unlikely	No	HIGH	No	
Laridae	*Hydroprogne caspia*	Caspian Tern	MI / MI	Sheltered coastal embayments (harbours, lagoons, inlets, bays, estuaries and river deltas) and those with sandy or muddy margins are preferred. They also occur on near-coastal or inland terrestrial wetlands that are either fresh or saline, especially lakes (including ephemeral lakes), waterholes, reservoirs, rivers and creeks.	Unlikely	Unlikely	Yes - Marginal	HIGH	No	
Megapodiidae	*Leipoa ocellata*	Malleefowl	VU / VU	Arid and semi-arid areas dominated by mallee eucalypts on sandy soils. They are known to also occur in Mulga (*Acacia aneura*), Broombush (*Melaleuca uncinata*), Scrub Pine (*Callitris verrucosa*), Eucalyptus woodlands and coastal heathlands. Malleefowl require abundant leaf litter and a sandy substrate for the successful construction of nest mounds.	Unlikely	Unlikely	No	MODERATE	No	
Scolopacidae	*Limicola falcinellus*	Broad-billed Sandpiper	MI / MI	Sheltered parts of the coast, favouring estuarine mudflats but also occasionally occur on saltmarshes, shallow freshwater lagoons, saltworks and sewage farms, and in areas with large soft intertidal mudflats, which may have shell or sandbanks nearby. Occasionally they occur on reefs or rocky platforms. They have also been recorded in creeks, swamps and lakes near the coast, particularly those with bare mudflats or sand exposed by receding water.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Limosa lapponica*	Bar-tailed Godwit	MI (& VU or CR at subsp. level) / MI (& VU or CR at subsp. level)	Inhabit estuarine mudflats, beaches and mangroves.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Limosa lapponica menzbieri*	Northern Siberian Bar-tailed Godwit	CR (& MI at sp. level) / CR (& MI at sp. level) /	Occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, salt lakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats.	Unlikely	Unlikely	No	HIGH	No	
Motacillidae	*Motacilla cinerea*	Grey Wagtail	MI / MI	Species has a strong association with water (wetlands, water courses banks of lakes and marshes, artificial wetlands).	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Numenius madagascariensis*	Eastern Curlew	CR / CR & MI	Intertidal mudflats and sandflats, often with beds of seagrass, on sheltered coasts, especially estuaries, mangrove swamps, bays, harbours and lagoons.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Numenius minutus*	Little Curlew	MI / MI	Pools, river beds and water-filled tidal channels, and shallow water at edges of billabongs. The species prefers pools with bare dry mud (including mudbanks in shallow water) and they do not use pools if they are totally dry, flooded or heavily vegetated. Feed in short, dry grassland and sedgeland, including dry floodplains and black soil plains, which have scattered, shallow freshwater pools or areas seasonally inundated. Open woodlands with a grassy or burnt understorey, dry saltmarshes, coastal swamps, mudflats or sandflats of estuaries or beaches on sheltered coasts, mown lawns, gardens, recreational areas, ovals, racecourses and verges of roads and airstrips are also used.	Unlikely	Unlikely	No	HIGH	No	
Laridae	*Onychoprion anaethetus*	Bridled Tern	MI / MI	Occupy tropical and subtropical seas, breeding on islands, including vegetated coral cays, rocky continental islands and rock stacks. Bridled Terns are only rarely found in inshore continental waters and along mainland coastlines, though the species is reported to breed on the mainland of far southern Western Australia (Higgins & Davies 1996; Johnstone & Storr 1998).	Unlikely	Unlikely	No	HIGH	No	

Table 13 continued.

Family	Scientific Name	Vernacular	Status (WA) / EPBC Act	Habitat Description	Likelihood of Occurrence (Pre Survey)	Likelihood of Occurrence (Post Survey)	Habitat Present (Y/N)	Likelihood of Detection if Present	Species Present (Y/N)	Comment
Accipitridae	*Pandion haliaetus*	Osprey	MI / MI	Littoral and coastal habitats and terrestrial wetlands and offshore islands. Requires extensive areas of open fresh, brackish or saline water for foraging.	Possible	Unlikely	No	HIGH	No	
Elapidae	*Parasuta spectabilis* subsp. *bushi*	Spectacled hooded snake (Esperance), Mallee Black-headed Snake (Esperance area	P1	Variety of temperate to semiarid vegetation associations growing on light to heavy, often stony soils, including coastal shell grit beaches, dry sclerophyll forest of mallee and/or other Eucalyptus woodlands, heathlands, shrublands including chenopod, often with Triodia- Brown dominated understorey, and rocky ranges, slopes and foothills.	Possible	Unlikely	No	LOW	No	
Psittacidae	*Pezoporus flaviventris*	Western Ground Parrot	CR / CR	Preferred habitat includes low coastal and near coastal heathlands, unburnt for at least five years.	Unlikely	Unlikely	No	LOW	No	
Threskiornithidae	*Plegadis falcinellus*	Glossy Ibis	MI / MI	Fresh water marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation. The species is occasionally found in coastal locations such as estuaries, deltas, saltmarshes and coastal lagoons.	Unlikely	Unlikely	No	HIGH	No	
Charadriidae	*Pluvialis fulva*	Pacific Golden Plover	MI / MI	Coastal habitats, occasionally fresh, brackish or saline wetlands or claypans especially with muddy margins and often with submerged vegetation or short emergent grass. Other terrestrial habitats include short grass in paddocks, or ploughed or recently burnt areas.	Unlikely	Unlikely	No	HIGH	No	
Charadriidae	*Pluvialis squatarola*	Grey Plover	MI / MI	Sheltered embayments, estuaries and lagoons with mudflats and sandflats; terrestrial wetlands such as near-coastal lakes and swamps, or salt-lakes (Marchant & Higgins 1993).	Unlikely	Unlikely	Yes - Marginal	HIGH	No	
Hydryphantidae	*Pseudohydryphantes doegi*	Doeg's Watermite	P2 / -	Pseudohydryphantes is a genus of water mites that are found in lentic (still fresh water) and lotic (moving fresh water).	Unlikely	Unlikely	No	LOW	No	Water found within the survey area is seasonally inundated. Would not support the watermite.
Scolopacidae	*Tringa glareola*	Wood Sandpiper	MI / MI	Inland shallow freshwater wetlands, often with other waders. They prefer ponds and pools with emergent reeds and grass, surrounded by tall plants or dead trees and fallen timber.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Tringa nebularia*	Common Greenshank, greenshank	MI / MI	Typical habitat is often found to be sheltered coasts with reefs and rock platforms or with intertidal mudflats.	Unlikely	Unlikely	No	HIGH	No	
Scolopacidae	*Tringa stagnatilis*	Marsh Sandpiper	MI / MI	Prefers permanent or ephemeral wetlands of varying salinity, including swamps, lagoons, billabongs, saltpans, saltmarshes, estuaries, pools on inundated floodplains, and intertidal mudflats and also regularly at sewage farms and saltworks.	Unlikely	Unlikely	Yes - Marginal	HIGH	No	
Archaeidae	Zephyrarchaea marki	Cape Le Grand Assassin Spider	VU/-	Elevated leaf litter in *Banksia speciosa* thickets. Currently known from Cape Le Grand.	Possible	Unlikely	No	LOW	No	
Procellariidae	*Ardenna carneipes*	Flesh-footed Shearwater	VU / MI	Mainly occurs in the subtropics over continental shelves and slopes and occasionally inshore waters. Breeds on islands in burrows on sloping ground in coastal forest, scrubland, shrubland or grassland.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Procellariidae	*Ardenna grisea*	Sooty Shearwater	MI / MI	Marine species. Occurs in pelagic (open ocean) sub-tropical, sub-Antarctic and Antarctic waters.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Scolopacidae	*Calidris alba*	Sanderling	MI / MI	Almost entirely coastal mostly on open sandy beaches exposed to open sea-swell, and also on exposed sandbars and spits, and shingle banks, where they forage in the wave-wash zone and amongst rotting seaweed.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Charadriidae	*Charadrius leschenaultii*	Greater Sand Plover	VU / VU & MI	Almost entirely coastal, inhabiting littoral and estuarine habitats. Mainly occur on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks, as well as sandy estuarine lagoons. Seldom occur at shallow freshwater wetlands.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Diomedea antipodensis*	Antipodean Albatross	EN / VU & MI	Marine, pelagic and aerial species. Nests in open patchy vegetation, such as among tussock grassland or shrubs on ridges, slopes and plateaus.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Diomedea dabbenena*	Tristan Albatross	CR/ EN & MI	Marine, pelagic seabird that sleeps and rests on ocean waters when not breeding.	Highly Unlikely	Highly Unlikely	No	HIGH	No	

Table 13 continued.

Family	Scientific Name	Vernacular	Status (WA) / EPBC Act	Habitat Description	Likelihood of Occurrence (Pre Survey)	Likelihood of Occurrence (Post Survey)	Habitat Present (Y/N)	Likelihood of Detection if Present	Species Present (Y/N)	Comment
Diomedeidae	*Diomedea epomophora*	Southern Royal Albatross	VU / VU & MI	Marine, pelagic seabird that sleeps and rests on ocean waters when not breeding.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Diomedea exulans*	Wandering Albatross	VU / VU & MI	Marine, pelagic seabird that sleeps and rests on ocean waters when not breeding.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Diomedea sanfordi*	Northern Royal Albatross	EN / EN & MI	Marine, pelagic and aerial. Habitat includes subantarctic, subtropical, and occasionally Antarctic waters.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Geotriidae	*Geotria australis*	Pouched Lamprey	P3 / -	Species is anadromous and requires estuaries and coastal waters connected to freshwater rivers and streams with slow flowing, fine sediment microhabitats where spawning and development of ammocoetes occurs.	Highly Unlikely	Highly Unlikely	No	MODERATE	No	
Procellariidae	*Halobaena caerulea*	Blue Petrel	- / VU	Pelagic, occasionally over shallow waters.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Procellariidae	*Macronectes giganteus*	Southern Giant-Petrel	MI / VU & MI	Marine; Antarctic to subtropical waters.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Procellariidae	*Macronectes halli*	Northern Giant Petrel	MI / EN & MI	Marine, oceanic; mainly in subantarctic waters.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Anatidae	*Oxyura australis*	Blue-billed Duck	P4 / -	Prefers deep water in large permanent wetlands and swamps with dense aquatic vegetation.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Procellariidae	*Pachyptila turtur subantarctica*	Fairy Prion (southern)	- / VU	Sub-Antarctic seas and islands while breeding. Subtropical seas non breeding time; rarely inshore expect when sheltering from storms.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Procellariidae	*Pterodroma mollis*	Soft-plumaged Petrel	- / VU	Marine, oceanic species.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Stercorariidae	*Stercorarius antarcticus lonnbergi*	Brown Skua	P4 -	Marine, oceanic species.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Laridae	*Sternula nereis nereis*	Australian Fairy Tern	VU / VU	Coastal areas and embayments of a variety of habitats including offshore, estuarine or lacustrine (lake) islands, wetlands and mainland coastline.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalassarche carteri*	Indian Yellow-nosed Albatross	EN / VU & MI	Marine bird, located in subtropical and warmer subantarctic waters (Marchant & Higgins 1990).	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalassarche cauta cauta*	Shy Albatross	VU / VU & MI	Marine species. Breeds on rock islands.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalassarche cauta steadi*	White-capped Albatross	VU / VU & MI	Shelf-waters around breeding islands and over adjacent rises. During the non-breeding season, birds have been observed over continental shelves around continents. The species occurs both inshore and offshore and enters harbours and bays. The species is scarce in pelagic waters. Birds gather to scavenge at commercial fishing grounds.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalassarche chlororhynchos*	Atlantic Yellow-nosed Albatross	VU / MI	Marine species. Builds nests built on tussock grass, on rocks and under trees.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalassarche impavida*	Campbell Albatross	VU / VU & MI	Marine sea bird inhabiting sub-Antarctic and subtropical waters from pelagic to shelf-break water habitats.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalassarche melanophris*	Black-browed Albatross	EN / VU & MI	Marine species that inhabits Antarctic, subantarctic and temperate waters and occasionally enters the tropics.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Diomedeidae	*Thalasseus bergii*	Crested Tern	MI / MI	Tropical and subtropical coastlines, foraging in the shallow waters of lagoons, coral reefs, estuaries, bays, harbours and inlets, along sandy, rocky, coral or muddy shores, on rocky outcrops in open sea, in mangrove swamps and also far out to sea on open water. It shows a preference for nesting on offshore islands, low-lying coral reefs, sandy or rocky coastal islets, coastal spits, lagoon mudflats, and artificial islets in saltpans and sewage works within 3 km of the coast.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Charadriidae	*Thinornis rubricollis*	Hooded Plover, Hooded Dotterel	P4 / -	Ocean sandy beaches and coastal lakes.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Scolopacidae	*Tringa brevipes*	Grey-tailed Tattler	MI & P4 / MI	Typical habitat is often found to be sheltered coasts with reefs and rock platforms or with intertidal mudflats.	Highly Unlikely	Highly Unlikely	No	HIGH	No	
Bivalvia	*Westralunio carteri*	Carter's Freshwater Mussel	VU / -	Patchily distributed in sandy/muddy sediments of freshwater lakes, rivers and streams with greatest densities associated with woody debris and overhanging riparian vegetation near stream banks and edges of lakes/dams.	Highly Unlikely	Highly Unlikely	No	MODERATE	No	Water found is associated with salt lake and is seasonally inundated.

Appendix C

Conservation Status Definitions and Condition Scale

Table 4: 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 15: 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 16: 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 17: 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 ≤100ha), 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 ≤200ha). 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 18: 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 D

Species Lists and Relevé Data

Table 19: Flora Species List recorded within survey area.

Family	Genus	Species	Subspecies	Vernacular	Invasive	Cons code	1	2	3
Aizoaceae	*Disphyma*	*crassifolium*	subsp. *clavellatum*	Round Leaved Pigface					X
Aizoaceae	*Gunniopsis*	*glabra*							X
Anarthriaceae	*Anarthria*	*laevis*						X	
Araliaceae	*Trachymene*	*pilosa*		Native Parsnip			X		X
Asparagaceae	*Lomandra*	*micrantha*	subsp. *teretifolia*					X	
Asteraceae	*Arctotheca*	*calendula*		Cape Weed	X		X		
Asteraceae	*Argentipallium*	*tephrodes*							X
Asteraceae	*Hypochaeris*	*glabra*		Silky Cat Ears	X				X
Asteraceae	*Hypochaeris*	*radiata*		Flat Weed	X		X		
Asteraceae	*Sonchus*	*oleracea*		Common Sowthistle	X		X		
Asteraceae	*Blennospora*	*drummondii*						X	
Asteraceae	*Gnephosis*	*tenuissima*						X	
Asteraceae	*Pterochaeta*	*paniculata*		Wooly Waitzia				X	
Asteraceae	*Vellereophyton*	*dealbatum*		White Cudweed			X		
Asteraceae	*Siloxerus*	*filifolius*					X		
Asteraceae	*Podotheca*	*angustifolia*		Sticky Longheads			X		
Asteraceae	*Pogonolepis*	*muelleriana*							X
Asteraceae	*Ursinia*	*anthemoides*		Ursinia	X		X		X
Campanulaceae	*Monopsis*	*debilis*			X		X		
Casuarinaceae	*Allocasuarina*	*humilis*		Dwarf Sheoak			X		
Casuarinaceae	*Allocasuarina*	*thyoides*		Horned Sheoak			X		
Centrolepidaceae	*Centrolepis*	*polygyna*					X		
Centrolepidaceae	*Centrolepis*	*aristata*		Pointed Centrolepis			X		
Chenopodiaceae	*Tecticornia*	*pergranulata* subsp *pergranulata*							X
Chenopodiaceae	*Tecticornia*	*pterygosperma* subsp *pterygosperma*							X
Convolvulaceae	*Wilsonia*	*humilis*		Silky Wilsonia					X

Table 19 continued

Family	Genus	Species	Subspecies	Vernacular	Invasive	Cons code	1	2	3
Crassulaceae	*Crassula*	*tetramera*							X
Cyperaceae	*Caustis*	*dioica*		Puzzle grass			X	X	
Cyperaceae	*Gahnia*	*trifida*		Saw Sedge				X	
Cyperaceae	*Lepidosperma*	*squamatum*						X	X
Cyperaceae	*Machaerina*	*juncea*		Bare Twigrush				X	
Cyperaceae	*Lyginia*	*imberbis*					X		
Cyperaceae	*Cyathochaeta*	*equitans*					X		
Dilleniaceae	*Hibbertia*	*gracilipes*		Australian Buttercup			X		
Dilleniaceae	*Hibbertia*	*racemosa*		Stalked Guinea Flower			X		
Droseraceae	*Drosera*	*drummondii*					X		
Droseraceae	*Drosera*	*leucoblasta*		Wheel Sundew					
Ericaceae	*Leucopogon*	*carinatus*					X		
Ericaceae	*Leucopogon*	*assimilis*						X	
Ericaceae	*Leucopogon*	*sp.* Coujinup (M.A. Burgman 1085)					X		
Ericaceae	*Lysinema*	*pentapetalum*		Curry Flower			X		
Ericaceae	*Leucopogon*	*?bossiaea*				P2			X
Ericaceae	*Andersonia*	*parvifolia*					X	X	
Ericaceae	*Dielsiodoxa*	*oligarrhenoides*					X	X	
Fabaceae	*Acacia*	*cyclops*		Coastal Wattle			X	X	
Fabaceae	*Acacia*	*patagiata*						X	
Fabaceae	*Acacia*	*saligna*					X		
Fabaceae	*Acacia*	*biflora*		Two Flowered Acacia			X		
Fabaceae	*Daviesia*	*apiculata*					X	X	
Fabaceae	*Gompholobium*	*baxteri*					X		

Table 19 continued

Family	Genus	Species	Subspecies	Vernacular	Invasive	Cons Code	1	2	3
Fabaceae	*Jacksonia*	*venosa*					X		
Fabaceae	*Jacksonia*	*racemosa*					X		
Frankeniaceae	*Frankenia*	*sessilis*	var *sessilis*						X
Goodeniaceae	*Dampiera*	*lavandulacea*					X		
Goodeniaceae	*Goodenia*	*incana*		Hoary Goodenia			X		
Hemerocallidaceae	*Dianella*	*brevicaulis*		Flax Lilly			X		
Iridaceae	*Freesia*	sp		Freesia	X		X		
Iridaceae	*Patersonia*	*lanata*		Wooly Purple Flag			X		
Lauraceae	*Cassytha*	*flava*		Dodder Laurel			X	X	X
Loranthaceae	*Nuytsia*	*floribunda*		Mundjar; Christmas Tree			X		
Myrtaceae	*Calothamnus*	*gracilis*		One-sided Bottle Brush			X	X	
Myrtaceae	*Conothamnus*	*aureus*					X		
Myrtaceae	*Darwinia*	*vestita*		Pom-pom Darwinia			X		
Myrtaceae	*Eucalyptus*	*micranthera*		Alexander River Mallee			X	X	
Myrtaceae	*Eucalyptus*	*tetraptera*		Four Winged Mallee			X		
Myrtaceae	*Kunzea*	*salina*				P3			X
Myrtaceae	*Melaleuca*	*brevifolia*						X	X
Myrtaceae	*Melaleuca*	*cuticularis*		Saltwater Paperbark				X	
Myrtaceae	*Melaleuca*	*societatis*		Soccer Ball Melaleuca			X	X	
Myrtaceae	*Melaleuca*	*striata*					X		
Myrtaceae	*Micromyrtus*	*elobata*	*elobata*				X		
Myrtaceae	*Phymatocarpus*	*maxwellii*					X	X	
Myrtaceae	*Austrobaeckea*	*latens*					X	X	X
Myrtaceae	*Oxymyrrhine*	*gracilis*					X		

Table 19 continued

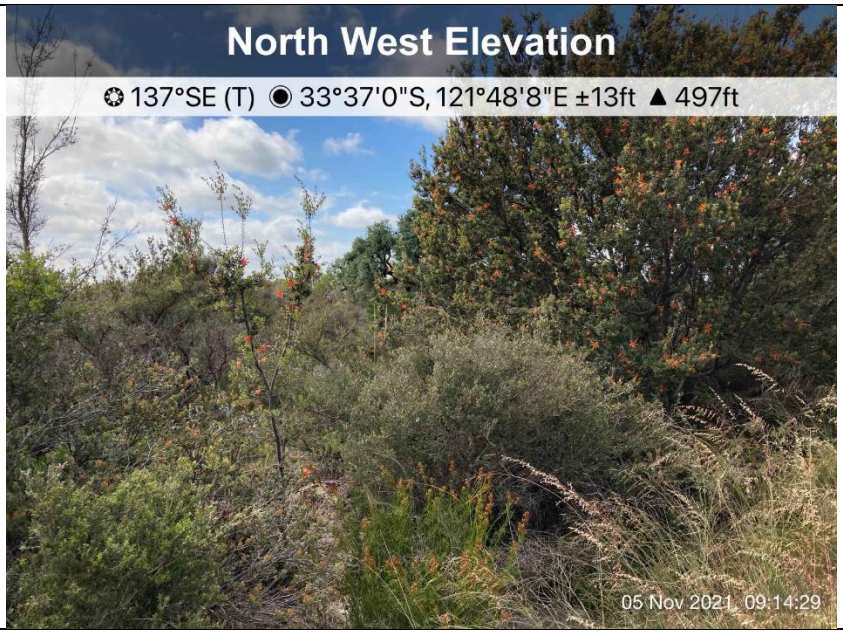
Family	Genus	Species	Subspecies	Vernacular	Invasive	Cons code	1	2	3
Myrtaceae	*Taxandria*	*spathulata*					X		
Myrtaceae	*Verticordia*	*minutifolia*					X	X	
Myrtaceae	*Verticordia*	*plumosa*	var *grandiflora*	Plumed Featherflower			X	X	
Orchidaceae	*Diuris*	*laxiflora*		Bee Orchid			X		
Orchidaceae	*Microtis*	*media*	subsp. media	Mignonette Orchid				X	
Pittosporaceae	*Billardiera*	*fusiformis*		Australian Blue Bell			X	X	
Poaceae	*Austrostipa*	*juncifolia*							X
Poaceae	*Briza*	*maxima*		Blowfly Grass	X		X		
Poaceae	*Avena*	*fatua*			X		X	X	
Poaceae	*Eragrostis*	*curvula*		African Lovegrass	X		X	X	
Poaceae	*Lolium*	*perenne*		Annual Ryegrass	X		X		
Poaceae	*Neurachne*	*alopecuroidea*		Mulga Foxtail Grass			X		
Poaceae	*Sporobolus*	*virginicus*		Marine Couch					X
Poaceae	*Austrostipa*	*semibarbata*					X		
Poaceae	*Vulpia*	*muralis*		Fox Grass	X		X	X	
Primulaceae	*Lysimachia*	*arvensis*		Pimpernel	X		X	X	
Proteaceae	*Adenanthos*	*cuneatus*		Jug Flower			X		
Proteaceae	*Banksia*	*obovatus*		Wedge Leaved Banksia			X		
Proteaceae	*Banksia*	*speciosa*		Showy Banksia			X		
Proteaceae	*Hakea*	*cinerea*		Ashy Hakea				X	
Proteaceae	*Hakea*	*trifurcata*		Two Leaf Hakea				X	
Proteaceae	*Isopogon*	*trilobus*		Barrell Coneflower				X	
Proteaceae	*Lambertia*	*inermis var drummondii*		Chiddick, Native Honeysuckle			X		
Proteaceae	*Lambertia*	*inermis var inermis*		Chiddick, Native Honeysuckle			X	X	

Table 19 continued

Family	Genus	Species	Subspecies	Vernacular	Invasive	Cons code	1	2	3
Restionaceae	*Desmocladus*	*flexuosus*					X		X
Restionaceae	*Hypolaena*	*humilis*					X	X	
Restionaceae	*Desmocladus*	*quiricanus*							X
Rubiaceae	*Opercularia*	*vaginata*		Dogweed				X	
Stylidiaceae	*Stylidium*	*insensitivum*		Insensitive Trigger Plant					X
Stylidiaceae	*Stylidium*	*rupestre*		Rock Triggerplant					
Stylidiaceae	*Stylidium*	*repens*		Creeping Stylidium			X		

Relevé	R1	**Veg Code**	Lamine and Nuyflo SL	**Date Surveyed**	05/11/2021
Location	270m south of the Degrussa Road railway crossing on the eastern corridor. 352.658KM.				
GPS (Lat, Long)	-33.6189151681, 121.8026924996				
Landform and Slope	Plain, Flat				
Soils	Sand, Light Grey				
Hydrology	Good Drainage				
Vegetation description	Vegetation Description (NVIS, 2017): U ^^*Lambertia inermis* var *inermis*, *Acacia cyclops*, +/-*Nuytsia floribunda*\shrub\4\i; M ^^*Melaleuca scabra*, *Adenanthos cuneatus, Micromyrtus elobata* subsp. *elobata*\shrub\2\r; G+ ^*Hypolaena humilis*, +/-*Caustis dioica, Stylidium repens*\sedge, herb\1\d. Vegetation Description (Muirs, 1977): *Lambertia inermis* var *inermis, Acacia cyclops* and *Nuytsia floribunda* Scrub, *over Melaleuca scabra, Adenanthos cuneatus* and *Allocasuarina humilis* Open Low Scrub A and B, over *Micromyrtus elobata* subsp *elobata, Verticordia minutifolia* and *Darwinia vestita* Open Dwarf Scrub C, over *Caustis dioica* Dense Tall Sedge, over *Hypolaena humilis* Dense Low Sedge.				
Condition	Good				
Comments	-				

Life Form	**Dominant Species**	**Other Species**	**Cover (%)**
Trees >30m			
Trees 10-30m			
Shrub >2m	*Acacia cyclops, Lambertia inermis* var *inermis*	*Nuytsia floribunda*	S 10-30%
Shrub 1-2m	*Melaleuca scabra, Adenanthos cuneatus*	*Allocasuarina humilis, Calothamnus gracilis, Austrobaeckea latens*	V 2-10%
Shrub 0.5-1m	*Micromyrtus elobata* subsp. *elobata*, *Verticordia minutifolia*	*Darwinia vestita*	E <5%
Shrub <0.5m			
Sedge	*Hypolaena humilis*	*Caustis dioica*	D > 70%
Herb	*Stylidium repens*	**Ursinia anthemoides, Levenhookia stipitata, Microtis media subsp. media*	E <5%
Grass		*Austrostipa semibarbata, *Avena fatua, *Briza maxima*	E <5%



Relevé	R2	Veg Code	Hakcin Melcut ShL and Hyphum SeL	Date Surveyed	05/11/2021
Location	520 m south of the Degrussa Road railway crossing, eastern corridor. 352.910KM				
GPS (Lat, Long)	-33.6211418341, 121.8031998333				
Landform and Slope	Drainage Depression, Flat				
Soils	Sand, Light Grey				
Hydrology	Poor Drainage				
Vegetation description	Vegetation Description (NVIS, 2017): U ^*Hakea cinerea, +/-Melaleuca cuticularis, Acacia cyclops*\shrub\4\bc; M ^^*Austrobaeckea latens, Verticordia minutifolia, +/-Verticordia plumosa* var *grandiflora*\shrub\2\r; G+ ^*Hypolaena humilis*, *+/-Gahnia trifida*, *Caustis dioica*\sedge\2\d. Vegetation Description (Muirs, 1977): *Hakea cinerea, Melaleuca cuticularis* and *Acacia cyclops* Open Scrub, over *Austrobaeckea latens, Verticordia minutifolia* and *Verticordia plumosa* var *grandiflora* Very Open Low Scrub A and B, over *Gahnia trifida* and *Caustis dioica* Dense Tall Sedge, over *Hypolaena humilis* Dense Low Sedge.				
Condition	Very Good				
Comments	-				

Life Form	Dominant Species	Other Species	Cover (%)
Trees >30m			
Trees 10-30m			
Shrub >2m	*Hakea cinerea*	*Melaleuca cuticularis, Acacia cyclops, Lambertia inermis* var *inermis*	E <5%
Shrub 1-2m	*Austrobaeckea latens, Verticordia minutifolia*	*Verticordia plumosa* var *grandiflora, Melaleuca scabra*	V 2-10%
Shrub 0.5-1m			
Shrub <0.5m			
Sedge	*Hypolaena humilis*	*Gahnia trifida, Caustis dioica*	D > 70%
Herb			
Grass			

Relevé	R3	Veg Code	Salt Lake Forbland and Grassland	Date Surveyed	05/11/2021
Location	730m south of Degrussa Road railway crossing, eastern corridor. 353.107KM				
GPS (Lat, Long)	-33.6229263338, 121.803703333				
Landform and Slope	Drainage Depression, Flat				
Soils	Sand Clay, White				
Hydrology	Seasonal Wet				
Vegetation description	Vegetation Description (NVIS, 2017): M ^^*Melaleuca brevifolia*, *Leucopogon ?bossiaea, Kunzea salina*\shrub\2\i ; G+ ^*Austrostipa juncifolia*, ^^*Gunniopsis glabra*, *Stylidium insensitivum*\grass, herb\1\c. Vegetation Description (Muirs, 1977): *Melaleuca brevifolia* and *Austrobaeckea latens* Low Scrub A and B, over *Leucopogon ?bossiaea* and *Kunzea salina* Open Dwarf Scrub D, over *Austrostipa juncifolia* Tall Grass, over *Gunniopsis glabra* and *Stylidium insensitivum* Open Herbs.				
Condition	Very Good				
Comments	-				

Life Form	Dominant Species	Other Species	Cover (%)
Trees >30m			
Trees 10-30m			
Shrub >2m			
Shrub 1-2m	*Melaleuca brevifolia*	*Austrobaeckea latens*	S 10-30%
Shrub 0.5-1m			
Shrub <0.5m	*Leucopogon ?bossiaea, Kunzea salina*		E <5%
Sedge		*Hypolaena humilis, Lepidosperma squamatum*	E <5%
Herb	*Gunniopsis glabra, Stylidium insensitivum*		V 2-10%
Grass	*Austrostipa juncifolia*		M 30-70%

Table 20: Fauna species recorded within survey area.

Family	Species	Common Name	Conservation Code	Comment
Birds				
Meliphagidae	*Anthochaera carunculata*	Red Wattlebird		
Covidae	*Corvus coronoides*	Australian Raven		
Phasianidae	*Coturnix pectoralis*	Stubble Quail		
Petroicidae	*Eopsaltria griseogularis*	Western Yellow Robin		
Meliphagidae	*Manorina flavigula*	Yellow-throated Miner		
Cuculidae	*Chrysococcyx lucidus*	Shining Bronze Cuckoo		
Monarchidae	*Myiagra inquieta*	Restless Flycatcher		
Meliphagidae	*Phylidonyris novaehollandiae*	New Holland Honeyeater		
Invertebrates				
Araneidae	*Argiope trifasciata*	Banded Garden Spider		
Formicidae	*Rhytidoponera metallica*	Green-head Ant		
Araneidae	*Austracantha minax*	Christmas Spider		
Formicidae	*Iridomyrmex purpureus*	Southern Meat Ant		
Blaberidae	*Panesthia australis*	Australian Bush Cockroach		
Lycosidae	*Hogna crispipes*	Wolf Spider		
Syrphidae	*Simosyrphus grandicornis*	Hoverfly		
Pieridae	*Pieris rapae*	Cabbage White		
Mammals				
Peramelidae	*Isoodon fusciventer*	Quenda	P4	Identified through one digging in the north of the subject site.
Macropodidae	*Macropus fuliginosus*	Western Grey Kangaroo		
Leporidae	*Oryctolagus cuniculus*	Rabbit		
Canidae	*Vulpes vulpes*	Fox		
Reptiles				
Scincidae	*Tiliqua rugosa*	Bobtail Skink		

Appendix E

Threatened and Priority reporting forms

Appendix F

NatureMap and EPBC Act PMST report

Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

Threatened and Priority Flora Report Form

Version 1.4 March 2021

Please complete as much of the form as possible, with emphasis on those sections bordered in black. For information on how to complete the form please refer to the Threatened & Priority Flora Report Form (TPRF) manual on the DBCA website at www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/threatened-plants

TAXON: Leucopogon bossiaea **TPFL Pop. No:**

OBSERVATION DATE: 05/11/2021 **CONSERVATION STATUS:** P2 **New population** ☒

OBSERVER/S: Katie White, Kimberly Jenkins **PHONE** 0439 993 451 or 0458 441 432

ROLE: Botanist / Consultant **ORGANISATION:** Bio Diverse Solutions

EMAIL: katie@biodiversesolutions.com.au ; enquiry@biodiversesolutions.com.au

DESCRIPTION OF LOCATION (Provide at least nearest town/named locality, and the distance and direction to that place)**:**

~29 km north of Esperance townsite. 3 km north of Gibson townsite. 690m south of railway crossing on Degrussa rd, on eastern railway reserve

Reserve No:

DBCA DISTRICT: South coast **LGA:** Esperance Land manager present: ☐

DATUM:
GDA94 / MGA94 ☒
AGD84 / AMG84 ☐
WGS84 ☐
Unknown ☐

COORDINATES: (If UTM coords provided, **Zone** is also required)
DecDegrees ☐ DegMinSec ☐ UTMs ☒

Lat / Northing: **945764.906**

Long / Easting: 6269326.65

ZONE: **51H**

METHOD USED:
GPS ☐ Differential GPS ☐ Map ☒

No. satellites: _____ Map used: ArcGIS

Boundary polygon captured: ☐ Map scale: _____

LAND TENURE:

Nature reserve ☐	Timber reserve ☐	Private property ☐	Rail reserve ☒	Shire road reserve ☐
National park ☐	State forest ☐	Pastoral lease ☐	MRWA road reserve ☐	Other Crown reserve ☐
Conservation park ☐	Water reserve ☐	UCL ☐	SLK/Pole 353.074 to _____	Specify other: _____

AREA ASSESSMENT: Edge survey ☐ Partial survey ☒ Full survey ☐ Area observed (m²): _____

EFFORT: Time spent surveying (minutes): _____ No. of minutes spent / 100 m²: _____

POP'N COUNT ACCURACY: Actual ☒ Extrapolation ☐ Estimate ☐ Count method: _____
(Refer to field manual for list)

WHAT COUNTED: Plants ☒ Clumps ☐ Clonal stems ☐

TOTAL POP'N STRUCTURE:	**Mature:**	**Juveniles:**	**Seedlings:**	**Totals:**
Alive	31			
Dead				

Area of pop (m²): _____

Note: Pls record count as numbers (not percentages) for database.

QUADRATS PRESENT: No. _____ Size _____ Data attached ☐ Total area of quadrats (m²): _____

Summary Quad. Totals: Alive				

REPRODUCTIVE STATE: Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☐
Immature fruit ☐ Fruit ☐ Dehisced fruit ☐ Percentage in flower: 0%

CONDITION OF PLANTS: Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

COMMENT: Adjacent to track disturbance of railway access track and old laydown area. Likely historically disturbed.

THREATS - type, agent and supporting information: Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. **Specify agent** where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)	**Current impact (N-E)**	**Potential Impact (L-E)**	**Potential Threat Onset (S-L)**
• Laydown areas and track widening along the railway access tracks	M	H	S
•			

Please return completed form to **Species And Communities Program** DBCA,
Locked Bag 104, BENTLEY DELIVERY CENTRE WA 6983 **OR** email to: flora.data@dbca.wa.gov.au

RECORDS: Please forward to **Flora Administrative Officer,** Species and Communities Program.

Record entered by:_____ **Sheet No.:**_____ **Record Entered in Database** ❑

Department of **Biodiversity, Conservation and Attractions**

GOVERNMENT OF WESTERN AUSTRALIA

Threatened and Priority Flora Report Form

Version 1.4 March 2021

HABITAT INFORMATION:

LANDFORM:
Crest ☐
Hill ☐
Ridge ☐
Outcrop ☐
Slope ☐
Flat ☐
Open depression ☒
Drainage line ☒
Closed depression ☐
Wetland ☐

ROCK TYPE:
Granite ☐
Dolerite ☐
Laterite ☐
Ironstone ☐
Limestone ☐
Quartz ☐
Specify other:

LOOSE ROCK:
(on soil surface; eg gravel, quartz fields)
0-10% ☐
10-30% ☐
30-50% ☐
50-100% ☐

SOIL TYPE:
Sand ☐
Sandy loam ☐
Loam ☐
Clay loam ☒
Light clay ☐
Peat ☐
Specify other:

SOIL COLOUR:
Red ☐
Brown ☐
Yellow ☐
White ☒
Grey ☐
Black ☐
Specify other:

DRAINAGE:
Well drained ☐
Seasonally inundated ☒
Permanently inundated ☐
Tidal ☐

Specific **Landform** Element:
(Refer to field manual for additional values)
Gibson salt lake

CONDITION OF SOIL: Dry ☐ Moist ☒ Waterlogged ☐ Inundated ☐

VEGETATION CLASSIFICATION*:
Eg: **1**. Banksia woodland (B. attenuata, B. ilicifolia); **2**. Open shrubland (Hibbertia sp., Acacia spp.) ; **3**. Isolated clumps of sedges (M.tetragona)

1. Semi-open salt tolerant shrubs with closed forbland and scattered grasses
2.
3.
4.

ASSOCIATED SPECIES: Melaleuca brevifolia, Austrostipa sp, Frankenia sessilis var sessilis, Lepidosperma sp

Other (non-dominant) spp

* Please record up to four of the most representative vegetation layers (with up to three dominant species in each layer). Structural Formations should follow 2009 *Australian Soil and Land Survey Field Handbook* guidelines – refer to field manual for further information and structural formation table.

CONDITION OF HABITAT: Pristine ☐ Excellent ☐ Very good ☐ Good ☒ Degraded ☐ Completely degraded ☐

COMMENT:

FIRE HISTORY: **Last Fire:** Season/Month: _____ Year: **Fire Intensity:** High ☐ Medium ☐ Low ☐ No signs of fire ☒

FENCING: Not required ☐ Present ☐ Replace / repair ☐ Required ☐ Length req'd: _____

ROADSIDE MARKERS: Not required ☐ Present ☐ Replace / reposition ☐ Required ☐ Quantity req'd: _____

OTHER COMMENTS: (Please include recommended management actions and/or implemented actions - include date. Also include details of additional data available, and how to locate it.)

Specimen not retained by WA Herbarium

Proposed impact and targeted level survey results presented in 'Bio Diverse Solutions, reconnaissance flora, vegetation and basic survey, AI005-009 Degrussa Rd, KM 351-353 (2022)'

Only surveyed within railway tenure, likely population extends further, with suitable habitat present

Noted on Herbarium confirmation, significant range extension

FLORA AUTHORISATION / LICENCE No: FB62000327 Note if only observing plants (i.e. no specimens or plant matieral is taken) then no authorisation/licence is required. For further information on authorisation and licening requirements see the Threatened Flora and Wildlife Licensing pages on DBCA's website. Any actions carried out under authorisations/licences should be recorded above in the OTHER COMMENTS section.

SPECIMEN: Collectors No: KW178 WA Herb. ☐ Regional Herb. ☐ District Herb. ☐ Other: _____

LODGEMENT: WA Herb Lodgement No: 9281

ATTACHED: Map ☐ Mudmap ☐ Photo ☐ GIS data ☒ Field notes ☐ Other: _____

COPY SENT TO: Regional Office ☒ District Office ☒ Other: _____

Submitter of Record: Katie White Role: Botanist / Consultant Signed: KW Date: 05/ 01 /2022

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TAXON: Kunzea salina **TPFL Pop. No:**

OBSERVATION DATE: 05/11/2021 **CONSERVATION STATUS:** P3 **New population** ☒

OBSERVER/S: Katie White, Kimberly Jenkins **PHONE** 0439 993 451 or 0458 441 432

ROLE: Botanist / Consultant **ORGANISATION:** Bio Diverse Solutions

EMAIL: katie@biodiversesolutions.com.au ; enquiry@biodiversesolutions.com.au

DESCRIPTION OF LOCATION (Provide at least nearest town/named locality, and the distance and direction to that place)**:**

~29 km north of Esperance townsite. 3 km north of Gibson townsite. 720m south of railway crossing on Degrussa Rd, on eastern road reserve

Reserve No:

DBCA DISTRICT: South coast **LGA:** Esperance Land manager present: ☐

DATUM:
GDA94 / MGA94 ☒
AGD84 / AMG84 ☐
WGS84 ☐
Unknown ☐

COORDINATES: (If UTM coords provided, **Zone** is also required)
DecDegrees ☐ DegMinSec ☐ UTMs ☒

Lat / Northing: **945772.961**

Long / Easting: 6269286.522

ZONE: **51H**

METHOD USED:
GPS ☐ Differential GPS ☐ Map ☒

No. satellites: Map used: ArcGIS

Boundary polygon captured: ☐ Map scale:

LAND TENURE:

Nature reserve ☐	Timber reserve ☐	Private property ☐	Rail reserve ☒	Shire road reserve ☐
National park ☐	State forest ☐	Pastoral lease ☐	MRWA road reserve ☐	Other Crown reserve ☐
Conservation park ☐	Water reserve ☐	UCL ☐	SLK/Pole 353.121 to	Specify other:

AREA ASSESSMENT: Edge survey ☐ Partial survey ☒ Full survey ☐ Area observed (m²):

EFFORT: Time spent surveying (minutes): No. of minutes spent / 100 m²:

POP'N COUNT ACCURACY: Actual ☒ Extrapolation ☐ Estimate ☐ Count method: (Refer to field manual for list)

WHAT COUNTED: Plants ☒ Clumps ☒ Clonal stems ☐

TOTAL POP'N STRUCTURE:	**Mature:**	**Juveniles:**	**Seedlings:**	**Totals:**
Alive	36			
Dead				

Area of pop (m²):

Note: Pls record count as numbers (not percentages) for database.

QUADRATS PRESENT: No. Size Data attached ☐ Total area of quadrats (m²):

Summary Quad. Totals: Alive				

REPRODUCTIVE STATE: Clonal ☐ Vegetative ☐ Flowerbud ☐ Flower ☐
Immature fruit ☐ Fruit ☐ Dehisced fruit ☐ Percentage in flower: 0%

CONDITION OF PLANTS: Healthy ☒ Moderate ☐ Poor ☐ Senescent ☐

COMMENT: Adjacent to track disturbance of railway access track and old laydown area. Likely historically disturbed.

THREATS - type, agent and supporting information: Eg clearing, too frequent fire, weed, disease. Refer to field manual for list of threats & agents. **Specify agent** where relevant. Rate current and potential threat impact: N=Nil, L=Low, M=Medium, H=High, E=Extreme Estimate time to potential impact: S=Short (<12mths), M=Medium (<5yrs), L=Long (5yrs+)	**Current impact (N-E)**	**Potential Impact (L-E)**	**Potential Threat Onset (S-L)**
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Loam ☐
Clay loam ☒
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Peat ☐
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Yellow ☐
White ☒
Grey ☐
Black ☐
Specify other:

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Seasonally inundated ☒
Permanently inundated ☐
Tidal ☐

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Australian Government

Department of Agriculture, Water and the Environment

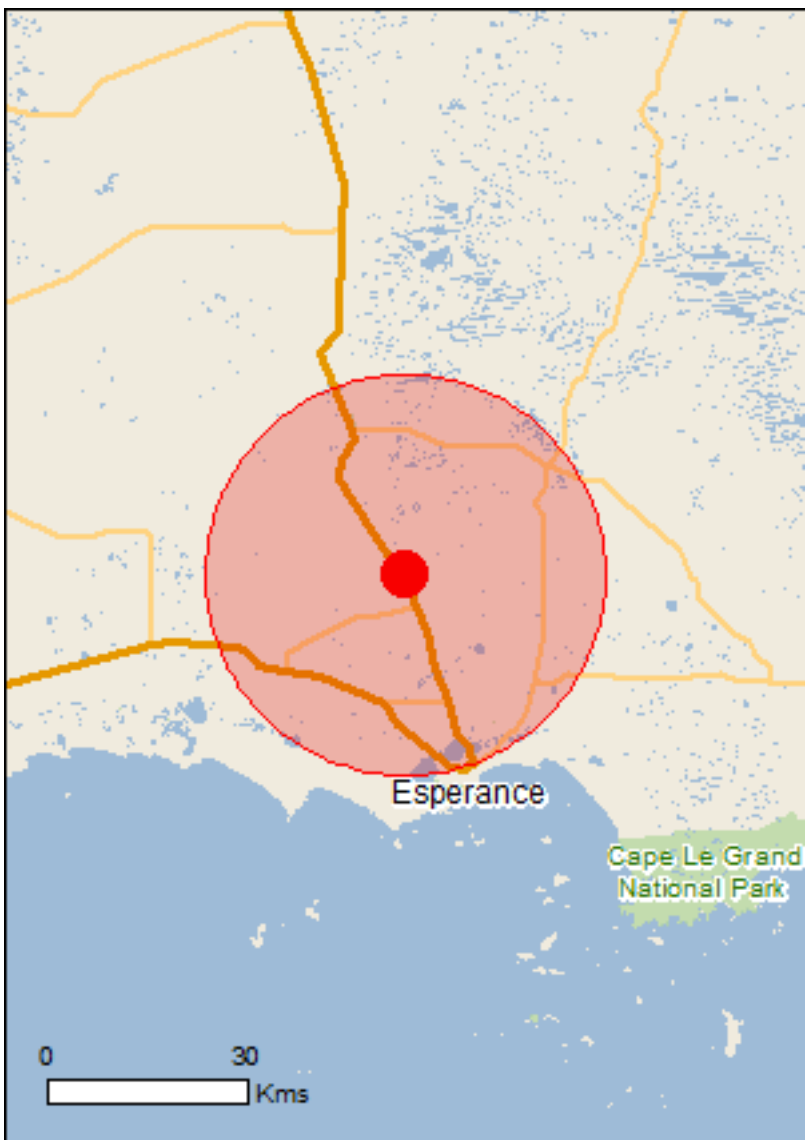
EPBC Act Protected Matters Report

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

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

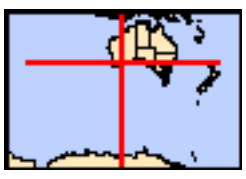
Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 17/11/21 14:34:37



Coordinates

Buffer: 30.0Km



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:	2
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	43
Listed Migratory Species:	49

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:	77
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:	17
Regional Forest Agreements:	None
Invasive Species:	13
Nationally Important Wetlands:	3
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar) [Resource Information]

Name	Proximity
Lake gore	Within 10km of Ramsar
Lake warden system	Within Ramsar site

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
Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Calyptorhynchus latirostris Carnaby's Cockatoo, Short-billed Black-Cockatoo [59523]	Endangered	Species or species habitat known to occur within area
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	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

Name	Status	Type of Presence
		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 likely to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat likely to occur within area
Limosa lapponica menzbieri Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit [86432]	Critically Endangered	Species or species habitat known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Pachyptila turtur subantarctica Fairy Prion (southern) [64445]	Vulnerable	Species or species habitat may 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
Thalassarche steadi White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Mammals		
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Dasyurus geoffroii Chuditch, Western Quoll [330]	Vulnerable	Species or species

Name	Status	Type of Presence
		habitat may 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 likely to occur within area
Neophoca cinerea		
Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat likely to occur within area
Plants		
Anigozanthos bicolor subsp. minor		
Little Kangaroo Paw, Two-coloured Kangaroo Paw, Small Two-colour Kangaroo Paw [21241]	Endangered	Species or species habitat known to occur within area
Eremophila glabra subsp. Scaddan (C. Turley s.n. 10/11/2005)		
[89454]	Critically Endangered	Species or species habitat known to occur within area
Eucalyptus merrickiae		
Goblet Mallee [13119]	Vulnerable	Species or species habitat known to occur within area
Kennedia glabrata		
Northcliffe Kennedia [16452]	Vulnerable	Species or species habitat likely to occur within area
Lambertia echinata subsp. echinata		
Prickly Honeysuckle [56729]	Endangered	Species or species habitat may occur within area
Ricinocarpos trichophorus		
Barrens Wedding Bush [19931]	Endangered	Species or species habitat likely to occur within area
Reptiles		
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitat may 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	Foraging, feeding or related behaviour 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

Name	Threatened	Type of Presence
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
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Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea sanfordi Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Hydroprogne caspia Caspian Tern [808]		Foraging, feeding or related behaviour known to occur within area
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Onychoprion anaethetus Bridled Tern [82845]		Foraging, feeding or related behaviour likely to occur within area
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

Name	Threatened	Type of Presence
Balaenoptera musculus Blue Whale [36]	Endangered	Species or species habitat may occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Carcharhinus longimanus Oceanic Whitetip Shark [84108]		Species or species habitat may occur within area
Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Foraging, feeding or related behaviour known to occur within area
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may occur within area
Dermochelys coriacea Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Breeding likely to occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus Porbeagle, Mackerel Shark [83288]		Species or species habitat likely to occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely to occur within area
Orcinus orca Killer Whale, Orca [46]		Species or species habitat may occur within area
Rhincodon typus Whale Shark [66680]	Vulnerable	Species or species habitat may occur within area
Migratory Terrestrial Species		
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat known to occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris alba Sanderling [875]		Foraging, feeding or related behaviour known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat known to occur within area

Name	Threatened	Type of Presence
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat known to occur within area
Calidris ruficollis		
Red-necked Stint [860]		Foraging, feeding or related behaviour known to occur within area
Calidris tenuirostris		
Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Charadrius bicinctus		
Double-banded Plover [895]		Species or species habitat known to occur within area
Gallinago megala		
Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura		
Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus		
Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat likely to occur within area
Tringa brevipes		
Grey-tailed Tattler [851]		Foraging, feeding or related behaviour known to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		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

Name	Threatened	Type of Presence
		habitat likely to occur within area
Ardea ibis Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
Calidris alba Sanderling [875]		Foraging, feeding or related behaviour known to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat likely 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]		Foraging, feeding or related behaviour known to occur within area
Calidris tenuirostris Great Knot [862]	Critically Endangered	Foraging, feeding or related behaviour known to occur within area
Catharacta skua Great Skua [59472]		Species or species habitat may occur within area
Cereopsis novaehollandiae grisea Cape Barren Goose (south-western), Recherche Cape Barren Goose [25978]	Vulnerable	Species or species habitat known to occur within area
Charadrius bicinctus Double-banded Plover [895]		Species or species habitat known to occur within area
Charadrius ruficapillus Red-capped Plover [881]		Foraging, feeding or related behaviour known to occur within area
Chrysococcyx osculans Black-eared Cuckoo [705]		Species or species habitat likely 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

Name	Threatened	Type of Presence
		to occur within area
Gallinago megala Swinhoe's Snipe [864]		Foraging, feeding or related behaviour likely to occur within area
Gallinago stenura Pin-tailed Snipe [841]		Foraging, feeding or related behaviour likely to occur within area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat known to occur within area
Halobaena caerulea Blue Petrel [1059]	Vulnerable	Species or species habitat may occur within area
Heteroscelus brevipes Grey-tailed Tattler [59311]		Foraging, feeding or related behaviour known to 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
Macronectes giganteus Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat likely to occur within area
Numenius minutus Little Curlew, Little Whimbrel [848]		Foraging, feeding or related behaviour likely to occur within area
Pachyptila turtur Fairy Prion [1066]		Species or species habitat may occur within area
Pandion haliaetus Osprey [952]		Species or species habitat likely to occur within area
Phalacrocorax fuscescens Black-faced Cormorant [59660]		Foraging, feeding or related behaviour likely to occur within area
Pterodroma mollis Soft-plumaged Petrel [1036]	Vulnerable	Species or species habitat may occur within area

Name	Threatened	Type of Presence
[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]		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
[Thalassarche steadi](#) White-capped Albatross [64462]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Thinornis rubricollis](#) Hooded Plover [59510]		Species or species habitat known to occur within area
[Tringa nebularia](#) Common Greenshank, Greenshank [832]		Species or species habitat 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

Name	Threatened	Type of Presence
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 habitat may occur within area
Phyllopteryx taeniolatus Common Seadragon, Weedy Seadragon [66268]		Species or species habitat may occur within area
Pugnaso curtirostris Pugnose Pipefish, Pug-nosed Pipefish [66269]		Species or species habitat may occur within area
Solegnathus lettiensis Gunther's Pipehorse, Indonesian Pipefish [66273]		Species or species habitat may occur within area
Stigmatopora argus Spotted Pipefish, Gulf Pipefish, Peacock Pipefish [66276]		Species or species habitat may occur within area
Stigmatopora nigra Widebody Pipefish, Wide-bodied Pipefish, Black Pipefish [66277]		Species or species habitat may occur within area
Urocampus carinirostris Hairy Pipefish [66282]		Species or species habitat may occur within area
Vanacampus margaritifer Mother-of-pearl Pipefish [66283]		Species or species habitat may occur within area
Vanacampus phillipi Port Phillip Pipefish [66284]		Species or species habitat may occur within area
Vanacampus poecilolaemus Longsnout Pipefish, Australian Long-snout Pipefish, Long-snouted Pipefish [66285]		Species or species habitat may occur within area
Mammals		
Arctocephalus forsteri Long-nosed Fur-seal, New Zealand Fur-seal [20]		Species or species habitat likely to occur within area
Neophoca cinerea Australian Sea-lion, Australian Sea Lion [22]	Endangered	Species or species habitat likely to occur within area

Name	Threatened	Type of Presence
Reptiles		
Caretta caretta Loggerhead Turtle [1763]	Endangered	Breeding likely to occur within area
Chelonia mydas Green Turtle [1765]	Vulnerable	Species or species habitat may 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 may occur within area
Caperea marginata Pygmy Right Whale [39]		Species or species habitat may occur within area
Delphinus delphis Common Dolphin, Short-beaked Common Dolphin [60]		Species or species habitat may occur within area
Eubalaena australis Southern Right Whale [40]	Endangered	Breeding known to occur within area
Grampus griseus Risso's Dolphin, Grampus [64]		Species or species habitat may occur within area
Lagenorhynchus obscurus Dusky Dolphin [43]		Species or species habitat may occur within area
Megaptera novaeangliae Humpback Whale [38]	Vulnerable	Species or species habitat likely 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
Dalyup	WA
Esperance 827 and Part 373 & 826	WA
Helms Arboretum	WA
Kendall Road	WA
Lake Mortijinup	WA
Lake Warden	WA
Mount Ridley	WA
Mullet Lake	WA
Shark Lake	WA
Speddingup East	WA
Truslove Townsite	WA
Unnamed WA04182	WA
Unnamed WA24511	WA
Unnamed WA24953	WA
Unnamed WA31313	WA
Unnamed WA32259	WA
Woody Lake	WA

Invasive Species [Resource Information]

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

Name	Status	Type of Presence
Birds		
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
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

Name	Status	Type of Presence
Vulpes vulpes		
Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Asparagus asparagoides		
Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473]		Species or species habitat likely to occur within area
Carrichtera annua		
Ward's Weed [9511]		Species or species habitat may occur within area
Lycium ferocissimum		
African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area

Nationally Important Wetlands	[Resource Information]
Name	State
Lake Warden System	WA
Mortijinup Lake System	WA
Pink Lake	WA

Caveat

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

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

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

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

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

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

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

- migratory and
- marine

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

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

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

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

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

Coordinates

-33.62139 121.80309

Acknowledgements

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

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

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

Please feel free to provide feedback via the Contact Us page.

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NatureMap
Mapping Western Australia's biodiversity

AI005-009 NatureMap 30km Species Report

Created By Guest user on 17/11/2021

Current Names Only	Yes
Core Datasets Only	Yes
Method	'By Circle'
Centre	121° 48' 11" E,33° 37' 17" S
Buffer	30km
Group By	Kingdom

Kingdom	Species	Records
Animalia	717	10870
Chromista	18	34
Fungi	57	141
Plantae	1378	4769
TOTAL	**2170**	**15814**

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
Animalia					
1.	24559	*Acanthagenys rufogularis (Spiny-cheeked Honeyeater)*			
2.	24260	*Acanthiza apicalis (Broad-tailed Thornbill, Inland Thornbill)*			
3.	24261	*Acanthiza chrysorrhoa (Yellow-rumped Thornbill)*			
4.	24265	*Acanthiza uropygialis (Chestnut-rumped Thornbill)*			
5.		*Acanthopagrus butcheri*			
6.	25242	*Acanthophis antarcticus (Southern Death Adder)*		P3	
7.	24560	*Acanthorhynchus superciliosus (Western Spinebill)*			
8.	25535	*Accipiter cirrocephalus (Collared Sparrowhawk)*			
9.	25536	*Accipiter fasciatus (Brown Goshawk)*			
10.		*Acercella falcipes*			
11.	42368	*Acritoscincus trilineatus (Western Three-lined Skink)*			
12.	25755	*Acrocephalus australis (Australian Reed Warbler)*			
13.	41323	*Actitis hypoleucos (Common Sandpiper)*		IA	
14.		*Adversaeschna brevistyla*			
15.		*Aedes (Och.) sp. 1 (nr. nigrithorax) (SAP)*			
16.		*Aedes camptorhynchus*			
17.		*Aedes sp.*			
18.	25544	*Aegotheles cristatus (Australian Owlet-nightjar)*			
19.		*Agaue similis*			
20.		*Agaue tenuipes*			
21.		*Agauopsis calidictyota*			Y
22.		*Agauopsis miliaris*			
23.		*Agraptocorixa eurynome*			
24.		*Agraptocorixa parvipunctata*			
25.		*Agraptocorixa sp.*			
26.		*Alboa worooa*			
27.		*Aldrichetta forsteri*			
28.		*Allodessus bistrigatus*			
29.		*Allomycterus pilatus*			
30.		*Ammotretis elongatus*			
31.	24860	*Amphibolurus norrisi (Mallee Tree Dragon)*			
32.	25647	*Amytornis striatus (Striated Grasswren)*			
33.		*Aname mainae*			
34.		*Aname tepperi*			
35.	24310	*Anas castanea (Chestnut Teal)*			
36.	24312	*Anas gracilis (Grey Teal)*			
37.	24313	*Anas platyrhynchos (Mallard)*			
38.		*Anas platyrhynchos subsp. domesticus*			
39.	24315	*Anas rhynchotis (Australasian Shoveler)*			
40.	24316	*Anas superciliosa (Pacific Black Duck)*			
41.		*Anax papuensis*			
42.	47414	*Anhinga novaehollandiae (Australasian Darter)*			
43.		*Anisops baylii*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
44.		*Anisops gratus*			
45.		*Anisops hackeri*			
46.		*Anisops hyperion*			
47.		*Anisops sp.*			
48.		*Anisops thienemanni*			
49.		*Anostraca (unident.)*			
50.	24561	*Anthochaera carunculata (Red Wattlebird)*			
51.	24562	*Anthochaera lunulata (Western Little Wattlebird)*			
52.	24599	*Anthus australis subsp. australis (Australian Pipit)*			
53.		*Antiporus gilberti*			
54.		*Antiporus occidentalis*			
55.		*Apocyclops dengizicus*			
56.	24991	*Aprasia repens (Sand-plain Worm-lizard)*			
57.	24994	*Aprasia striolata (Lined Worm-lizard)*			
58.	25554	*Apus pacificus (Fork-tailed Swift, Pacific Swift)*		IA	
59.	24285	*Aquila audax (Wedge-tailed Eagle)*			
60.		*Aracana aurita*			
61.		*Aracana ornata*			
62.		*Araneus necopinus*			
63.		*Araneus senicaudatus*			
64.		*Arcella discoides*			
65.		*Arcella hemisphaerica*			
66.		*Arcella sp. b (SAP)*			
67.	24208	*Arctocephalus forsteri (New Zealand Fur Seal, long-nosed fur-seal)*		S	
68.	25558	*Ardea ibis (Cattle Egret)*			
69.	41324	*Ardea modesta (great egret, white egret)*			
70.	24340	*Ardea novaehollandiae (White-faced Heron)*			
71.	24341	*Ardea pacifica (White-necked Heron)*			
72.	24610	*Ardeotis australis (Australian Bustard)*			
73.	25736	*Arenaria interpres (Ruddy Turnstone)*		IA	
74.		*Argiope trifasciata*			
75.		*Arrenurus (Truncaturus) sp. (SAP)*			
76.		*Arripis truttaceus*			Y
77.	25566	*Artamus cinereus (Black-faced Woodswallow)*			
78.	24353	*Artamus cyanopterus (Dusky Woodswallow)*			
79.		*Artoria cingulipes*			
80.		*Artoria flavimana*			
81.		*Artoria taeniifera*			
82.		*Artoriopsis eccentrica*			
83.		*Artoriopsis expolita*			
84.		*Artoriopsis joergi*			
85.		*Ascorhis occidua*			
86.		*Asplanchna brightwelli*			
87.		*Astigmata sp.*			Y
88.		*Asymbolus vincenti*			
89.		*Atherinosoma wallacei*			
90.		*Aulopus purpurissatus*			
91.		*Austracantha minax*			
92.		*Australocyclops australis*			
93.		*Australocyclops similis*			
94.		*Australocypris insularis*			
95.		*Australocypris sp.*			
96.		*Australomedusa ?baylii (SAP)*			
97.		*Austroagrion cyane*			
98.		*Austrochiltonia sp.*			
99.		*Austrochiltonia subtenuis*			
100.		*Austrolestes analis*			
101.		*Austrolestes annulosus*			
102.		*Austrolestes aridus*			
103.		*Austrolestes io*			
104.		*Austrolestes sp.*			
105.	24318	*Aythya australis (Hardhead)*			
106.		*Barnardius zonarius*			
107.		*Bdelloidea med-large contracted of RJS (SAP)*			
108.		*Bdelloidea sp.*			
109.		*Bdelloidea sp. 2:2*			
110.		*Bennelongia barangaroo lineage*			
111.		*Bennelongia frumenta*			
112.		*Berosus discolor*			
113.		*Berosus munitipennis*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
114.		*Berosus nutans*			
115.		*Berosus sp.*			
116.		*Bezzia sp. (not 1 or 2)*			
117.		*Bezzia sp. 2 (SAP)*			
118.		*Bivalvia sp.*			
119.	24319	*Biziura lobata (Musk Duck)*			
120.		*Boeckella triarticulata*			
121.		*Boolathana mainae*			
122.		*Brachaluteres jacksonianus*			
123.		*Brachionus angularis*			
124.		*Brachionus cf. nilsoni (SAP)*			
125.		*Brachionus cf. plicatilis (SAP)*			
126.		*Brachionus leydigii*			
127.		*Brachionus plicatilis complex ("towerinninensis" form)*			Y
128.		*Brachionus plicatilis s.l.*			
129.		*Brachionus quadridentatus*			
130.		*Brachionus quadridentatus cluniorbicularis*			
131.		*Brachionus rotundiformis*			
132.		*Brachionus sp.*			
133.		*Brachionus urceolaris s.l.*			
134.		*Bradyagaue exilis*			Y
135.		*Branchipodidae sp.*			
136.		*Brentidae sp.*			
137.	24359	*Burhinus grallarius (Bush Stone-curlew)*			
138.		*Caboncypris kondininensis*			
139.	25598	*Cacomantis flabelliformis (Fan-tailed Cuckoo)*			
140.	24427	*Cacomantis flabelliformis subsp. flabelliformis (Fan-tailed Cuckoo)*			
141.	42307	*Cacomantis pallidus (Pallid Cuckoo)*			
142.	24269	*Calamanthus campestris (Rufous Fieldwren)*			
143.		*Calamoecia clitellata*			
144.		*Calamoecia sp. 342 (ampulla variant) (CB)*			
145.		*Calanoida sp.*			
146.	24779	*Calidris acuminata (Sharp-tailed Sandpiper)*		IA	
147.	24780	*Calidris alba (Sanderling)*		IA	
148.	25738	*Calidris canutus (Red Knot, knot)*		IA	
149.	24783	*Calidris canutus subsp. rogersi (Red Knot (north-eastern Siberia))*		T	
150.	24784	*Calidris ferruginea (Curlew Sandpiper)*		T	
151.	24786	*Calidris melanotos (Pectoral Sandpiper)*		IA	
152.	24788	*Calidris ruficollis (Red-necked Stint)*		IA	
153.	24790	*Calidris tenuirostris (Great Knot)*		T	
154.		*Callogobius mucosus*			
155.	24734	*Calyptorhynchus latirostris (Carnaby's Cockatoo, White-tailed Short-billed Black Cockatoo)*		T	
156.	48400	*Calyptorhynchus sp. (white-tailed black cockatoo)*		T	
157.		*Candonocypris novaezelandiae*			
158.		*Capitella sp.*			
159.		*Capitellidae sp.*			
160.		*Capropygia unistriata*			
161.		*Carabidae sp.*			
162.		*Carcharhinus brachyurus*			
163.		*Ceinidae sp.*			
164.		*Centropyxis aculeata*			
165.		*Centropyxis cassis*			Y
166.		*Centropyxis sp. b (SAP)*			
167.		*Ceratopogonidae sp.*			
168.		*Ceratopogonidae sp. A (SAP)*			
169.	24086	*Cercartetus concinnus (Western Pygmy-possum, Mundarda)*			
170.		*Cercophonius granulosus*			
171.	25551	*Cereopsis novaehollandiae (Cape Barren Goose)*		T	
172.	24320	*Cereopsis novaehollandiae subsp. grisea (Recherche Cape Barren Goose, Cape Barren Goose)*		T	
173.		*Ceriodaphnia n. sp. c (Berner sp.#1) (SAP)*			
174.	25575	*Charadrius leschenaultii (Greater Sand Plover)*		T	
175.	24377	*Charadrius ruficapillus (Red-capped Plover)*			
176.	24321	*Chenonetta jubata (Australian Wood Duck, Wood Duck)*			
177.	47909	*Cheramoeca leucosterna (White-backed Swallow)*			
178.		*Chironomidae sp.*			
179.		*Chironominae sp.*			
180.		*Chironomus aff. alternans (V24) (CB)*			
181.		*Chironomus occidentalis*			

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182.		*Chironomus tepperi*			
183.	24980	*Christinus marmoratus (Marbled Gecko)*			
184.		*Chroicocephalus novaehollandiae*			
185.	24288	*Circus approximans (Swamp Harrier)*			
186.	24289	*Circus assimilis (Spotted Harrier)*			
187.		*Cladopelma curtivalva*			
188.	24774	*Cladorhynchus leucocephalus (Banded Stilt)*			
189.		*Cladotanytarsus sp. A (SAP)*			
190.		*Cletocamptus aff deitersi*			
191.		*Clinohelea sp.*			
192.		*Clynotis albobarbatus*			
193.	25675	*Colluricincla harmonica (Grey Shrike-thrush)*			
194.	24399	*Columba livia (Domestic Pigeon)*	Y		
195.		*Colurella colurus*			
196.		*Colurella uncinata*			
197.	25568	*Coracina novaehollandiae (Black-faced Cuckoo-shrike)*			
198.		*Cordylophora sp.*			Y
199.		*Corixidae sp.*			
200.		*Cormocephalus michaelseni*			
201.	24416	*Corvus bennetti (Little Crow)*			
202.	25592	*Corvus coronoides (Australian Raven)*			
203.	24417	*Corvus coronoides subsp. perplexus (Australian Raven)*			
204.		*Corynoneura sp. (V49) (SAP)*			
205.	24671	*Coturnix pectoralis (Stubble Quail)*			
206.	25701	*Coturnix ypsilophora (Brown Quail)*			
207.		*Coxiella glabra*			
208.		*Coxiella sp.*			
209.		*Coxiella sp. 3 (ABP)*			Y
210.		*Coxiella striatula*			
211.	24420	*Cracticus nigrogularis (Pied Butcherbird)*			
212.	25595	*Cracticus tibicen (Australian Magpie)*			
213.	24422	*Cracticus tibicen subsp. dorsalis (White-backed Magpie)*			
214.	25596	*Cracticus torquatus (Grey Butcherbird)*			
215.	25398	*Crinia georgiana (Quacking Frog)*			
216.	25399	*Crinia glauerti (Clicking Frog)*			
217.	25401	*Crinia pseudinsignifera (Bleating Froglet)*			
218.	30893	*Cryptoblepharus buchananii*			
219.	30888	*Cryptoblepharus pulcher subsp. clarus*			
220.		*Cryptochironomus griseidorsum*			
221.	42385	*Ctenophorus chapmani (Eastern Heath Dragon)*			
222.	25460	*Ctenophorus maculatus (Spotted Military Dragon)*			
223.	24879	*Ctenophorus maculatus subsp. griseus (Spotted Military Dragon)*			
224.	25040	*Ctenotus gemmula (Jewelled South-west Ctenotus (Swan Coastal Plain subpop P3), skink)*			
225.	25047	*Ctenotus impar*			
226.	25049	*Ctenotus labillardieri*			
227.	25074	*Ctenotus schomburgkii*			
228.		*Culicidae sp.*			
229.		*Culicoides sp.*			
230.		*Curculionidae sp.*			
231.		*Cyclosa trilobata*			
232.	24322	*Cygnus atratus (Black Swan)*			
233.		*Cyprideis australiensis*			
234.		*Cyprididae sp.*			
235.		*Cyprinotus cingalensis*			
236.		*Cyprinotus cingalensis (ex edwardi)*			
237.		*Cytherideidae sp.*			Y
238.		*Daphnia australis*			
239.		*Daphnia carinata*			
240.		*Daphnia queenslandensis*			
241.		*Daphnia sp.*			
242.		*Daphnia truncata*			
243.		*Daphnia wardi*			
244.	25673	*Daphoenositta chrysoptera (Varied Sittella)*			
245.		*Dasyhelea sp.*			
246.	24995	*Delma australis*			
247.	25766	*Delma fraseri (Fraser's Legless Lizard)*			
248.	24052	*Delphinus delphis (Common Dolphin)*			
249.	25346	*Dermochelys coriacea (Leatherback Turtle)*		T	
250.		*Dero digitata*			

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251.		*Diacypris 'gunyidi' (ms name) (SAP)*			
252.		*Diacypris compacta*			
253.		*Diacypris sp.*			
254.		*Diacypris sp. 581 (n. sp.) (SAP)*			Y
255.		*Diacypris spinosa*			
256.		*Diaprepocoris barycephala*			
257.		*Diaprepocoris sp.*			
258.		*Dicrotendipes conjunctus*			
259.		*Dicrotendipes pseudoconjunctus*			
260.		*Dicrotendipes sp.*			
261.		*Dicrotendipes sp. A (V47) (SAP)*			
262.		*Difflugia sp.*			
263.		*Difflugia sp. b (SAP)*			
264.		*Diodon sp.*			
265.	25618	*Diomedea exulans (Wandering Albatross)*		T	
266.	41403	*Diplodactylus calcicolus (South Coast Gecko)*			
267.		*Dolichopodidae sp.*			
268.		*Dolichopodidae sp. B (SAP)*			
269.	24470	*Dromaius novaehollandiae (Emu)*			
270.		*Dytiscidae sp.*			
271.	25251	*Echiopsis curta (Bardick)*			
272.		*Ecnomus pansus/turgidus*			
273.	25096	*Egernia kingii (King's Skink)*			
274.		*Egretta garzetta*			
275.		*Egretta novaehollandiae*			
276.		*Elanus axillaris*			
277.	25250	*Elapognathus coronatus (Crowned Snake)*			
278.	47937	*Elseyornis melanops (Black-fronted Dotterel)*			
279.		*Empididae sp.*			
280.		*Enchytraeidae sp.*			
281.		*Enochrus eyrensis*			
282.		*Enochrus sp.*			
283.		*Eolophus roseicapillus*			
284.		*Ephydridae sp.*			
285.		*Ephydridae sp. 3 (SAP)*			
286.		*Ephydridae sp. 6 (SAP)*			
287.		*Ephydridae sp. 7(SAP)*			
288.	24567	*Epthianura albifrons (White-fronted Chat)*			
289.	24379	*Erythrogonys cinctus (Red-kneed Dotterel)*			
290.	47938	*Esacus magnirostris (Beach Stone-curlew, Beach Thick-knee)*			
291.	24043	*Eubalaena australis (Southern Right Whale)*		T	
292.		*Eubalichthys mosaicus*			
293.		*Euchlanis dilatata*			
294.		*Eucyclops australiensis*			
295.	25744	*Eudyptes chrysocome (Rockhopper Penguin)*			
296.	24816	*Eudyptes pachyrhynchus (Fiordland Penguin)*			
297.	24817	*Eudyptes sclateri (Erect-crested Penguin)*			Y
298.		*Euglypha sp.*			
299.		*Exosphaeroma sp.*			
300.		*Eylais sp.*			
301.	25621	*Falco berigora (Brown Falcon)*			
302.	25622	*Falco cenchroides (Australian Kestrel, Nankeen Kestrel)*			
303.	25623	*Falco longipennis (Australian Hobby)*			
304.	25624	*Falco peregrinus (Peregrine Falcon)*		S	
305.		*Favonigobius lateralis*			
306.		*Ferrissia petterdi*			
307.		*Filinia longiseta*			
308.	25727	*Fulica atra (Eurasian Coot)*			
309.	24761	*Fulica atra subsp. australis (Eurasian Coot)*			
310.		*Galaxias maculatus*			
311.	39404	*Galaxias truttaceus (Trout Minnow)*			
312.	25730	*Gallirallus philippensis (Buff-banded Rail)*			
313.		*Gea theridioides*			
314.		*Geogarypus taylori*			
315.	34030	*Geotria australis (Pouched Lamprey)*		P3	
316.	25530	*Gerygone fusca (Western Gerygone)*			
317.		*Gianius sp. WA9 (SAP)*			Y
318.		*Gladioferens imparipes*			
319.	47962	*Glyciphila melanops (Tawny-crowned Honeyeater)*			
320.		*Glyptophysa cf. gibbosa (SAP)*			

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321.		*Gonorynchus greyi*			
322.	24443	*Grallina cyanoleuca (Magpie-lark)*			
323.	24056	*Grampus griseus (Risso's Dolphin)*			
324.		*Gymnocthebius sp. 1 (SAP)*			
325.		*Gymnometriocnemus sp. B (=V45=sp. A&2=ortho sp. O)*			
326.		*Gymnometriocnemus spp. (not V44 or V45)*			
327.		*Gyrinidae sp.*			
328.		*Habronestes grimwadei*			
329.	25627	*Haematopus fuliginosus (Sooty Oystercatcher)*			
330.	24485	*Haematopus fuliginosus subsp. fuliginosus (Sooty Oystercatcher)*			
331.	24487	*Haematopus longirostris (Pied Oystercatcher)*			
332.	24293	*Haliaeetus leucogaster (White-bellied Sea-Eagle)*			
333.	24295	*Haliastur sphenurus (Whistling Kite)*			
334.		*Halicyclops sp. 1 (nr ambiguus) (SAP)*			
335.		*Haliplus fuscatus*			
336.		*Haliplus sp.*			
337.		*Haloniscus searlei*			
338.		*Haloniscus sp.*			
339.		*Harpacticoida sp*			
340.	25410	*Heleioporus eyrei (Moaning Frog)*			
341.	25412	*Heleioporus psammophilus (Sand Frog)*			
342.		*Hellyethira litua*			
343.		*Helochares tenuistriatus*			
344.		*Hemicordulia tau*			
345.	25474	*Hemiergis initialis*			
346.	25115	*Hemiergis initialis subsp. initialis*			
347.	25475	*Hemiergis peronii*			
348.	25117	*Hemiergis peronii subsp. peronii*			
349.		*Heteroceridae sp.*			
350.		*Hexarthra fennica*			
351.		*Hexarthra mira*			
352.		*Hexarthra n. sp.a (cf. fennica with 7/7 unci teeth) (SAP)*			
353.	47965	*Hieraaetus morphnoides (Little Eagle)*			
354.	25734	*Himantopus himantopus (Black-winged Stilt)*			
355.		*Hirudinea sp.*			
356.	24491	*Hirundo neoxena (Welcome Swallow)*			
357.		*Hoggicosa storri*			
358.		*Hogna crispipes*			
359.		*Hogna kuyani*			
360.		*Holasteron esperance*			Y
361.		*Hyderodes crassus*			
362.		*Hydra sp.*			
363.		*Hydrachna sp.*			
364.		*Hydrachnidae sp.*			
365.		*Hydrobiidae sp.*			
366.		*Hydrophilidae sp.*			
367.	48587	*Hydroprogne caspia (Caspian Tern)*		IA	
368.		*Hydryphantes meridianus*			
369.		*Hyphydrus elegans*			
370.		*Hyphydrus sp.*			
371.		*Idiommata blackwalli*			
372.		*Ilyocryptus cf. timmsi (SAP)*			Y
373.		*Ilyocypris australiensis*			
374.		*Ilyodromus sp.*			
375.		*Ischnura heterosticta heterosticta*			
376.	48588	*Isoodon fusciventer (Quenda, southwestern brown bandicoot)*		P4	
377.		*Isopeda leishmanni*			
378.		*Kathetostoma laeve*			
379.		*Kennethia cristata*			
380.		*Keratella australis*			
381.		*Keratella cf. quadrata (SAP)*			
382.		*Keratella procurva*			
383.		*Keratella quadrata*			
384.		*Kiefferulus intertinctus*			
385.		*Kiefferulus martini*			
386.		*Koenikea nr australica (=verrucosa)*			
387.	24070	*Kogia breviceps (Pygmy Sperm Whale)*			
388.		*Laccobius clarus*			
389.		*Lampona cylindrata*			
390.		*Lancetes lanceolatus*			

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391.		*Lancetes sp.*			
392.	24510	*Larus dominicanus (Kelp Gull)*			
393.	24511	*Larus novaehollandiae subsp. novaehollandiae (Silver Gull)*			
394.	25638	*Larus pacificus (Pacific Gull)*			
395.	24512	*Larus pacificus subsp. georgii (Pacific Gull)*			
396.		*Lecane (M) sp. A (ESP023)*			Y
397.		*Lecane [M] sp.*			
398.		*Lecane bulla*			
399.		*Lecane luna*			
400.		*Lecane sp. s.str.*			
401.	24557	*Leipoa ocellata (Malleefowl)*		T	
402.		*Lepadella discoidea*			
403.		*Lepadella patella*			
404.		*Lepidoblennius marmoratus*			
405.		*Lepidoptera (non-pyralid)*			
406.		*Lepidoptera (non-pyralid) sp. 3 (SAP)*			
407.		*Lepidoptera (non-pyralid) sp. 9 (SAP) (nr Pilbara sp. 3)*			
408.		*Leptatherina presbyteroides*			
409.		*Leptoceridae sp.*			
410.		*Leptocythere lacustris*			
411.		*Leptoichthys fistularius*			
412.	25131	*Lerista distinguenda*			
413.	25483	*Lerista microtis*			
414.	25153	*Lerista microtis subsp. intermedia*			
415.		*Lesquereusia sp.*			
416.		*Leydigia cf. leydigii (SAP)*			
417.	25659	*Lichenostomus leucotis (White-eared Honeyeater)*			
418.	25661	*Lichmera indistincta (Brown Honeyeater)*			
419.	25739	*Limicola falcinellus (Broad-billed Sandpiper)*		IA	
420.		*Limnesia dentifera*			
421.		*Limnichidae sp.*			
422.		*Limnochares australica*			
423.	25415	*Limnodynastes dorsalis (Western Banjo Frog)*			
424.		*Limnophyes vestitus (V41)*			
425.	30932	*Limosa lapponica (Bar-tailed Godwit)*		IA	
426.	25383	*Litoria cyclorhyncha (Spotted-thighed Frog)*			
427.		*Lohmannella pinggi*			
428.		*Lophoictinia isura*			
429.		*Lycosa godeffroyi*			
430.	24132	*Macropus fuliginosus (Western Grey Kangaroo)*			
431.		*Macrothrix breviseta*			
432.		*Macrothrix cf. breviseta (SAP)*			
433.		*Macrothrix sp.*			
434.		*Macrotrachela sp. a (SAP)*			Y
435.		*Makaira sp.*			Y
436.	24326	*Malacorhynchus membranaceus (Pink-eared Duck)*			
437.		*Manayunkia n. sp.*			
438.	24583	*Manorina flavigula (Yellow-throated Miner)*			
439.		*Maratus chrysomelas*			
440.	25758	*Megalurus gramineus (Little Grassbird)*			
441.		*Megaporus howittii*			
442.		*Megaporus solidus*			
443.		*Megaporus sp.*			
444.		*Melita kauerti*			
445.	24736	*Melopsittacus undulatus (Budgerigar)*			
446.	25184	*Menetia greyii*			
447.		*Meridiecyclops baylyi*			
448.	24598	*Merops ornatus (Rainbow Bee-eater)*			
449.		*Mesochra baylyi*			
450.		*Mesochra nr flava*			
451.		*Mesocyclops brooksi*			
452.		*Mesostigmata sp.*			
453.		*Microcarbo melanoleucos*			
454.		*Micronecta gracilis*			
455.		*Micronecta robusta*			
456.		*Micronecta sp.*			
457.	24213	*Mirounga leonina (Southern Elephant Seal)*			
458.		*Missulena granulosa*			
459.		*Missulena hoggi*			
460.		*Molycria quadricauda*			

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461.		*Monohelea sp. 3 (SAP)*			
462.	25188	*Morethia adelaidensis*			
463.	25192	*Morethia obscura*			
464.	48008	*Morus serrator (Australasian Gannet)*			
465.		*Muraenichthys breviceps*			
466.	24223	*Mus musculus (House Mouse)*	Y		
467.		*Muscidae sp.*			
468.		*Muscidae sp. A (SAP)*			
469.		*Muscidae sp. D (SAP)*			
470.		*Myandra bicincta*			
471.	25610	*Myiagra inquieta (Restless Flycatcher)*			
472.		*Mytilocypris ambiguosa*			
473.		*Mytilocypris mytiloides*			
474.		*Mytilocypris sp.*			
475.		*Naididae (ex Tubificidae)*			
476.		*Necterosoma penicillatus*			
477.		*Necterosoma sp.*			
478.		*Necterosoma wollastoni*			
479.		*Nematoda sp.*			
480.	25421	*Neobatrachus albipes (White-footed Trilling Frog)*			
481.	25425	*Neobatrachus kunapalari (Kunapalari Frog)*			
482.	25426	*Neobatrachus pelobatoides (Humming Frog)*			
483.	24738	*Neophema elegans (Elegant Parrot)*			
484.	24739	*Neophema petrophila (Rock Parrot)*			
485.	24210	*Neophoca cinerea (Australian Sea-lion)*		T	
486.		*Nephila edulis*			
487.		*Nerthra sp.*			
488.		*Newnhamia fenestrata*			
489.		*Nicodamus mainae*			
490.		*Nilobezzia sp.*			
491.		*Nitocra near sp. 4 (SAP)*			
492.		*Nitocra reducta*			
493.		*Nitocra sp. 4 (SAP)*			
494.		*Nitocra sp. 5 (nr reducta) (SAP)*			
495.		*No invertebrates*			
496.		*Nomindra flavipes*			
497.		*Notalina spira*			
498.	48022	*Notamacropus irma (Western Brush Wallaby)*		P4	
499.	25252	*Notechis scutatus (Tiger Snake)*			
500.		*Notholca salina*			
501.	24229	*Notomys mitchellii (Mitchell's Hopping-mouse)*			
502.		*Notonectidae sp.*			
503.		*Novakiella trituberculosa*			
504.	25564	*Nycticorax caledonicus (Rufous Night Heron)*			
505.	24194	*Nyctophilus geoffroyi (Lesser Long-eared Bat)*			
506.		*Ochthebius sp.*			
507.		*Ochthebius sp. 4*			Y
508.	24407	*Ocyphaps lophotes (Crested Pigeon)*			
509.		*Oecetis sp.*			
510.		*Oecobius navus*			
511.		*Oligochaeta sp.*			
512.		*Oniscidae sp.*			
513.		*Onychocamptus bengalensis*			
514.		*Opisthopora sp.*			
515.		*Oribatida sp.*			
516.		*Oribatida sp. 1 (PLP)*			Y
517.		*Oribatida sp. 2(PLP)*			Y
518.		*Orthetrum caledonicum*			
519.		*Orthocladiinae sp.*			
520.		*Orthocladiinae sp. G (SAP)*			
521.		*Orthocladiinae sp. I (SAP)*			
522.		*Orthocladiinae sp. J (SAP)*			
523.		*Orthocladiinae sp. P (SAP)*			
524.	24328	*Oxyura australis (Blue-billed Duck)*		P4	
525.		*Ozestheria packardi*			
526.	24619	*Pachycephala inornata (Gilbert's Whistler)*			
527.	25680	*Pachycephala rufiventris (Rufous Whistler)*			
528.		*Palaemonetes australis*			
529.		*Paracyclops ?chiltoni (SAP)*			
530.		*Paralimnophyes pullulus (V42)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
531.		*Paramerina levidensis*			
532.		*Paranais litoralis*			
533.		*Parartemia longicaudata*			
534.		*Parartemia sp.*			
535.	25253	*Parasuta gouldii*			
536.	25255	*Parasuta nigriceps*			
537.	25256	*Parasuta spectabilis subsp. bushi (spectacled hooded snake (Esperance), Mallee Black-headed Snake (Esperance area))*		P1	Y
538.	25681	*Pardalotus punctatus (Spotted Pardalote)*			
539.	24626	*Pardalotus punctatus subsp. xanthopyge (Yellow-rumped Pardalote)*			
540.	25682	*Pardalotus striatus (Striated Pardalote)*			
541.		*Paroster niger*			
542.	24642	*Passer montanus (Eurasian Tree Sparrow)*	Y		
543.	24648	*Pelecanus conspicillatus (Australian Pelican)*			
544.		*Pescecyclops sp. 434 (Stuart's original arnaudi sensu Sars)*			
545.		*Pescecyclops sp. 442=462=465=CB2 (salinarum in Morton)*			
546.	48060	*Petrochelidon ariel (Fairy Martin)*			
547.	48061	*Petrochelidon nigricans (Tree Martin)*			
548.	48066	*Petroica boodang (Scarlet Robin)*			
549.		*Pezidae sp.*			
550.	41348	*Pezoporus flaviventris (Western Ground Parrot)*		T	
551.	25697	*Phalacrocorax carbo (Great Cormorant)*			
552.	24665	*Phalacrocorax fuscescens (Black-faced Cormorant)*			
553.	25698	*Phalacrocorax melanoleucos (Little Pied Cormorant)*			
554.	24667	*Phalacrocorax sulcirostris (Little Black Cormorant)*			
555.	25699	*Phalacrocorax varius (Pied Cormorant)*			
556.	24409	*Phaps chalcoptera (Common Bronzewing)*			
557.	25587	*Phaps elegans (Brush Bronzewing)*			
558.		*Philodinidae sp.*			
559.		*Phycodurus eques subsp. glauerti*			Y
560.	48071	*Phylidonyris niger (White-cheeked Honeyeater)*			
561.	24596	*Phylidonyris novaehollandiae (New Holland Honeyeater)*			
562.		*Phyllopteryx taeniolatus*			
563.		*Physa acuta*			
564.		*Placobdelloides sp.*			
565.	24841	*Platalea flavipes (Yellow-billed Spoonbill)*			
566.	24842	*Platalea regia (Royal Spoonbill)*			
567.		*Platycephalus speculator*			
568.	25720	*Platycercus icterotis (Western Rosella)*			
569.	24747	*Platycercus spurius (Red-capped Parrot)*			
570.		*Platycypris baueri*			
571.	24843	*Plegadis falcinellus (Glossy Ibis)*		IA	
572.		*Pleuroxus inermis*			
573.		*Pleuroxus jugosus*			
574.		*Pleuroxus sp.*			
575.		*Plumatella sp.*			
576.		*Plurispina cf. multituberculata (SPS)*			Y
577.		*Plurispina chauliodis*			
578.	24381	*Pluvialis dominica (American Golden Plover)*			
579.	24382	*Pluvialis fulva (Pacific Golden Plover)*		IA	
580.	24383	*Pluvialis squatarola (Grey Plover)*		IA	
581.	25703	*Podargus strigoides (Tawny Frogmouth)*			
582.	25704	*Podiceps cristatus (Great Crested Grebe)*			
583.	25510	*Pogona minor (Dwarf Bearded Dragon)*			
584.	24907	*Pogona minor subsp. minor (Dwarf Bearded Dragon)*			
585.	24681	*Poliocephalus poliocephalus (Hoary-headed Grebe)*			
586.		*Polypedilum nr vespertinus (M2) (SAP)*			
587.		*Polypedilum nr. convexum (SAP)*			
588.		*Polypedilum nubifer*			
589.		*Pomatiopsidae sp.*			
590.	24683	*Pomatostomus superciliosus (White-browed Babbler)*			
591.	25731	*Porphyrio porphyrio (Purple Swamphen)*			
592.	24767	*Porphyrio porphyrio subsp. bellus (Purple Swamphen)*			
593.	24769	*Porzana fluminea (Australian Spotted Crake)*			
594.	24771	*Porzana tabuensis (Spotless Crake)*			
595.		*Pristina jenkinae*			
596.		*Pristina longiseta*			
597.		*Procladius paludicola*			
598.		*Procladius villosimanus*			
599.		*Protogarypinus giganteus*			

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600.		*Protozoan sp*			
601.		*Pseudocaranx dentex*			
602.		*Pseudogobius olorum*			
603.	44625	*Pseudohydryphantes doegi (Doeg's Watermite)*		P2	
604.		*Pseudolabrus parilus*			
605.	25259	*Pseudonaja affinis subsp. affinis (Dugite)*			
606.	25263	*Pseudonaja modesta (Ringed Brown Snake)*			
607.	25433	*Pseudophryne guentheri (Crawling Toadlet)*			
608.		*Pseudophycis breviuscula*			
609.		*Pseudorhombus jenynsii*			
610.		*Psychodidae sp.*			
611.	42344	*Purnella albifrons (White-fronted Honeyeater)*			
612.		*Purpureicephalus spurius*			
613.	25008	*Pygopus lepidopodus (Common Scaly Foot)*			
614.		*Pyralidae sp.*			
615.	24243	*Rattus fuscipes (Western Bush Rat)*			
616.	24245	*Rattus rattus (Black Rat)*	Y		
617.		*Raveniella cirrata*			
618.	24776	*Recurvirostra novaehollandiae (Red-necked Avocet)*			
619.		*Reticypris ?pinguis (SAP)*			
620.		*Reticypris clava*			
621.		*Reticypris sp. 557 (n. sp.) (SAP)*			
622.		*Reticypris walbu*			
623.		*Rhantus suturalis*			
624.	30818	*Rhinoplocephalus bicolor (Square-nosed Snake)*			
625.	48096	*Rhipidura albiscapa (Grey Fantail)*			
626.	25614	*Rhipidura leucophrys (Willie Wagtail)*			
627.		*Saldula brevicornis*			
628.		*Sarscypridopsis aculeata*			
629.		*Scatopsidae sp.*			
630.		*Schizopera clandestina*			
631.		*Sciomyzidae sp.*			
632.		*Scirtidae sp.*			
633.		*Scobinichthys granulatus*			
634.		*Scomber australasicus*			
635.		*Scomberomorus semifasciatus*			
636.	25534	*Sericornis frontalis (White-browed Scrubwren)*			
637.	24279	*Sericornis frontalis subsp. maculatus (White-browed Scrubwren)*			
638.		*Sigara sp.*			
639.		*Sillago bassensis*			
640.		*Simocephalus elizabethae*			
641.		*Siphonognathus argyrophanes*			
642.		*Siphonognathus radiatus*			
643.	30948	*Smicrornis brevirostris (Weebill)*			
644.	24108	*Sminthopsis crassicaudata (Fat-tailed Dunnart)*			
645.	24112	*Sminthopsis granulipes (White-tailed Dunnart)*			
646.		*Sphaeriidae sp.*			
647.		*Sphaeromatidae sp.*			
648.	24645	*Stagonopleura oculata (Red-eared Firetail)*			
649.		*Staphylinidae sp.*			
650.		*Steatoda grossa*			
651.	25643	*Sterna hybrida (Whiskered Tern)*			
652.		*Sternopriscus multimaculatus*			
653.		*Sternopriscus sp.*			
654.	48594	*Sternula nereis (Fairy Tern)*			
655.	24329	*Stictonetta naevosa (Freckled Duck)*			
656.	25655	*Stipiturus malachurus (Southern Emu-wren)*			
657.	24554	*Stipiturus malachurus subsp. westernensis (Southern Emu-wren)*			
658.		*Storena fungina*			
659.		*Stratiomyidae sp.*			
660.	25597	*Strepera versicolor (Grey Currawong)*			
661.	25590	*Streptopelia senegalensis (Laughing Turtle-Dove)*	Y		
662.	25518	*Strophurus spinigerus*			
663.	24943	*Strophurus spinigerus subsp. inornatus*			
664.		*Symphitoneuria wheeleri*			
665.		*Synsphyronus callus*			
666.		*Synsphyronus mimulus*			
667.		*Tabanidae sp.*			
668.	25705	*Tachybaptus novaehollandiae (Australasian Grebe, Black-throated Grebe)*			
669.	24331	*Tadorna tadornoides (Australian Shelduck, Mountain Duck)*			

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670.		*Talitridae sp.*			
671.		*Tanypodinae sp.*			
672.		*Tanytarsus barbitarsis*			
673.		*Tanytarsus fuscithorax/semibarbitarsus*			
674.		*Tanytarsus nr bispinosus (SAP)*			
675.		*Tardigrada sp.*			
676.	24167	*Tarsipes rostratus (Honey Possum, Noolbenger)*			
677.		*Tasmanicosa leuckartii*			
678.		*Tasmanocoenis tillyardi*			
679.		*Testudinella patina*			
680.		*Tetragnatha nitens*			
681.		*Tetragnatha valida*			
682.	34007	*Thalassarche chlororhynchos (Atlantic Yellow-nosed Albatross)*		T	
683.	48597	*Thalasseus bergii (Crested Tern)*		IA	
684.	48135	*Thinornis rubricollis (Hooded Plover, Hooded Dotterel)*		P4	
685.		*Threpterius maculosus*			
686.	24845	*Threskiornis spinicollis (Straw-necked Ibis)*			
687.	25203	*Tiliqua occipitalis (Western Bluetongue)*			
688.	25207	*Tiliqua rugosa subsp. rugosa*			
689.		*Tipulidae sp.*			
690.		*Tipulidae type F (SAP)*			
691.		*Tipulidae type J (SAP)*			Y
692.	25549	*Todiramphus sanctus (Sacred Kingfisher)*			
693.	24309	*Todiramphus sanctus subsp. sanctus (Sacred Kingfisher)*			
694.	48141	*Tribonyx ventralis (Black-tailed Native-hen)*			
695.		*Trichocerca sp.*			
696.	24803	*Tringa brevipes (Grey-tailed Tattler)*		P4	
697.	24806	*Tringa glareola (Wood Sandpiper)*		IA	
698.	24808	*Tringa nebularia (Common Greenshank, greenshank)*		IA	
699.	24809	*Tringa stagnatilis (Marsh Sandpiper, little greenshank)*		IA	
700.		*Triplectides australis*			
701.		*Turbellaria sp.*			
702.	48147	*Turnix varius (Painted Button-quail)*			
703.	30954	*Tursiops aduncus (Indo-Pacific Bottlenose Dolphin)*			
704.	24069	*Tursiops truncatus (Bottlenose Dolphin)*			
705.		*Upeneichthys lineatus*			
706.		*Urodacus novaehollandiae*			
707.	25577	*Vanellus miles (Masked Lapwing)*			
708.	24385	*Vanellus miles subsp. novaehollandiae (Masked Lapwing)*			
709.	24386	*Vanellus tricolor (Banded Lapwing)*			
710.	25225	*Varanus rosenbergi (Heath Monitor)*			
711.		*Venatrix pullastra*			
712.	24206	*Vespadelus regulus (Southern Forest Bat)*			
713.	34113	*Westralunio carteri (Carter's Freshwater Mussel)*		T	
714.		*Xanthagrion erythroneurum*			
715.		*Zeus faber*			
716.		*Zonocypris sp BOS082*			Y
717.	25765	*Zosterops lateralis (Grey-breasted White-eye, Silvereye)*			
Chromista					
718.	26586	*Caulocystis uvifera*			
719.	26717	*Cystophora brownii*			
720.	26729	*Cystophora subfarcinata*			
721.	26765	*Dictyopteris gracilis*			
722.	26766	*Dictyopteris muelleri*			
723.	26778	*Dictyota furcellata*			
724.	35218	*Dictyota nigricans*			
725.	35216	*Dictyota paniculata*			
726.	35223	*Dictyota polyclada*			
727.	26805	*Ecklonia radiata*			
728.	26947	*Hormosira banksii*			
729.	26949	*Hydroclathrus clathratus*			
730.	27044	*Lobospira bicuspidata*			
731.	27092	*Myriodesma tuberosum*			
732.	27105	*Notheia anomala*			
733.	27164	*Polycerea zostericola*			
734.	27239	*Sargassum fallax*			
735.	27264	*Scaberia agardhii*			
Fungi					
736.		*Agaricus sp.*			

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737.	38754	*Amanita conicobulbosa*			
738.	38758	*Anthracophyllum archeri*			
739.		*Armillaria luteobubalina*			
740.	38762	*Auriscalpium barbatum*			
741.	42106	*Austroparmelina conlabrosa*			
742.	38848	*Bolbitius titubans*			
743.		*Boletus sp.*			
744.	27597	*Buellia disciformis*			
745.		*Caloplaca sp.*			
746.	27663	*Cladia aggregata*			
747.	48177	*Cladia muelleri*			
748.	28208	*Cladonia cervicornis subsp. verticillata*			
749.		*Claviceps purpurea*			
750.		*Coltricia cinnamomea*			
751.		*Coprinus comatus*			
752.	27726	*Diplotomma alboatrum*			
753.	27744	*Flavoparmelia ferax*			
754.	27748	*Flavoparmelia rutidota*			
755.	27750	*Flavoparmelia secalonica*			
756.	44983	*Fulgensia cranfieldii*			
757.		*Fusarium avenaceum*			
758.		*Geastrum sp.*			
759.	38789	*Gymnopilus junonius*			
760.	27777	*Heterodermia obscurata*			
761.		*Hexagonia vesparia*			
762.	28219	*Hypogymnia subphysodes var. subphysodes*			
763.	45301	*Jackelixia ligulata*			
764.	38802	*Laccocephalum tumulosum*			
765.		*Lecidea sp.*			
766.	46454	*Leucoagaricus leucothites*			
767.	38808	*Limacella pitereka*			
768.	49003	*Macrolepiota turbinata*			
769.	38816	*Omphalotus nidiformis*			
770.	49073	*Peziza austrogeaster*			
771.		*Physcia sp.*			
772.		*Phytophthora cinnamomi*			
773.		*Pisolithus sp.*			
774.	38824	*Pleurotus australis*			
775.	48835	*Pycnoporus coccineus*			
776.	28027	*Ramalina celastri*			
777.	28224	*Ramalina inflata subsp. australis*			
778.	28034	*Ramboldia crassithallina*			
779.		*Rhizopogon luteolus*			
780.		*Schizophyllum commune*			
781.	28065	*Teloschistes chrysophthalmus*			
782.	28066	*Teloschistes sieberianus*			
783.	28069	*Thelotrema lepadinum*			
784.	45838	*Tilletia ehrhartae*			
785.		*Uromycladium tepperianum*			
786.	28086	*Usnea dasaea*			
787.	28087	*Usnea inermis*			
788.	45909	*Ustilago tritici*			
789.		*Verrucaria sp.*			
790.	29970	*Xanthoparmelia conranensis*			
791.	28172	*Xanthoparmelia reptans*			
792.	28327	*Xanthoparmelia semiviridis*			

Plantae

793.	14608	*Acacia aemula subsp. aemula*			
794.	16108	*Acacia aemula subsp. muricata*			
795.	3226	*Acacia assimilis*			
796.	15468	*Acacia assimilis subsp. atroviridis*			
797.	41461	*Acacia bartlei*		P3	
798.	3238	*Acacia bidentata*			
799.	3239	*Acacia biflora*			
800.	3244	*Acacia brachyclada*			
801.	16114	*Acacia bracteolata*			
802.	3256	*Acacia chrysella*			
803.	3262	*Acacia cochlearis (Rigid Wattle)*			
804.	3276	*Acacia crassuloides*			
805.	3277	*Acacia crispula*			

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806.	12672	*Acacia cupularis*			
807.	3278	*Acacia curvata*			
808.	3282	*Acacia cyclops (Coastal Wattle)*			
809.	3289	*Acacia delphina*			
810.	3296	*Acacia dermatophylla*			
811.	14071	*Acacia diminuta*		P1	
812.	14075	*Acacia euthyphylla*		P3	
813.	16123	*Acacia evenulosa*			
814.	3342	*Acacia fragilis*			
815.	14621	*Acacia glaucissima*		P3	
816.	3349	*Acacia glaucoptera (Flat Wattle)*			
817.	3353	*Acacia gonophylla*			
818.	16128	*Acacia hadrophylla*			
819.	3408	*Acacia lasiocalyx (Silver Wattle, Wilyurwur)*			
820.	11519	*Acacia lasiocarpa var. bracteolata*			
821.	15476	*Acacia latipes subsp. latipes*			
822.	3436	*Acacia maxwellii*			
823.	14465	*Acacia mimica var. angusta*			
824.	16134	*Acacia mutabilis subsp. mutabilis*			
825.	3453	*Acacia myrtifolia*			
826.	3457	*Acacia nigricans*			
827.	16138	*Acacia pachyphylla*			
828.	12265	*Acacia patagiata*			
829.	16139	*Acacia pinguiculosa subsp. teretifolia*			
830.	16141	*Acacia pravifolia*			
831.	3496	*Acacia preissiana*			
832.	3498	*Acacia pritzeliana*			
833.	15482	*Acacia pulchella var. goadbyi*			
834.	3504	*Acacia pycnantha (Golden Wattle)*	Y		
835.	16147	*Acacia rostellata*			
836.	3525	*Acacia rostellifera (Summer-scented Wattle)*			
837.	3527	*Acacia saligna (Orange Wattle, Kudjong)*			
838.	30034	*Acacia saligna subsp. pruinescens*			
839.	30032	*Acacia saligna subsp. saligna*			
840.	3548	*Acacia sorophylla*			
841.	18669	*Acacia sp. Ravensthorpe (R.S. Cowan & B.R. Maslin RSC A-760)*			
842.	15485	*Acacia sphacelata subsp. recurva*			
843.	3564	*Acacia subcaerulea*			
844.	13505	*Acacia sulcata var. planoconvexa*			
845.	3582	*Acacia triptycha*			
846.	15715	*Acacia varia var. parviflora*			
847.	7812	*Achillea millefolium (Yarrow, Milfoil)*	Y		
848.	6295	*Acrotriche cordata (Coast Ground Berry)*			
849.	20328	*Acrotriche sp. Israelite Bay (M. Hislop & F. Hort MH 2630)*			
850.	43201	*Adelphacme minima*		P3	
851.	1773	*Adenanthos cuneatus (Coastal Jugflower)*			
852.	4582	*Adriana quadripartita (Bitter Bush)*			
853.	20331	*Aeonium arboreum*	Y		
854.	20330	*Agonis baxteri*			
855.	23501	*Agrostocrinum scabrum subsp. scabrum*			
856.	185	*Aira cupaniana (Silvery Hairgrass)*	Y		
857.	1719	*Allocasuarina acuaria*			
858.	1721	*Allocasuarina campestris*			
859.	1730	*Allocasuarina helmsii*			
860.	1732	*Allocasuarina humilis (Dwarf Sheoak)*			
861.	13907	*Allocasuarina lehmanniana subsp. ecarinata*			
862.	1739	*Allocasuarina thuyoides (Horned Sheoak)*			
863.	48624	*Althenia cylindrocarpa*			
864.	48620	*Althenia preissii*			
865.	4905	*Alyogyne hakeifolia*			
866.	43023	*Alyogyne sp. Hutt River (B.J. Lepschi & T.R. Lally 2310)*			
867.	35909	*Amansia pinnatifida*			
868.	2655	*Amaranthus albus (Tumbleweed)*	Y		
869.	37280	*Amaranthus muricatus*	Y		Y
870.	2669	*Amaranthus retroflexus (Redroot Amaranth)*	Y		
871.	126	*Amphibolis antarctica (Sea Nymph)*			
872.	127	*Amphibolis griffithii*			
873.	13380	*Amphibromus nervosus*			
874.	195	*Amphipogon avenaceus*			
875.	200	*Amphipogon turbinatus*			

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876.	1058	*Anarthria gracilis*			
877.	1059	*Anarthria humilis*			
878.	1060	*Anarthria laevis*			
879.	1061	*Anarthria polyphylla*			
880.	1062	*Anarthria prolifera*			
881.	1063	*Anarthria scabra*			
882.	6316	*Andersonia macranthera*			
883.	6318	*Andersonia parvifolia*			
884.	29108	*Andersonia sp. Kulin (J.M. Powell 2588)*			
885.	6321	*Andersonia sprengelioides*			
886.	40903	*Androcalva aphrix*			
887.	7833	*Angianthus preissianus*			
888.	12102	*Anigozanthos bicolor subsp. minor*		T	
889.	1415	*Anigozanthos rufus (Red Kangaroo Paw)*			
890.	6949	*Anthocercis littorea (Yellow Tailflower)*			
891.	11555	*Anthocercis viscosa subsp. caudata*			
892.	7411	*Anthotium humile (Dwarf Anthotium)*			
893.	26475	*Antithamnion hanovioides*			
894.	19627	*Aotus sp. Esperance (P.G. Wilson 7904)*			
895.	43548	*Aphelia sp. Albany (B.G. Briggs 596)*			
896.	6210	*Apium annuum*			
897.	6211	*Apium prostratum (Sea Celery)*			
898.	12040	*Apium prostratum subsp. prostratum var. prostratum (Sea Celery)*			
899.	7838	*Arctotheca calendula (Cape Weed, African Marigold)*	Y		
900.	13327	*Argentipallium niveum*			
901.	13329	*Argentipallium tephrodes*			
902.	26485	*Asparagopsis armata*			
903.	8779	*Asparagus asparagoides (Bridal Creeper)*	Y		
904.	1364	*Asphodelus fistulosus (Onion Weed)*	Y		
905.	20347	*Astartea astarteoides*			
906.	42787	*Astartea reticulata*		P3	
907.	7845	*Asteridea asteroides*			
908.	7850	*Asteridea nivea*			
909.	6326	*Astroloma epacridis*			
910.	6335	*Astroloma prostratum (Cranberry Heath)*			
911.	14503	*Astroloma sp. Grass Patch (A.J.G. Wilson 110)*		P2	
912.	6338	*Astroloma tectum*			
913.	2457	*Atriplex exilifolia*			
914.	2471	*Atriplex prostrata (Hastate Orache)*	Y		
915.	2475	*Atriplex semibaccata (Berry Saltbush)*			
916.	2481	*Atriplex vesicaria (Bladder Saltbush)*			
917.	17231	*Austrostipa acrociliata*			
918.	17236	*Austrostipa drummondii*			
919.	17237	*Austrostipa elegantissima*			
920.	17240	*Austrostipa flavescens*			
921.	17241	*Austrostipa hemipogon*			
922.	17242	*Austrostipa juncifolia*			
923.	17244	*Austrostipa macalpinei*			
924.	35317	*Austrostipa mundula*		P3	
925.	17250	*Austrostipa pycnostachya*			
926.	17255	*Austrostipa trichophylla*			
927.	17257	*Austrostipa variabilis*			
928.	231	*Avellinia michelii*	Y		
929.	233	*Avena barbata (Bearded Oat)*	Y		
930.	5352	*Baeckea latens*			
931.	20674	*Baeckea sp. Esperance (A.G. Gunness AG 2435)*			
932.	20620	*Baeckea sp. Gibson (K.R. Newbey 11084)*		P1	
933.	5373	*Baeckea uncinella*			
934.	32681	*Banksia armata (Prickly Dryandra)*			
935.	32682	*Banksia armata var. armata*			
936.	32683	*Banksia armata var. ignicida*			
937.	1805	*Banksia blechnifolia*			
938.	1832	*Banksia media (Southern Plains Banksia)*			
939.	32203	*Banksia nivea subsp. nivea*			
940.	1836	*Banksia nutans (Nodding Banksia)*			
941.	11360	*Banksia nutans var. nutans (Nodding Banksia)*			
942.	32198	*Banksia obovata (Wedge-leaved Dryandra)*			
943.	32197	*Banksia obtusa (Shining Honeypot)*			
944.	1837	*Banksia occidentalis (Red Swamp Banksia)*			
945.	1839	*Banksia petiolaris*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
946.	1840	*Banksia pilostylis*			
947.	32145	*Banksia prolata subsp. calcicola*		P4	
948.	1843	*Banksia pulchella (Teasel Banksia)*			
949.	1845	*Banksia repens (Creeping Banksia)*			
950.	1850	*Banksia speciosa (Showy Banksia)*			
951.	32035	*Banksia tenuis*			
952.	32036	*Banksia tenuis var. tenuis*			
953.	1856	*Banksia violacea (Violet Banksia)*			
954.	32315	*Barbula calycina*			
955.	32320	*Barbula subcalycina*			
956.	741	*Baumea articulata (Jointed Rush)*			
957.	743	*Baumea juncea (Bare Twigrush)*			
958.	745	*Baumea preissii*			
959.	5383	*Beaufortia empetrifolia (South Coast Beaufortia)*			
960.	5388	*Beaufortia micrantha (Little Bottlebrush, Small-leaved Beaufortia)*			
961.	5391	*Beaufortia schaueri (Pink Beaufortia, Pink Bottlebrush)*			
962.	34262	*Beyeria physaphylla*		P1	Y
963.	34297	*Beyeria sulcata var. gracilis*			
964.	3154	*Billardiera coriacea*			
965.	25798	*Billardiera fusiformis (Australian Bluebell)*			
966.	25796	*Billardiera heterophylla (Australian Bluebell)*			
967.	3160	*Billardiera lehmanniana (Kurup)*			
968.	7856	*Blennospora drummondii*			
969.	749	*Bolboschoenus caldwellii (Marsh Club-rush)*			
970.	4403	*Boronia alata (Winged Boronia)*			
971.	4404	*Boronia albiflora*			
972.	16627	*Boronia baeckeacea subsp. baeckeacea*			
973.	4409	*Boronia coerulescens*			
974.	4411	*Boronia crassifolia*			
975.	16629	*Boronia fabianoides subsp. fabianoides*			
976.	4425	*Boronia inornata (Desert Boronia)*			
977.	15965	*Boronia inornata subsp. inornata*			
978.	15966	*Boronia inornata subsp. leptophylla*			
979.	11381	*Boronia ramosa subsp. anethifolia*			
980.	4441	*Boronia spathulata (Boronia)*			
981.	4446	*Boronia tetrandra (Yellow Boronia)*			
982.	1267	*Borya constricta*			
983.	30254	*Bossiaea flexuosa*		P3	
984.	3712	*Bossiaea leptacantha*			
985.	3716	*Bossiaea preissii*			
986.	3718	*Bossiaea rufa*			
987.	26518	*Botryocladia sonderi*			
988.	30138	*Brachyloma geissoloma*			
989.	17922	*Brachyloma mogin*		P3	
990.	7871	*Brachyscome ciliaris*			
991.	7874	*Brachyscome eyrensis*			
992.	11187	*Brassica barrelieri subsp. oxyrrhina (Smooth-stem Turnip)*	Y		
993.	2999	*Brassica rapa*	Y		
994.	3000	*Brassica tournefortii (Mediterranean Turnip)*	Y		
995.	2995	*Brassica x napus*	Y		
996.	244	*Briza maxima (Blowfly Grass)*	Y		
997.	245	*Briza minor (Shivery Grass)*	Y		
998.	248	*Bromus catharticus (Prairie Grass)*	Y		
999.	249	*Bromus diandrus (Great Brome)*	Y		
1000.	250	*Bromus hordeaceus (Soft Brome)*	Y		
1001.	1366	*Bulbine semibarbata (Leek Lily)*			
1002.	1277	*Caesia occidentalis*			
1003.	3001	*Cakile edentula (American Sea Rocket)*	Y		
1004.	3002	*Cakile maritima (Sea Rocket)*	Y		
1005.	13853	*Caladenia arrecta*			
1006.	15333	*Caladenia attingens subsp. gracillima*			
1007.	15334	*Caladenia brevisura*			
1008.	1580	*Caladenia cairnsiana (Zebra Orchid)*			
1009.	15342	*Caladenia cruscula*			
1010.	15343	*Caladenia decora*			
1011.	1587	*Caladenia doutchiae*			
1012.	15348	*Caladenia flava subsp. flava*			
1013.	1594	*Caladenia graminifolia*			
1014.	15353	*Caladenia heberleana*			
1015.	18023	*Caladenia horistes*			

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1016.	1599	*Caladenia latifolia (Pink Fairy Orchid)*			
1017.	15362	*Caladenia longicauda subsp. crassa*			
1018.	13860	*Caladenia longicauda subsp. rigidula*			
1019.	1603	*Caladenia longiclavata (Clubbed Spider Orchid)*			
1020.	1605	*Caladenia marginata (White Fairy Orchid)*			
1021.	15374	*Caladenia pachychila*			
1022.	1617	*Caladenia sigmoidea*			
1023.		*Caladenia sp.*			
1024.	1589	*Caladenia x ericksoniae*			
1025.	2845	*Calandrinia brevipedata (Short-stalked Purslane)*			
1026.	2846	*Calandrinia calyptrata (Pink Purslane)*			
1027.	2848	*Calandrinia corrigioloides (Strap Purslane)*			
1028.	2853	*Calandrinia eremaea (Twining Purslane)*			
1029.	48569	*Calandrinia sp. Gypsum (F. Obbens & L. Hancock FO 10/14)*			
1030.	40827	*Calandrinia tholiformis*			
1031.	19084	*Calectasia gracilis*			
1032.	10861	*Callistachys lanceolata (Wonnich)*			
1033.	5395	*Callistemon phoeniceus (Lesser Bottlebrush, Dubarda)*			
1034.	93	*Callitris drummondii (Drummond's Cypress Pine)*			
1035.	96	*Callitris preissii (Rottnest Island Pine, Maro)*			
1036.	97	*Callitris roei (Roe's Cypress Pine)*			
1037.	26538	*Callophyllis rangiferina*			
1038.	5407	*Calothamnus gibbosus*			
1039.	5408	*Calothamnus gilesii*			
1040.	5409	*Calothamnus gracilis*			
1041.	35816	*Calothamnus quadrifidus subsp. quadrifidus*			
1042.	5449	*Calytrix decandra (Pink Starflower)*			
1043.	5450	*Calytrix depressa*			
1044.	5454	*Calytrix duplistipulata*			
1045.	48451	*Calytrix hirta*			
1046.	5465	*Calytrix leschenaultii*			
1047.	5483	*Calytrix tetragona (Common Fringe-myrtle)*			
1048.	3003	*Camelina sativa (False Flax)*	Y		
1049.	32461	*Campylopus bicolor var. bicolor*			
1050.	32338	*Campylopus introflexus*	Y		
1051.	43241	*Carex thecata*			
1052.	2796	*Carpobrotus modestus (Inland Pigface)*			
1053.	2798	*Carpobrotus virescens (Coastal Pigface, Kolboko, Bain)*			
1054.	3008	*Carrichtera annua (Ward's Weed)*	Y		
1055.	2952	*Cassytha glabella (Tangled Dodder Laurel)*			
1056.	11211	*Cassytha glabella forma dispar*			
1057.	2953	*Cassytha melantha (Large Dodder-laurel)*			
1058.	2957	*Cassytha racemosa (Dodder Laurel)*			
1059.	11242	*Cassytha racemosa forma pilosa*			
1060.	26563	*Caulerpa flexilis*			
1061.	26570	*Caulerpa obscura*			
1062.	26573	*Caulerpa racemosa*			
1063.	760	*Caustis dioica*			
1064.	7915	*Centaurea calcitrapa (Star Thistle)*	Y		
1065.	7916	*Centaurea melitensis (Maltese Cockspur, Malta Thistle)*	Y		
1066.	6539	*Centaurium erythraea (Common Centaury)*	Y		
1067.	6214	*Centella asiatica*			
1068.	19761	*Centipeda crateriformis subsp. compacta*			
1069.	35322	*Centranthus ruber subsp. ruber*	Y		
1070.	1121	*Centrolepis aristata (Pointed Centrolepis)*			
1071.	1124	*Centrolepis cephaloformis*			
1072.	13122	*Centrolepis cephaloformis subsp. cephaloformis*			
1073.	1130	*Centrolepis humillima (Dwarf Centrolepis)*			
1074.	1134	*Centrolepis polygyna (Wiry Centrolepis)*			
1075.	13125	*Centrolepis strigosa subsp. strigosa*			
1076.	26599	*Ceramium puberulum*			
1077.	2889	*Cerastium glomeratum (Mouse Ear Chickweed)*	Y		
1078.	26607	*Chaetomorpha aerea*			
1079.	1280	*Chamaescilla corymbosa (Blue Squill)*			
1080.	1281	*Chamaescilla spiralis*			
1081.	5489	*Chamelaucium axillare (Esperance Waxflower)*			
1082.	5491	*Chamelaucium ciliatum*			
1083.	5495	*Chamelaucium megalopetalum (Large Waxflower)*			
1084.	1513	*Chasmanthe floribunda (African Cornflag)*	Y		
1085.	3168	*Cheiranthera filifolia*			

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1086.	2490	*Chenopodium glaucum (Glaucous Goosefoot)*	Y		
1087.	2494	*Chenopodium murale (Nettle-leaf Goosefoot)*	Y		
1088.	272	*Chloris virgata (Feathertop Rhodes Grass)*	Y		
1089.	7925	*Chondrilla juncea (Skeleton Weed)*	Y		
1090.	17689	*Chordifex laxus*			
1091.	17834	*Chordifex sphacelatus*			
1092.	13112	*Chorizema aciculare subsp. aciculare*			
1093.	3758	*Chorizema ilicifolium (Holly Flame Pea)*			
1094.	3759	*Chorizema nervosum*			
1095.	13108	*Chorizema obtusifolium*			
1096.	3763	*Chorizema uncinatum*			
1097.	6543	*Cicendia filiformis (Slender Cicendia)*	Y		
1098.	7937	*Cirsium vulgare (Spear Thistle, Scotch Thistle)*	Y		
1099.	10804	*Clematis linearifolia*			
1100.	2929	*Clematis pubescens (Common Clematis)*			
1101.	26672	*Codium galeatum*			
1102.	26678	*Codium muelleri*			
1103.	26686	*Coelarthrum opuntia*			
1104.	6342	*Coleanthera coelophylla*		P1	
1105.	14664	*Comesperma calcicola*		P3	
1106.	4550	*Comesperma calymega (Blue-spike Milkwort)*			
1107.	4552	*Comesperma confertum*			
1108.	4553	*Comesperma drummondii (Drummond's Milkwort)*			
1109.	4554	*Comesperma flavum*			
1110.	14663	*Comesperma griffinii*		P2	
1111.	4555	*Comesperma integerrimum*			
1112.	4563	*Comesperma spinosum (Spiny Milkwort)*			
1113.	4564	*Comesperma virgatum (Milkwort)*			
1114.	4566	*Comesperma volubile (Love Creeper)*			
1115.	40923	*Commersonia craurophylla (Brittle Leaved Rulingia)*			
1116.	40924	*Commersonia rotundifolia (Round-leaved Rulingia)*		P3	
1117.	1868	*Conospermum distichum*			
1118.	15518	*Conospermum filifolium subsp. filifolium*			
1119.	16349	*Conospermum leianthum subsp. leianthum*			
1120.	16350	*Conospermum leianthum subsp. orientale*			
1121.	14003	*Conospermum quadripetalum*		P2	
1122.	15611	*Conospermum stoechadis subsp. stoechadis (Common Smokebush)*			
1123.	1883	*Conospermum teretifolium (Spider Smokebush)*			
1124.	6346	*Conostephium marchantiorum*		P3	
1125.	43107	*Conostephium papillosum*			
1126.	1424	*Conostylis bealiana*			
1127.	1426	*Conostylis breviscapa*			
1128.	1439	*Conostylis lepidospermoides (Sedge Conostylis)*		T	
1129.	1445	*Conostylis phathyrantha*			
1130.	11923	*Conostylis seorsiflora subsp. seorsiflora*			
1131.	1453	*Conostylis serrulata*			
1132.	5500	*Conothamnus aureus*			
1133.	7939	*Conyza bonariensis (Flaxleaf Fleabane)*	Y		
1134.		*Conyza sp.*			
1135.	20074	*Conyza sumatrensis*	Y		
1136.	7418	*Coopernookia polygalacea*			
1137.	7419	*Coopernookia strophiolata*			
1138.	2891	*Corrigiola litoralis (Strapwort)*	Y		
1139.	48700	*Corunastylis fuscoviridis*			
1140.	1624	*Corybas despectans*			
1141.	12012	*Corynotheca micrantha var. panda*			
1142.	7943	*Cotula australis (Common Cotula)*			
1143.	7944	*Cotula bipinnata (Ferny Cotula)*	Y		
1144.	7945	*Cotula coronopifolia (Waterbuttons)*	Y		
1145.	7946	*Cotula cotuloides (Smooth Cotula)*			
1146.	3136	*Crassula alata*	Y		
1147.	3137	*Crassula colorata (Dense Stonecrop)*			
1148.	3139	*Crassula exserta*			
1149.	3142	*Crassula natans*	Y		
1150.	15706	*Crassula natans var. minus*	Y		
1151.	16188	*Cryptandra minutifolia subsp. brevistyla*			
1152.	9076	*Cryptandra myriantha*			
1153.	4809	*Cryptandra pungens*			
1154.	16194	*Cryptandra recurva*			
1155.	48865	*Cucumis myriocarpus subsp. myriocarpus*	Y		

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1156.	20717	*Cyanicula aperta*			
1157.	15114	*Cyanicula gemmata*			
1158.	769	*Cyathochaeta clandestina*			
1159.	17618	*Cyathochaeta equitans*			
1160.	42220	*Cyathostemon ambiguus*			
1161.	42080	*Cyathostemon blackettii*			
1162.	43962	*Cyathostemon sp. Esperance (A. Fairall 2431)*		P1	
1163.	20422	*Cyathostemon tenuifolius*			
1164.	40661	*Cycnogeton lineare*			
1165.	6680	*Cynoglossum australe (Australian Hound's-tongue)*			
1166.	783	*Cyperus congestus (Dense Flat-sedge)*	Y		
1167.	801	*Cyperus laevigatus*	Y		
1168.	815	*Cyperus tenellus (Tiny Flatsedge)*	Y		
1169.	2779	*Cypselocarpus haloragoides*			
1170.	10964	*Cyrtostylis robusta*			
1171.	7422	*Dampiera angulata*			
1172.	18632	*Dampiera angulata subsp. angulata*			
1173.	7439	*Dampiera fasciculata (Bundled-leaf Dampiera)*			
1174.	7451	*Dampiera lavandulacea*			
1175.	7461	*Dampiera parvifolia (Many-bracted Dampiera)*			
1176.	7471	*Dampiera sacculata (Pouched Dampiera)*			
1177.	7474	*Dampiera sericantha*		P3	
1178.	7485	*Dampiera triloba*		P3	
1179.	5510	*Darwinia diosmoides*			
1180.	5525	*Darwinia polycephala*		P4	
1181.	20451	*Darwinia sp. Gibson (R.D. Royce 3569)*		P1	
1182.	35618	*Darwinia sp. Karonie (K. Newbey 8503)*			
1183.	18574	*Darwinia sp. Ravensthorpe (G.J. Keighery 8030)*			
1184.	5533	*Darwinia vestita (Pom-pom Darwinia)*			
1185.	26734	*Dasya clavigera*			
1186.	26738	*Dasya elongata*			
1187.	26739	*Dasya extensa*			
1188.	6218	*Daucus glochidiatus (Australian Carrot)*			
1189.	8977	*Daviesia aphylla*			
1190.	16736	*Daviesia apiculata*			
1191.	16577	*Daviesia articulata*			
1192.	3796	*Daviesia benthamii*			
1193.	15507	*Daviesia incrassata subsp. reversifolia*			
1194.	3818	*Daviesia lancifolia*			
1195.	14892	*Daviesia major*			
1196.	3823	*Daviesia nematophylla*			
1197.	12817	*Daviesia pauciflora*		P3	
1198.	16591	*Daviesia scoparia*			
1199.	3844	*Daviesia teretifolia*			
1200.	16593	*Desmocladus biformis*		P3	
1201.	16595	*Desmocladus flexuosus*			
1202.	46362	*Desmocladus lateriflorus*			
1203.	16471	*Desmocladus myriocladus*			
1204.	299	*Deyeuxia quadriseta (Reed Bentgrass)*			
1205.	16326	*Dianella brevicaulis*			
1206.	1259	*Dianella revoluta (Blueberry Lily)*			
1207.	26762	*Dictyomenia sonderi*			
1208.	32346	*Didymodon torquatus*			
1209.	38260	*Dielsiodoxa oligarrhenoides*			
1210.	3862	*Dillwynia acerosa*			
1211.	3864	*Dillwynia divaricata*			
1212.	3866	*Dillwynia uncinata (Silky Parrot Pea)*			
1213.	3012	*Diplotaxis tenuifolia (Sand Rocket)*	Y		
1214.	3867	*Dipogon lignosus (Dolichos Pea)*	Y		
1215.	19649	*Disa bracteata*	Y		
1216.	7054	*Dischisma arenarium*	Y		
1217.	2799	*Disphyma crassifolium (Round-leaved Pigface)*			
1218.	11681	*Disphyma crassifolium subsp. clavellatum*			
1219.	327	*Distichlis distichophylla*			
1220.	7961	*Dittrichia graveolens (Stinkwort)*	Y		
1221.	12942	*Diuris concinna*			
1222.	12941	*Diuris conspicillata*			
1223.	42231	*Diuris decrementa*			
1224.	33159	*Diuris immaculata*			Y
1225.	1634	*Diuris laxiflora (Bee Orchid)*			

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1226.	46873	*Diuris littoralis*			
1227.	12937	*Diuris pulchella*			
1228.	4753	*Dodonaea amblyophylla*			
1229.	4756	*Dodonaea caespitosa*			
1230.	4757	*Dodonaea ceratocarpa*			
1231.	4758	*Dodonaea concinna*			
1232.	26795	*Doxodasya bolbochaete*			
1233.	26796	*Doxodasya lanuginosa*			
1234.	1640	*Drakaea glyptodon (King-in-his-carriage)*			
1235.	48726	*Drosera australis*			
1236.	48751	*Drosera drummondii*			
1237.	3098	*Drosera glanduligera (Pimpernel Sundew)*			
1238.	3102	*Drosera huegelii (Bold Sundew)*			
1239.	3105	*Drosera leucoblasta (Wheel Sundew)*			
1240.	3109	*Drosera menziesii (Pink Rainbow)*			
1241.	3113	*Drosera neesii (Jewel Rainbow)*			
1242.	3114	*Drosera nitidula (Shining Sundew)*			
1243.	3128	*Drosera ramellosa (Branched Sundew)*			
1244.	13227	*Drosera sargentii*			
1245.	3130	*Drosera scorpioides (Shaggy Sundew)*			
1246.	49090	*Drosera sp. Branched styles (S.C. Coffey 193)*			
1247.	48708	*Drosera trichocaulis*			
1248.	3135	*Drosera zonaria (Painted Sundew)*			
1249.	33501	*Dysphania cristata (Crested Goosefoot)*			
1250.	33480	*Dysphania pumilio (Clammy Goosefoot)*			
1251.	32351	*Eccremidium pulchellum*			
1252.	26803	*Echinothamnion hystrix*			
1253.	347	*Ehrharta calycina (Perennial Veldt Grass)*	Y		
1254.	349	*Ehrharta longiflora (Annual Veldt Grass)*	Y		
1255.		*Ehrharta sp.*			
1256.	831	*Eleocharis sphacelata (Tall Spikerush, Djabren)*			
1257.	1643	*Elythranthera brunonis (Purple Enamel Orchid)*			
1258.	1644	*Elythranthera emarginata (Pink Enamel Orchid)*			
1259.	1645	*Epiblema grandiflorum (Babe-in-a-cradle)*			
1260.	11570	*Epilobium billardiereanum subsp. billardiereanum (Smooth Willow Herb)*			
1261.	374	*Eragrostis cilianensis (Stinkgrass)*	Y		
1262.	376	*Eragrostis curvula (African Lovegrass)*	Y		
1263.	7180	*Eremophila alternifolia (Poverty Bush)*			
1264.	7187	*Eremophila calorhabdos (Red Rod)*			
1265.	7188	*Eremophila chamaephila*		P3	
1266.	16807	*Eremophila densifolia subsp. pubiflora*			
1267.	7199	*Eremophila dichroantha (Bale-hook Eremophila)*			
1268.	7215	*Eremophila glabra (Tar Bush)*			
1269.	28351	*Eremophila glabra subsp. Scaddan (C. Turley s.n. 10/11/2005)*		T	
1270.	7226	*Eremophila ionantha (Violet-flowered Eremophila)*			
1271.	10780	*Eremophila psilocalyx*			
1272.	7264	*Eremophila saligna (Willowy Eremophila)*			
1273.	14633	*Eremophila subfloccosa subsp. glandulosa*			
1274.	20718	*Ericksonella saccharata*			
1275.	1646	*Eriochilus dilatatus (White Bunny Orchid)*			
1276.	15413	*Eriochilus dilatatus subsp. undulatus*			
1277.	13866	*Eriochilus pulchellus*			
1278.	4336	*Erodium moschatum (Musky Crowfoot)*	Y		
1279.	12740	*Erymophyllum tenellum*			
1280.	5550	*Eucalyptus angulosa (Ridge-fruited Mallee, Kwararl)*			
1281.	5551	*Eucalyptus angustissima (Narrow-leaved Mallee)*			
1282.	19508	*Eucalyptus calycogona subsp. calycogona*			
1283.	13518	*Eucalyptus captiosa*			
1284.	5600	*Eucalyptus conglobata (Port Lincoln Mallee)*			
1285.	20292	*Eucalyptus conglobata subsp. conglobata*			
1286.	20293	*Eucalyptus conglobata subsp. perata*			
1287.	5611	*Eucalyptus cylindriflora (White Mallee)*			
1288.	5616	*Eucalyptus decurva (Slender Mallee)*			
1289.	12870	*Eucalyptus densa*			
1290.	12869	*Eucalyptus densa subsp. densa*			
1291.	5622	*Eucalyptus dielsii (Cap-fruited Mallee)*			
1292.	5624	*Eucalyptus discreta*			
1293.	13517	*Eucalyptus dolichorhyncha*		P4	
1294.	5637	*Eucalyptus eremophila (Tall Sand Mallee)*			
1295.	12377	*Eucalyptus extensa*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
1296.	16043	*Eucalyptus famelica*		P3	
1297.	5648	*Eucalyptus flocktoniae (Merrit, Merid)*			
1298.	13022	*Eucalyptus foliosa*		P3	
1299.	5652	*Eucalyptus forrestiana (Fuchsia Gum)*			
1300.	14277	*Eucalyptus fraseri subsp. fraseri*			
1301.	18216	*Eucalyptus globulus*	Y		
1302.	5659	*Eucalyptus gomphocephala (Tuart, Duart)*			
1303.	5669	*Eucalyptus halophila*			
1304.	5675	*Eucalyptus incrassata (Lerp Mallee)*			
1305.	13535	*Eucalyptus indurata (Ironbark)*			
1306.	14299	*Eucalyptus kessellii*			
1307.	13065	*Eucalyptus kessellii subsp. eugnosta*			
1308.	13066	*Eucalyptus kessellii subsp. kessellii*			
1309.	5695	*Eucalyptus leptocalyx (Hopetoun Mallee)*			
1310.	19811	*Eucalyptus leptocalyx subsp. leptocalyx*			
1311.	12696	*Eucalyptus litorea*		P2	
1312.	13037	*Eucalyptus loxophleba subsp. lissophloia*			
1313.	5704	*Eucalyptus macrandra (Long-flowered Marlock, Dwed)*			
1314.	5712	*Eucalyptus merrickiae (Goblet Mallee)*		T	
1315.	5713	*Eucalyptus micranthera (Alexander River Mallee)*			
1316.	13023	*Eucalyptus misella*		P1	
1317.	5723	*Eucalyptus occidentalis (Flat-topped Yate, Moidj)*			
1318.	5745	*Eucalyptus pileata (Capped Mallee)*			
1319.	15742	*Eucalyptus platypus subsp. congregata*			
1320.	18551	*Eucalyptus platypus subsp. platypus*			
1321.	16180	*Eucalyptus pleurocarpa*			
1322.	15068	*Eucalyptus preissiana subsp. lobata*		P4	
1323.	13525	*Eucalyptus quadrans*			
1324.	12694	*Eucalyptus rigens (Saltlake Mallee)*			
1325.	5767	*Eucalyptus salubris (Gimlet)*			
1326.	10834	*Eucalyptus scyphocalyx (Goblet Mallee)*			
1327.	13014	*Eucalyptus semiglobosa*		P3	
1328.	5772	*Eucalyptus sheathiana (Ribbon-barked Gum)*			
1329.		*Eucalyptus sp.*			
1330.	29700	*Eucalyptus sp. Truslove (M.I.H. Brooker 7499)*			
1331.	5775	*Eucalyptus spathulata (Swamp Mallet)*			
1332.	14189	*Eucalyptus sporadica*			
1333.	13030	*Eucalyptus suggrandis subsp. suggrandis*			
1334.	34778	*Eucalyptus sweedmaniana*		P2	
1335.	13027	*Eucalyptus tenera*			
1336.	5788	*Eucalyptus tetraptera (Four-winged Mallee)*			
1337.	12889	*Eucalyptus tumida*			
1338.	5796	*Eucalyptus uncinata (Hook-leaved Mallee)*			
1339.	18085	*Eucalyptus utilis*			
1340.	15808	*Eucalyptus valens*			
1341.	12864	*Eucalyptus varia*			
1342.	12862	*Eucalyptus varia subsp. salsuginosa*			
1343.	12863	*Eucalyptus varia subsp. varia*			
1344.	8587	*Eucalyptus x erythrandra*			
1345.	19661	*Eucalyptus x missilis*		P4	
1346.	5802	*Eucalyptus yilgarnensis (Yorrell)*			
1347.	19088	*Euchiton collinus*			
1348.	4636	*Euphorbia paralias (Sea Spurge)*	Y		
1349.	4643	*Euphorbia segetalis (Shortstemmed Carnation Weed)*	Y		Y
1350.	4648	*Euphorbia terracina (Geraldton Carnation Weed)*	Y		
1351.	11271	*Euphrasia collina subsp. tetragona*			
1352.	26830	*Euptilota articulata*			
1353.	37740	*Eutaxia inuncta*			
1354.	19614	*Eutaxia lutea*			
1355.	20214	*Eutaxia myrtifolia*			
1356.	3879	*Eutaxia parvifolia*			
1357.	10977	*Exocarpos aphyllus (Leafless Ballart)*			
1358.	10765	*Exocarpos sparteus (Broom Ballart, Djuk)*			
1359.	20162	*Fabronia hampeana*		P2	
1360.	8850	*Fallopia convolvulus*	Y		
1361.	20216	*Ficinia nodosa (Knotted Club Rush)*			
1362.	5189	*Frankenia brachyphylla (Short Leaved Frankenia)*		P2	
1363.	5191	*Frankenia cinerea*			
1364.	5209	*Frankenia pauciflora (Seaheath)*			
1365.	5213	*Frankenia tetrapetala (Four Petaled Frankenia)*			

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1366.	1944	*Franklandia fucifolia (Lanoline Bush)*			
1367.	899	*Gahnia ancistrophylla (Hooked-leaf Saw Sedge)*			
1368.	901	*Gahnia australis*			
1369.	16249	*Gahnia sp. Headland (G.J. Keighery 8501)*			
1370.	16283	*Gahnia sp. L (K.R. Newbey 7888)*			
1371.	43205	*Gahnia sp. South West (K.L. Wilson & K. Frank KLW 9266)*			
1372.	907	*Gahnia trifida (Coast Saw-sedge)*			
1373.	7323	*Galium murale (Small Goosegrass)*	Y		
1374.	19702	*Gastrolobium discolor*			
1375.	11044	*Gastrolobium heterophyllum*			
1376.	20453	*Gastrolobium latifolium*			
1377.	19725	*Gastrolobium musaceum*			
1378.	10981	*Gastrolobium parviflorum*			
1379.	3913	*Gastrolobium parvifolium (Berry Poison)*			
1380.	20487	*Gastrolobium punctatum*			
1381.	3924	*Gastrolobium spinosum (Prickly Poison)*			
1382.	16311	*Gazania linearis*	Y		
1383.	26850	*Gelinaria ulvoidea*			
1384.	1518	*Gladiolus angustus (Long Tubed Painted Lady)*	Y		
1385.	33620	*Glischrocaryon angustifolium*			
1386.	6143	*Glischrocaryon aureum (Common Popflower)*			
1387.	6145	*Glischrocaryon roei*			
1388.	26860	*Gloiocladia halymenioides*			
1389.	7983	*Gnaphalium indutum (Tiny Cudweed)*			
1390.	7991	*Gnephosis drummondii*			
1391.	8003	*Gnephosis tridens*			
1392.	6587	*Gomphocarpus fruticosus (Narrowleaf Cottonbush)*	Y		
1393.	3946	*Gompholobium baxteri*			
1394.	10909	*Gompholobium confertum*			
1395.	3950	*Gompholobium knightianum*			
1396.	3954	*Gompholobium polymorphum*			
1397.	11083	*Gompholobium scabrum*			
1398.	3957	*Gompholobium tomentosum (Hairy Yellow Pea)*			
1399.	3959	*Gompholobium viscidulum*			
1400.	6163	*Gonocarpus pycnostachyus*		P3	
1401.	7488	*Goodenia affinis (Silver Goodenia)*			
1402.	7499	*Goodenia concinna (Elegant Goodenia)*			
1403.	7503	*Goodenia decursiva*			
1404.	7517	*Goodenia incana (Hoary Goodenia)*			
1405.	17655	*Goodenia laevis subsp. laevis*		P3	
1406.	12551	*Goodenia micrantha*			
1407.	7537	*Goodenia pterigosperma*			
1408.	19051	*Goodenia scapigera subsp. scapigera*			
1409.	23461	*Goodenia turleyae*		P1	
1410.	7562	*Goodenia viscida (Viscid Goodenia)*			
1411.	1961	*Grevillea baxteri (Cape Arid Grevillea)*		P4	
1412.	1991	*Grevillea disjuncta*			
1413.	2018	*Grevillea huegelii*			
1414.	2050	*Grevillea nudiflora*			
1415.	2053	*Grevillea oligantha*			
1416.	2061	*Grevillea pectinata (Comb-leaved Grevillea)*			
1417.	2070	*Grevillea plurijuga*			
1418.	19492	*Grevillea plurijuga subsp. plurijuga*			
1419.	19491	*Grevillea plurijuga subsp. superba*			
1420.	32386	*Grimmia laevigata*			
1421.	5011	*Guichenotia ledifolia*			
1422.	5013	*Guichenotia micrantha (Small Flowered Guichenotia)*			
1423.	2804	*Gunniopsis glabra*			
1424.	2787	*Gyrostemon sheathii*			
1425.	1475	*Haemodorum spicatum (Mardja)*			
1426.	2126	*Hakea adnata*			
1427.	12224	*Hakea bicornata*			
1428.	2139	*Hakea cinerea (Ashy Hakea)*			
1429.	2141	*Hakea clavata (Coastal Hakea)*			
1430.	2142	*Hakea commutata*			
1431.	2145	*Hakea corymbosa (Cauliflower Hakea)*			
1432.	12226	*Hakea denticulata*			
1433.	12227	*Hakea drupacea*			
1434.	2160	*Hakea ferruginea*			
1435.	2171	*Hakea laurina (Pincushion Hakea, Kodjet)*			

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1436.	2175	*Hakea lissocarpha (Honey Bush)*			
1437.	2187	*Hakea nitida (Frog Hakea)*			
1438.	2188	*Hakea obliqua (Needles and Corks)*			
1439.	13335	*Hakea obliqua subsp. obliqua*			
1440.	2193	*Hakea pandanicarpa*			
1441.	16910	*Hakea pandanicarpa subsp. pandanicarpa*			
1442.	2197	*Hakea prostrata (Harsh Hakea)*			
1443.	2203	*Hakea ruscifolia (Candle Hakea)*			
1444.	2208	*Hakea strumosa*			
1445.	2212	*Hakea sulcata (Furrowed Hakea)*			
1446.	2214	*Hakea trifurcata (Two-leaf Hakea)*			
1447.	2216	*Hakea varia (Variable-leaved Hakea)*			
1448.	2218	*Hakea victoria (Royal Hakea, Dalyongurd)*			
1449.	31013	*Halgania anagalloides var. Southern (A.E. Orchard 1609)*			
1450.	6684	*Halgania andromedifolia*			
1451.	6691	*Halgania integerrima*			
1452.	161	*Halophila australis*			
1453.	26900	*Haloplegma preissii*			
1454.	6171	*Haloragis digyna*			
1455.	48666	*Halymenia harveyana*			
1456.	8008	*Helianthus annuus (Sunflower, Common Sunflower)*	Y		
1457.	8024	*Helichrysum leucopsideum*			
1458.	3016	*Heliophila pusilla*	Y		
1459.	6707	*Heliotropium curassavicum (Smooth Heliotrope)*			
1460.	6710	*Heliotropium europaeum (Common Heliotrope)*	Y		
1461.	439	*Hemarthria uncinata (Matgrass)*			
1462.	11451	*Hemarthria uncinata var. uncinata*			
1463.	2689	*Hemichroa pentandra (Trailing Jointweed)*			
1464.	26936	*Heterosiphonia muelleri*			
1465.	26938	*Heterosiphonia wrangelioides*			
1466.	5108	*Hibbertia acerosa (Needle Leaved Guinea Flower)*			
1467.	5110	*Hibbertia andrewsiana*			
1468.	5117	*Hibbertia cuneiformis (Cutleaf Hibbertia)*			
1469.	5122	*Hibbertia eatoniae*			
1470.	5131	*Hibbertia gracilipes*			
1471.	20059	*Hibbertia hemignosta*			
1472.	20049	*Hibbertia hibbertioides var. meridionalis*			
1473.	5143	*Hibbertia lineata*			
1474.	20417	*Hibbertia oligantha*			
1475.	20349	*Hibbertia psilocarpa*			
1476.	5162	*Hibbertia racemosa (Stalked Guinea Flower)*			
1477.	5165	*Hibbertia rostellata*			
1478.		*Hibbertia sp.*			
1479.	5173	*Hibbertia subvaginata*			
1480.	20036	*Hibbertia turleyana*		P2	Y
1481.	19433	*Hibbertia ulicifolia*			
1482.	13773	*Hopkinsia adscendens*		P3	
1483.	3966	*Hovea pungens (Devil's Pins, Puyenak)*			
1484.	3968	*Hovea trisperma (Common Hovea)*			
1485.	12742	*Hyalosperma demissum*			
1486.	5220	*Hybanthus epacroides (Spiny Hybanthus)*			
1487.	6223	*Hydrocotyle alata*			
1488.	48770	*Hydrocotyle asterocarpa (Starry Pennywort)*		P2	
1489.	6234	*Hydrocotyle medicaginoides (Trefoil Pennywort)*			
1490.	6239	*Hydrocotyle rugulosa*			
1491.	49013	*Hydrocotyle tuberculata (Bumpy-fruited Pennywort)*		P2	
1492.	26962	*Hymenocladia dactyloides*			
1493.	26965	*Hymenocladia usnea*			
1494.	452	*Hyparrhenia hirta (Tambookie Grass)*	Y		
1495.	26971	*Hypnea ramentacea*			
1496.	26973	*Hypnea valentiae*			
1497.	5827	*Hypocalymma strictum*			
1498.	8086	*Hypochaeris glabra (Smooth Catsear)*	Y		
1499.	9352	*Hypochaeris radicata (Flat Weed, Cats-ear)*	Y		
1500.	1070	*Hypolaena exsulca*			
1501.	1071	*Hypolaena fastigiata*			
1502.	17844	*Hypolaena humilis*			
1503.	910	*Isolepis cernua (Nodding Club-rush)*			
1504.	912	*Isolepis cyperoides*			
1505.	917	*Isolepis marginata (Coarse Club-rush)*			

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1506.	2220	*Isopogon alcicornis (Elkhorn Coneflower)*		P3	
1507.	2225	*Isopogon buxifolius*			
1508.	16880	*Isopogon formosus subsp. formosus*			
1509.	2234	*Isopogon polycephalus (Clustered Coneflower)*			
1510.	19998	*Isopogon sp. Fitzgerald River (D.B. Foreman 813)*			
1511.	2240	*Isopogon trilobus (Barrel Coneflower)*			
1512.	7399	*Isotoma scapigera (Long-scaped Isotome)*			
1513.	3992	*Isotropis cuneifolia (Granny Bonnets)*			
1514.	3993	*Isotropis drummondii (Lamb Poison)*			
1515.	3997	*Jacksonia alata*			
1516.	4002	*Jacksonia capitata*			
1517.	4005	*Jacksonia condensata*			
1518.	4028	*Jacksonia spinosa*			
1519.	14741	*Jacksonia venosa*			
1520.	14777	*Jacksonia viscosa*			
1521.	1295	*Johnsonia acaulis*			
1522.	1175	*Juncus acutus (Spiny Rush)*	Y		
1523.	20454	*Juncus acutus subsp. acutus*	Y		
1524.	1176	*Juncus aridicola*			
1525.	1178	*Juncus bufonius (Toad Rush)*	Y		
1526.	1179	*Juncus caespiticius (Grassy Rush)*			
1527.	1180	*Juncus capitatus (Capitate Rush)*	Y		
1528.	11922	*Juncus kraussii subsp. australiensis*			
1529.	1188	*Juncus pallidus (Pale Rush)*			
1530.	1194	*Juncus radula*			
1531.	4037	*Kennedia coccinea (Coral Vine)*			
1532.	37961	*Kennedia coccinea subsp. esotera*			
1533.	4042	*Kennedia nigricans (Black Kennedia)*			
1534.	4044	*Kennedia prostrata (Scarlet Runner)*			
1535.	42680	*Kennedia sp. South coast (T.R. Lally 1576 & I.P. Lally)*			
1536.	26995	*Kuetzingia canaliculata*			
1537.	5830	*Kunzea affinis*			
1538.	5831	*Kunzea baxteri (Baxter's Kunzea)*			
1539.	5839	*Kunzea preissiana*			
1540.	38222	*Kunzea salina*		P3	
1541.	11528	*Labichea lanceolata subsp. brevifolia*			
1542.	467	*Lagurus ovatus (Hare's Tail Grass)*	Y		
1543.	13647	*Lambertia echinata subsp. echinata*		T	
1544.	2248	*Lambertia inermis (Chittick, Djidiok)*			
1545.	16870	*Lambertia inermis var. drummondii*			
1546.	16871	*Lambertia inermis var. inermis*			
1547.	5030	*Lasiopetalum discolor*			
1548.	5035	*Lasiopetalum indutum*			
1549.	5047	*Lasiopetalum rosmarinifolium*			
1550.	35642	*Lasiopetalum sp. Mt Ragged (T.E.H. Aplin 4349)*			
1551.	26997	*Laurencia arbuscula*			
1552.	48408	*Laurencia dendroidea*			
1553.	27001	*Laurencia filiformis*			
1554.	27002	*Laurencia forsteri*			
1555.	4954	*Lawrencia diffusa*			
1556.	4955	*Lawrencia glomerata*			
1557.	4958	*Lawrencia spicata*			
1558.	4959	*Lawrencia squamata*			
1559.	1301	*Laxmannia brachyphylla (Stilted Paper-lily)*			
1560.	1304	*Laxmannia minor*			
1561.	1305	*Laxmannia omnifertilis*			
1562.	1306	*Laxmannia paleacea*			
1563.	1307	*Laxmannia ramosa (Branching Lily)*			
1564.	12029	*Laxmannia ramosa subsp. deflexa*			
1565.	7569	*Lechenaultia brevifolia*			
1566.	7575	*Lechenaultia formosa (Red Leschenaultia)*			
1567.	7590	*Lechenaultia tubiflora (Heath Leschenaultia)*			
1568.	1051	*Lemna disperma (Duckweed)*			
1569.	35864	*Lenormandia muelleri*			
1570.	27013	*Lenormandia spectabilis*			
1571.	8099	*Leontodon saxatilis (Hairy Hawkbit)*	Y		
1572.	3018	*Lepidium africanum (Rubble Peppercress)*	Y		
1573.	3021	*Lepidium bonariense (Peppercress)*	Y		
1574.	3026	*Lepidium fasciculatum (Bundled Peppercress)*		P3	
1575.	3044	*Lepidium rotundum (Veined Peppercress)*			

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1576.	1073	*Lepidobolus chaetocephalus (Bristle-headed Chaff Rush)*			
1577.	1075	*Lepidobolus preissianus*			
1578.	929	*Lepidosperma carphoides (Black Rapier Sedge)*			
1579.	45756	*Lepidosperma fairallianum (Fairalls' Sword Sedge)*			
1580.	936	*Lepidosperma leptostachyum*			
1581.	939	*Lepidosperma pruinosum*			
1582.		*Lepidosperma sp.*			
1583.	33279	*Lepidosperma sp. Bandalup Scabrid (N. Evelegh 10798)*			
1584.	945	*Lepidosperma squamatum*			
1585.	947	*Lepidosperma tenue*			
1586.	949	*Lepidosperma tuberculatum*			
1587.	1653	*Leporella fimbriata (Hare Orchid)*			
1588.	1078	*Leptocarpus coangustatus*			
1589.	46381	*Leptocarpus crebriculmis*			
1590.	2347	*Leptomeria lehmannii*			
1591.	2349	*Leptomeria pachyclada*			
1592.	2350	*Leptomeria pauciflora (Sparse-flowered Currant Bush)*			
1593.	5848	*Leptospermum fastigiatum*			
1594.	5849	*Leptospermum incanum*			
1595.	5850	*Leptospermum laevigatum (Coast Teatree)*	Y		
1596.	5851	*Leptospermum maxwellii*			
1597.	5853	*Leptospermum oligandrum*			
1598.	5855	*Leptospermum roei*			
1599.	5856	*Leptospermum sericeum (Silver Teatree)*			
1600.	5857	*Leptospermum spinescens*			
1601.	12692	*Leptospermum subtenue*			
1602.	1088	*Lepyrodia macra (Large Scale Rush)*			
1603.	16449	*Leucophyta brownii*			
1604.	6358	*Leucopogon assimilis*			
1605.	34768	*Leucopogon canaliculatus*			
1606.	6368	*Leucopogon carinatus*			
1607.	6373	*Leucopogon concinnus*			
1608.	6374	*Leucopogon conostephioides*			
1609.	44222	*Leucopogon corymbiformis*		P2	
1610.	6383	*Leucopogon cuneifolius*			
1611.	6386	*Leucopogon dielsianus*			
1612.	6391	*Leucopogon fimbriatus*			
1613.	40940	*Leucopogon obovatus subsp. obovatus*			
1614.	6419	*Leucopogon obtusatus*			
1615.	6422	*Leucopogon opponens*			
1616.	6427	*Leucopogon parviflorus (Coast Beard-heath)*			
1617.	34769	*Leucopogon remotus*		P1	
1618.	6442	*Leucopogon rotundifolius*		P3	
1619.	19580	*Leucopogon sp. Bremer Bay (K.R. Newbey 4667)*			
1620.	14637	*Leucopogon sp. Coujinup (M.A. Burgman 1085)*			
1621.	16051	*Leucopogon sp. Kau Rock (M.A. Burgman 1126)*			
1622.	41769	*Leucopogon sp. Lake Magenta (K.R. Newbey 3387)*		P1	
1623.	14205	*Leucopogon sp. Mount Heywood (M.A. Burgman 1211)*			
1624.	34163	*Leucopogon sp. Newdegate (M. Hislop 3585)*			
1625.	6455	*Leucopogon woodsii (Nodding Beard-heath)*			
1626.	39820	*Levenhookia murfetii*			
1627.	7673	*Levenhookia pauciflora (Deceptive Stylewort)*			
1628.	27023	*Liagora harveyana*			
1629.	4362	*Linum marginale (Wild Flax)*			
1630.	20647	*Lissanthe rubicunda*			
1631.	9289	*Lobelia anceps (Angled Lobelia)*			
1632.	7402	*Lobelia gibbosa (Tall Lobelia)*			
1633.	7403	*Lobelia heterophylla (Wing-seeded Lobelia)*			
1634.	7405	*Lobelia rarifolia*			
1635.	3048	*Lobularia maritima (Sweet Alyssum)*	Y		
1636.	6504	*Logania buxifolia*			
1637.	6507	*Logania fasciculata*			
1638.	6509	*Logania micrantha*			
1639.	13129	*Logania perryana*			
1640.	6513	*Logania stenophylla*			
1641.	6515	*Logania vaginalis (White Spray)*			
1642.	478	*Lolium rigidum (Wimmera Ryegrass)*	Y		
1643.		*Lolium sp.*			
1644.	11384	*Lolium temulentum forma temulentum*	Y		
1645.	1224	*Lomandra collina (Pale Mat Rush)*			

	Name ID	Species Name	Naturalised	Conservation Code	[1]Endemic To Query Area
1646.	1227	*Lomandra hastilis*			
1647.	14542	*Lomandra micrantha subsp. micrantha*			
1648.	14543	*Lomandra micrantha subsp. teretifolia*			
1649.	1233	*Lomandra mucronata*			
1650.	1234	*Lomandra nigricans*			
1651.	1241	*Lomandra rigida (Stiff Mat Rush)*			
1652.	6968	*Lycium ferocissimum (African Boxthorn)*	Y		
1653.	1097	*Lyginia barbata*			
1654.	18049	*Lyginia imberbis*			
1655.	6456	*Lysinema ciliatum (Curry Flower)*			
1656.	34736	*Lysinema pentapetalum*			
1657.	5281	*Lythrum hyssopifolia (Lesser Loosestrife)*	Y		
1658.	2838	*Macarthuria apetala*			
1659.	27053	*Macrothamnion pellucidum*			
1660.	14366	*Macrozamia dyeri*			
1661.	2542	*Maireana erioclada*			
1662.	2553	*Maireana oppositifolia*			
1663.	36480	*Malva arborea (Tree Mallow)*	Y		
1664.	19421	*Marianthus bicolor (Painted Marianthus)*			
1665.	4076	*Medicago lupulina (Black Medic)*	Y		
1666.	4079	*Medicago polymorpha (Burr Medic)*	Y		
1667.	4080	*Medicago sativa (Alfalfa)*	Y		
1668.	4083	*Medicago truncatula (Barrel Medic)*	Y		
1669.	5881	*Melaleuca brevifolia*			
1670.	5882	*Melaleuca bromelioides*			
1671.	37600	*Melaleuca calcicola*			
1672.	5885	*Melaleuca calycina*			
1673.	17982	*Melaleuca carrii*			
1674.	5896	*Melaleuca cordata*			
1675.	5898	*Melaleuca cucullata*			
1676.	5900	*Melaleuca cuticularis (Saltwater Paperbark)*			
1677.	15693	*Melaleuca dempta*		P3	
1678.	5909	*Melaleuca elliptica (Granite Bottlebrush, Ngow)*			
1679.	13269	*Melaleuca fissurata*		P4	
1680.	5913	*Melaleuca glaberrima*			
1681.	18277	*Melaleuca glena*			
1682.	19486	*Melaleuca hamata*			
1683.	5918	*Melaleuca haplantha*			
1684.	18274	*Melaleuca hnatiukii*			
1685.	13272	*Melaleuca incana subsp. tenella*			
1686.	5922	*Melaleuca lanceolata (Rottnest Teatree, Moonah)*			
1687.	19080	*Melaleuca linguiformis*			
1688.	5948	*Melaleuca pentagona*			
1689.	11686	*Melaleuca pentagona var. latifolia*			
1690.	15993	*Melaleuca pentagona var. pentagona*			
1691.	19609	*Melaleuca plumea*			
1692.	19092	*Melaleuca podiocarpa*			
1693.	5955	*Melaleuca pulchella (Claw Flower)*			
1694.	5960	*Melaleuca rigidifolia*			
1695.	18276	*Melaleuca sapientes*			
1696.	5961	*Melaleuca scabra (Rough Honeymyrtle, Wurru Bush)*			
1697.	18165	*Melaleuca societatis*			
1698.	5971	*Melaleuca striata*			
1699.	5973	*Melaleuca suberosa (Corky Honeymyrtle)*			
1700.	5974	*Melaleuca subfalcata*			
1701.	5979	*Melaleuca teuthidoides*			
1702.	19399	*Melaleuca thapsina*			
1703.	5980	*Melaleuca thymoides*			
1704.	5981	*Melaleuca thyoides*			
1705.	5982	*Melaleuca torquata*			
1706.	18126	*Melaleuca tuberculata var. macrophylla*			
1707.	5985	*Melaleuca undulata (Hidden Honey-myrtle)*			
1708.	4084	*Melilotus albus*	Y		
1709.	4085	*Melilotus indicus*	Y		
1710.	6883	*Mentha pulegium (Pennyroyal)*	Y		
1711.	2813	*Mesembryanthemum crystallinum (Iceplant)*	Y		
1712.	956	*Mesomelaena stygia*			
1713.	11473	*Mesomelaena stygia subsp. stygia*			
1714.	957	*Mesomelaena tetragona (Semaphore Sedge)*			
1715.	27069	*Metagoniolithon stelliferum*			

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1716.	27070	*Metamastophora flabellata*			
1717.	6887	*Microcorys barbata*			
1718.	6893	*Microcorys glabra*			
1719.	6902	*Microcorys subcanescens*			
1720.	18046	*Microcybe multiflora subsp. multiflora*			
1721.	4488	*Microcybe pauciflora (Yellow Microcybe)*			
1722.	13785	*Microcybe pauciflora subsp. pauciflora*			
1723.	5993	*Micromyrtus elobata*			
1724.	20543	*Micromyrtus elobata subsp. elobata*			
1725.	5998	*Micromyrtus imbricata*			
1726.	34158	*Microtis alboviridis*			
1727.	1658	*Microtis atrata (Swamp Mignonette Orchid)*			
1728.	8814	*Microtis brownii*			
1729.	10954	*Microtis media (Tall Mignonette Orchid)*			
1730.	15419	*Microtis media subsp. media*			
1731.	1660	*Microtis orbicularis (Dark Mignonette Orchid)*			
1732.	8106	*Millotia tenuifolia (Soft Millotia)*			
1733.	14344	*Millotia tenuifolia var. tenuifolia (Soft Millotia)*			
1734.	4090	*Mirbelia dilatata (Holly-leaved Mirbelia)*			
1735.	4096	*Mirbelia ovata*			
1736.	29418	*Monoculus monstrosus*	Y		
1737.	4667	*Monotaxis paxii*			
1738.	19179	*Moraea flaccida (One-leaf Cape Tulip)*	Y		
1739.	2412	*Muehlenbeckia adpressa (Climbing Lignum)*			
1740.	27077	*Mychodea aciculare*			
1741.	27079	*Mychodea carnosa*			
1742.	27080	*Mychodea disticha*			
1743.	7291	*Myoporum insulare (Blueberry Tree, boobialla)*			
1744.	7295	*Myoporum tetrandrum (Boobialla)*			
1745.	6196	*Myriophyllum muelleri (Hooded Water Milfoil)*		P1	
1746.	6464	*Needhamiella pumilio*			
1747.	4492	*Nematolepis phebalioides*			
1748.	492	*Neurachne alopecuroidea (Foxtail Mulga Grass)*			
1749.	4366	*Nitraria billardierei (Nitre Bush)*			
1750.	2401	*Nuytsia floribunda (Christmas Tree, Mudja)*			
1751.	6138	*Oenothera drummondii (Beach Evening Primrose)*	Y		
1752.	14292	*Oenothera stricta subsp. stricta*	Y		
1753.	2365	*Olax benthamiana*			
1754.	2366	*Olax phyllanthi*			
1755.	8127	*Olearia axillaris (Coastal Daisybush)*			
1756.	8131	*Olearia ciliata (Fringed Daisy Bush)*			
1757.	8134	*Olearia exiguifolia (Small-leaved Daisy Bush)*			
1758.	8137	*Olearia imbricata (Imbricate Daisy Bush)*			
1759.	11397	*Olearia passerinoides subsp. passerinoides*			
1760.	8146	*Olearia ramosissima (Much-branched Daisy Bush)*			
1761.	44401	*Olearia sp. Eremicola (Diels & Pritzel s.n. PERTH 00449628)*			
1762.	19582	*Olearia trifurcata*			
1763.	6465	*Oligarrhena micrantha*			
1764.	20661	*Oncosiphon suffruticosum (Calomba Daisy)*	Y		
1765.	7348	*Opercularia hispidula (Hispid Stinkweed)*			
1766.	18256	*Opercularia spermacocea*			
1767.	18255	*Opercularia vaginata (Dog Weed)*			
1768.	46217	*Orianthera callosa*			
1769.	46255	*Orianthera campanulata*			
1770.	46316	*Orianthera serpyllifolia subsp. angustifolia*			
1771.	36181	*Ornduffia parnassifolia*			
1772.	4113	*Ornithopus compressus (Yellow Serradella)*	Y		
1773.	4115	*Ornithopus sativus (French Serradella)*	Y		
1774.	7122	*Orobanche minor (Lesser Broomrape)*	Y		
1775.	27107	*Osmundaria prolifera*			
1776.	30375	*Oxalis exilis*			
1777.	4355	*Oxalis perennans*			
1778.	34841	*Oxymyrrhine gracilis*			
1779.	12645	*Ozothamnus lepidophyllus*			
1780.	502	*Panicum capillare (Witchgrass)*	Y		
1781.	2964	*Papaver hybridum (Rough Poppy)*	Y		
1782.	1667	*Paracaleana nigrita (Flying Duck Orchid)*			
1783.	23499	*Paracaleana parvula*		P2	
1784.	516	*Parapholis incurva (Coast Barbgrass)*	Y		
1785.	1545	*Patersonia inaequalis (Unequal Bract Patersonia)*		P2	

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1786.	1546	*Patersonia juncea (Rush Leaved Patersonia)*			
1787.	19670	*Patersonia lanata forma calvata*			
1788.	19669	*Patersonia lanata forma lanata*			
1789.	1549	*Patersonia maxwellii*			
1790.	1550	*Patersonia occidentalis (Purple Flag, Koma)*			
1791.	30472	*Patersonia occidentalis var. occidentalis*			
1792.	1552	*Patersonia rudis (Hairy Flag)*			
1793.	4343	*Pelargonium capitatum (Rose Pelargonium)*	Y		
1794.	4344	*Pelargonium drummondii*			
1795.	4346	*Pelargonium littorale*			
1796.	40423	*Pentameris airoides (False Hairgrass)*	Y		
1797.	11052	*Persicaria prostrata*			
1798.	15136	*Persoonia cymbifolia*		P3	
1799.	2275	*Persoonia scabra*		P3	
1800.	2279	*Persoonia teretifolia*			
1801.	2296	*Petrophile fastigiata*			
1802.	2304	*Petrophile phylicoides*			
1803.	2311	*Petrophile squamata*			
1804.	20053	*Petrophile squamata subsp. northern (J. Monks 40)*			
1805.	2313	*Petrophile teretifolia*			
1806.	551	*Phalaris minor (Lesser Canary Grass)*	Y		
1807.	4501	*Phebalium lepidotum*			
1808.	18536	*Philotheca fitzgeraldii*			
1809.	18515	*Philotheca gardneri subsp. gardneri*			
1810.	18532	*Philotheca nodiflora subsp. lasiocalyx*			
1811.	1173	*Philydrella pygmaea (Butterfly Flowers)*			
1812.	555	*Phragmites australis (Common Reed)*	Y		
1813.	16825	*Phyllangium divergens*			
1814.	4675	*Phyllanthus calycinus (False Boronia)*			
1815.	4685	*Phyllanthus scaber*			
1816.	4	*Phylloglossum drummondii (Pigmy Clubmoss)*			
1817.	6007	*Phymatocarpus maxwellii*			
1818.	5231	*Pimelea angustifolia (Narrow-leaved Pimelea)*			
1819.	5232	*Pimelea argentea (Silvery Leaved Pimelea)*			
1820.	5234	*Pimelea brachyphylla*			
1821.	11282	*Pimelea brevifolia subsp. brevifolia*			
1822.	5240	*Pimelea cracens*			
1823.	5241	*Pimelea drummondii*			
1824.	5242	*Pimelea erecta*			
1825.	5243	*Pimelea ferruginea*			
1826.	11402	*Pimelea imbricata var. piligera*			
1827.	12701	*Pimelea pelinos*		P1	
1828.	5267	*Pimelea subvillifera*			
1829.	6804	*Pityrodia chrysocalyx*		P3	
1830.	7297	*Plantago coronopus (Buckshorn Plantain)*	Y		
1831.	7301	*Plantago exilis*			
1832.	6249	*Platysace compressa (Tapeworm Plant)*			
1833.	6250	*Platysace deflexa*			
1834.	6252	*Platysace effusa*			
1835.	27150	*Platysiphonia victoriae*			
1836.	27156	*Plocamium mertensii*			
1837.	27157	*Plocamium preissianum*			
1838.	577	*Poa poiformis (Coastal Poa)*			
1839.	8173	*Podolepis capillaris (Wiry Podolepis)*			
1840.	8180	*Podolepis rugata (Pleated Podolepis)*			
1841.	8181	*Podolepis tepperi*			
1842.	8182	*Podotheca angustifolia (Sticky Longheads)*			
1843.	8188	*Pogonolepis stricta*			
1844.	2419	*Polygonum aviculare (Wireweed)*	Y		
1845.	582	*Polypogon monspeliensis (Annual Beardgrass)*	Y		
1846.	27173	*Polysiphonia decipiens*			
1847.	27177	*Polysiphonia mollis*			Y
1848.	14547	*Pomaderris brevifolia*			
1849.	4818	*Pomaderris myrtilloides*			
1850.	16191	*Pomaderris rotundifolia*			
1851.	122	*Posidonia angustifolia*			
1852.	123	*Posidonia australis (Fibreball Weed)*			
1853.	106	*Posidonia denhartogii*			
1854.	107	*Posidonia kirkmanii*			
1855.	124	*Posidonia ostenfeldii*			

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1856.	108	*Posidonia robertsoniae*			
1857.	125	*Posidonia sinuosa*			
1858.	110	*Potamogeton drummondii*			
1859.	15424	*Praecoxanthus aphyllus*			
1860.	15425	*Prasophyllum calcicola*			
1861.	1671	*Prasophyllum elatum (Tall Leek Orchid)*			
1862.	1672	*Prasophyllum fimbria (Fringed Leek Orchid)*			
1863.	1674	*Prasophyllum giganteum (Bronze Leek Orchid)*			
1864.	1677	*Prasophyllum macrostachyum (Laughing Leek Orchid)*			
1865.	17650	*Prasophyllum odoratissimum*			
1866.	1680	*Prasophyllum parvifolium (Autumn Leek Orchid)*			
1867.	1682	*Prasophyllum sargentii*			
1868.	6911	*Prostanthera baxteri*			
1869.	11304	*Prostanthera serpyllifolia subsp. microphylla*			
1870.	8189	*Pseudognaphalium luteoalbum (Jersey Cudweed)*			
1871.	13255	*Pterochaeta paniculata*			
1872.		*Pterostylis aff. nana*			
1873.	48670	*Pterostylis arbuscula*			
1874.	1687	*Pterostylis dilatata*			
1875.	1689	*Pterostylis mutica (Midget Greenhood)*			
1876.	1693	*Pterostylis recurva (Jug Orchid)*			
1877.	1694	*Pterostylis rogersii (Curled-tongue Shell Orchid)*			
1878.	1696	*Pterostylis sargentii (Frog Greenhood)*			
1879.	41981	*Pterostylis timothyi*			
1880.	10998	*Pterostylis turfosa (Bird Orchid)*			
1881.	1698	*Pterostylis vittata (Banded Greenhood)*			
1882.	27204	*Ptilocladia vestita*			
1883.	2732	*Ptilotus holosericeus*			
1884.	2733	*Ptilotus humilis*			
1885.	2758	*Ptilotus seminudus*			
1886.	32417	*Ptychostomum angustifolium*			
1887.	31672	*Puccinellia longior*			
1888.	592	*Puccinellia stricta (Marsh Grass)*			
1889.	4165	*Pultenaea barbata*			
1890.	4170	*Pultenaea elachista*			
1891.	4172	*Pultenaea ericifolia*			
1892.	28286	*Pultenaea heterochila*			
1893.	20785	*Pultenaea indira subsp. indira*			
1894.	20790	*Pultenaea purpurea*			
1895.	4184	*Pultenaea spinulosa*			
1896.	4186	*Pultenaea tenuifolia*			
1897.	4187	*Pultenaea verruculosa*			
1898.	16367	*Pyrorchis nigricans (Red beaks, Elephants ears)*			
1899.	8195	*Quinetia urvillei*			
1900.	3061	*Raphanus raphanistrum (Wild Radish)*	Y		
1901.	3063	*Rapistrum rugosum (Turnip Weed)*	Y		
1902.	6014	*Regelia inops*			
1903.	27211	*Rhabdonia coccinea*			
1904.	2578	*Rhagodia baccata (Berry Saltbush)*			
1905.	2580	*Rhagodia crassifolia (Fleshy Saltbush)*			
1906.	2584	*Rhagodia preissii*			
1907.	13300	*Rhodanthe citrina*			
1908.	13294	*Rhodanthe laevis*			
1909.	13234	*Rhodanthe manglesii*			
1910.	13252	*Rhodanthe pygmaea*			
1911.	31911	*Ricinocarpos megalocarpus*			
1912.	11096	*Rinzia dimorphandra (Esperance Rinzia)*			
1913.	48269	*Rinzia icosandra (Recherche Mainland Rinzia)*			
1914.	48887	*Roepera billardierei*			
1915.	1556	*Romulea rosea (Guildford Grass)*	Y		
1916.	10970	*Rostraria cristata*	Y		
1917.	32426	*Rosulabryum campylothecium*			
1918.	32429	*Rosulabryum torquescens*			
1919.	20496	*Rubus laudatus*	Y		
1920.	2429	*Rumex acetosella (Sorrel)*	Y		
1921.	2430	*Rumex brownii (Swamp Dock)*	Y		
1922.	46434	*Rumex hypogaeus*	Y		
1923.	115	*Ruppia megacarpa*			
1924.	116	*Ruppia polycarpa*			
1925.	117	*Ruppia tuberosa*			

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1926.	40431	*Rytidosperma acerosum*			
1927.	40425	*Rytidosperma caespitosum*			
1928.	40427	*Rytidosperma setaceum*			
1929.	48433	*Salicornia blackiana*			
1930.	48430	*Salicornia quinqueflora*			
1931.	48431	*Salicornia quinqueflora subsp. quinqueflora (Beaded Glasswort)*			
1932.	6928	*Salvia reflexa (Mintweed)*	Y		
1933.	6483	*Samolus junceus*			
1934.	6484	*Samolus repens (Creeping Brookweed)*			
1935.	2356	*Santalum acuminatum (Quandong, Warnga)*			
1936.	2817	*Sarcozona praecox (Sarcozona)*			
1937.	20525	*Scaevola archeriana*		P1	
1938.	7606	*Scaevola crassifolia (Thick-leaved Fan-flower)*			
1939.	7607	*Scaevola cuneiformis (Wedge-leaved Scaevola)*			
1940.	7614	*Scaevola globulifera*			
1941.	7639	*Scaevola restiacea*			
1942.	13151	*Scaevola thesioides subsp. filifolia*			
1943.	41660	*Schenkia australis*			
1944.	976	*Schoenus breviculmis*			
1945.	978	*Schoenus brevisetis*			
1946.	979	*Schoenus caespititius*			
1947.	984	*Schoenus curvifolius*			
1948.	992	*Schoenus grandiflorus (Large Flowered Bogrush)*			
1949.	994	*Schoenus humilis*			
1950.	996	*Schoenus laevigatus*			
1951.	1004	*Schoenus nitens (Shiny Bog-rush)*			
1952.	1005	*Schoenus obtusifolius*			
1953.	1006	*Schoenus odontocarpus*			
1954.	1009	*Schoenus pleiostemoneus*			
1955.	17614	*Schoenus plumosus*			
1956.	16089	*Schoenus racemosus*			
1957.	1013	*Schoenus sculptus (Gimlet Bog-rush)*			
1958.	14626	*Schoenus sp. A1 Boorabbin (K.L. Wilson 2581)*			
1959.	16273	*Schoenus sp. Grey Rhizome (K.L. Wilson 2922)*		P1	
1960.	1016	*Schoenus subbarbatus (Bearded Bog-rush)*			
1961.	1018	*Schoenus subfascicularis*			
1962.	1019	*Schoenus subflavus (Yellow Bog-rush)*			
1963.	16251	*Schoenus subflavus subsp. long leaves (K.L. Wilson 2865)*			
1964.	1022	*Schoenus submicrostachyus*			
1965.	6544	*Sebaea ovata (Yellow Sebaea)*			
1966.	32433	*Sematophyllum homomallum*			
1967.	8207	*Senecio glossanthus (Slender Groundsel)*			
1968.	8216	*Senecio picridioides*			
1969.	25882	*Senecio pinnatifolius var. maritimus (Coastal Groundsel)*			
1970.	25883	*Senecio pinnatifolius var. pinnatifolius*			
1971.	7362	*Sherardia arvensis (Field Madder)*	Y		
1972.	4823	*Siegfriedia darwinioides*			
1973.	8224	*Siloxerus filifolius*			
1974.	14583	*Siloxerus multiflorus*			
1975.	8226	*Siloxerus pygmaeus*			
1976.	3071	*Sisymbrium officinale (Hedge Mustard)*	Y		
1977.	3072	*Sisymbrium orientale (Indian Hedge Mustard)*	Y		
1978.	7017	*Solanum laciniatum (Kangaroo Apple)*	Y		
1979.	7022	*Solanum nigrum (Black Berry Nightshade)*	Y		
1980.	7033	*Solanum rostratum (Buffalo Burr)*	Y		
1981.	7037	*Solanum symonii*			
1982.	45036	*Solidago chilensis*	Y		
1983.	8230	*Sonchus asper (Rough Sowthistle)*	Y		
1984.	9367	*Sonchus hydrophilus (Native Sowthistle)*			
1985.	8231	*Sonchus oleraceus (Common Sowthistle)*	Y		
1986.	614	*Sorghastrum nutans*	Y		Y
1987.	617	*Sorghum halepense (Johnson Grass)*	Y		
1988.	1560	*Sparaxis pillansii (Harlequin Flower)*	Y		
1989.	2914	*Spergularia diandra (Lesser Sand Spurry)*	Y		
1990.	8900	*Spergularia marina*			
1991.	2915	*Spergularia rubra (Sand Spurry)*	Y		
1992.	4201	*Sphaerolobium daviesioides (Prickly Globe-pea)*			
1993.	4205	*Sphaerolobium linophyllum*			
1994.	4206	*Sphaerolobium macranthum*			
1995.	624	*Spinifex hirsutus (Hairy Spinifex)*			

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1996.	635	*Sporobolus virginicus (Marine Couch)*			
1997.	27309	*Spyridia dasyoides*			
1998.	27310	*Spyridia filamentosa*			
1999.	4828	*Spyridium globulosum (Basket Bush)*			
2000.	4830	*Spyridium microcephalum (Small-headed Spyridium)*			
2001.	14243	*Spyridium minutum*			
2002.	14795	*Spyridium mucronatum subsp. multiflorum*		P2	
2003.	15140	*Spyridium polycephalum*			
2004.	31916	*Spyridium sp. Jerdacuttup (A. Williams 332)*			
2005.	4714	*Stachystemon brachyphyllus*			
2006.	4715	*Stachystemon polyandrus*			
2007.	20540	*Stachystemon vinosus*		P4	
2008.	20537	*Stachystemon virgatus*			
2009.	4733	*Stackhousia monogyna*			
2010.	4734	*Stackhousia muricata*			
2011.	9070	*Stackhousia pubescens (Downy Stackhousia)*			
2012.	43662	*Stackhousia sp. Thick sepals (A.E. Orchard 1547)*			
2013.	1315	*Stawellia gymnocephala*			
2014.	2918	*Stellaria media (Chickweed)*	Y		
2015.	15065	*Stenanthemum notiale subsp. notiale*			
2016.	16375	*Stirlingia anethifolia*			
2017.	2317	*Stirlingia simplex*			
2018.	27318	*Struvea plumosa*			
2019.	7678	*Stylidium adnatum (Common Beaked Triggerplant)*			
2020.	7682	*Stylidium albomontis*			
2021.	7687	*Stylidium assimile (Bronze-leaved Triggerplant)*			
2022.	7692	*Stylidium breviscapum (Boomerang Triggerplant)*			
2023.	12057	*Stylidium corymbosum var. corymbosum*			
2024.	7741	*Stylidium insensitivum (Insensitive Trigger Plant)*			
2025.	7758	*Stylidium macranthum (Crab Claws)*			
2026.	7772	*Stylidium perpusillum (Tiny Triggerplant)*			
2027.	7774	*Stylidium piliferum (Common Butterfly Triggerplant)*			
2028.	7775	*Stylidium pilosum (Silky Triggerplant)*			
2029.	7777	*Stylidium preissii (Lizard Triggerplant)*			
2030.	7785	*Stylidium repens (Matted Triggerplant)*			
2031.	7794	*Stylidium rupestre (Rock Triggerplant)*			
2032.		*Stylidium sp.*			
2033.	20599	*Stylidium turleyae*			
2034.	1260	*Stypandra glauca (Blind Grass)*			
2035.	6473	*Styphelia intertexta*			
2036.	48618	*Styphelia sp. South Coast (J.M. Powell 3374)*			
2037.	2639	*Suaeda australis (Seablite)*			
2038.	2640	*Suaeda baccifera*	Y		
2039.	43203	*Surreya diandra*			
2040.	25902	*Symphyotrichum squamatum (Bushy Starwort)*	Y		
2041.	16860	*Synaphea media*			
2042.	12911	*Synaphea obtusata*			
2043.	16772	*Synaphea oligantha*			
2044.	2324	*Synaphea petiolaris (Synaphea)*			
2045.	16864	*Synaphea petiolaris subsp. petiolaris*			
2046.	2329	*Synaphea spinulosa*			
2047.	15534	*Synaphea spinulosa subsp. major*			
2048.	32437	*Syntrichia antarctica*			
2049.	20102	*Taxandria callistachys*			
2050.	20134	*Taxandria marginata*			
2051.	20103	*Taxandria spathulata*			
2052.	31552	*Tecticornia arbuscula*			
2053.	33236	*Tecticornia halocnemoides (Shrubby Samphire)*			
2054.	31873	*Tecticornia indefessa*		P2	
2055.	33319	*Tecticornia indica subsp. bidens*			
2056.	31718	*Tecticornia lepidosperma*			
2057.	34823	*Tecticornia loriae*			
2058.	31675	*Tecticornia lylei*			
2059.	33297	*Tecticornia pergranulata subsp. pergranulata (Blackseed Samphire)*			
2060.	33218	*Tecticornia pterygosperma subsp. pterygosperma*			
2061.	34845	*Tecticornia sparagosa*			
2062.	31716	*Tecticornia syncarpa*			
2063.	4256	*Templetonia retusa (Cockies Tongues)*			
2064.	35842	*Templetonia rossii*			
2065.	2823	*Tetragonia implexicoma (Bower Spinach)*			

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2066.	46437	*Tetrapora preissiana*			
2067.	1034	*Tetraria capillaris (Hair Sedge)*			
2068.	35582	*Tetraria sp. Mt Madden (C.D. Turley 40 BP/897)*			
2069.	6935	*Teucrium myriocladum*			
2070.		*Thelymitra aff. pauciflora*			
2071.	1701	*Thelymitra antennifera (Vanilla Orchid)*			
2072.	10856	*Thelymitra benthamiana (Leopard Orchid)*			
2073.	1705	*Thelymitra crinita (Blue Lady Orchid)*			
2074.	11143	*Thelymitra graminea*			
2075.	20732	*Thelymitra petrophila*			
2076.		*Thelymitra sp.*			
2077.	20735	*Thelymitra speciosa*			
2078.	1716	*Thelymitra tigrina (Tiger Orchid)*			
2079.	1718	*Thelymitra villosa (Custard Orchid)*			
2080.	20731	*Thelymitra vulgaris*			
2081.	5075	*Thomasia angustifolia (Narrow Leaved Thomasia)*			
2082.	5077	*Thomasia cognata*			
2083.	5086	*Thomasia macrocalyx*			
2084.	5088	*Thomasia microphylla*			
2085.	5093	*Thomasia petalocalyx (Paper Flower)*			
2086.	5094	*Thomasia purpurea*			
2087.	5105	*Thomasia triphylla*			
2088.	19698	*Thryptomene australis subsp. australis*			
2089.	6065	*Thryptomene saxicola (Rock Thryptomene)*			
2090.	27330	*Thuretia australasica*			
2091.	27331	*Thuretia quercifolia*			
2092.	1323	*Thysanotus brachiatus*		P2	
2093.	1328	*Thysanotus dichotomus (Branching Fringe Lily)*			
2094.	1338	*Thysanotus manglesianus (Fringed Lily)*			
2095.	1341	*Thysanotus nudicaulis*			
2096.	1343	*Thysanotus patersonii*			
2097.	1351	*Thysanotus sparteus*			
2098.	1358	*Thysanotus triandrus*			
2099.	32444	*Tortula atrovirens*			
2100.	1368	*Trachyandra divaricata*	Y		
2101.	19047	*Trachymene anisocarpa var. trichocarpa*		P3	
2102.	6268	*Trachymene cyanopetala*			
2103.	6279	*Trachymene ornata (Spongefruit)*			
2104.	6280	*Trachymene pilosa (Native Parsnip)*			
2105.	11112	*Tribolium uniolae*	Y		
2106.	1485	*Tribonanthes violacea (Violet Tiurndin)*			
2107.	32449	*Trichostomum brachydontium*			
2108.	32450	*Trichostomum eckelianum*			
2109.	1361	*Tricoryne elatior (Yellow Autumn Lily)*			
2110.	41648	*Tricostularia aphylla*			
2111.	1037	*Tricostularia compressa*			
2112.	4289	*Trifolium angustifolium (Narrowleaf Clover)*	Y		
2113.	17542	*Trifolium arvense var. arvense*	Y		
2114.	4292	*Trifolium campestre (Hop Clover)*	Y		
2115.	4296	*Trifolium fragiferum (Strawberry Clover)*	Y		
2116.	4312	*Trifolium striatum (Knotted Clover)*	Y		
2117.	146	*Triglochin minutissima*			
2118.	147	*Triglochin mucronata*			
2119.	151	*Triglochin striata*			
2120.	152	*Triglochin trichophora*			
2121.	4737	*Tripterococcus brunonis (Winged Stackhousia)*			
2122.	32451	*Triquetrella papillata*			
2123.	13479	*Trymalium ledifolium var. rosmarinifolium*			
2124.	98	*Typha domingensis (Bulrush, Djandjid)*			
2125.	35260	*Ulva compressa*			
2126.	8255	*Ursinia anthemoides (Ursinia)*	Y		
2127.	38388	*Ursinia anthemoides subsp. anthemoides*	Y		
2128.	1766	*Urtica incisa (Scrub Nettle)*			
2129.	7145	*Utricularia menziesii (Redcoats)*			
2130.	7148	*Utricularia multifida*			
2131.	7153	*Utricularia tenella*			
2132.	13160	*Velleia exigua*		P2	
2133.	7665	*Velleia trinervis*			
2134.	6072	*Verticordia brownii*			
2135.	6073	*Verticordia chrysantha*			

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2136.	6076	*Verticordia densiflora (Compacted Featherflower)*			
2137.	15432	*Verticordia densiflora var. densiflora*			
2138.	6079	*Verticordia fastigiata (Mouse Featherflower)*			
2139.	6090	*Verticordia humilis*			
2140.	12432	*Verticordia inclusa*			
2141.	6096	*Verticordia minutiflora*			
2142.	12450	*Verticordia plumosa var. grandiflora*			
2143.	12451	*Verticordia plumosa var. incrassata*			
2144.	14718	*Verticordia sieberi var. sieberi*			
2145.	12470	*Verticordia vicinella*			
2146.	11474	*Vicia sativa subsp. nigra*	Y		
2147.	27360	*Vidalia spiralis*			
2148.	4325	*Viminaria juncea (Swishbush, Koweda)*			
2149.	8260	*Vittadinia australasica*			
2150.	8266	*Vittadinia gracilis*			
2151.	12052	*Vulpia myuros forma megalura*	Y		
2152.	33101	*Vulpia myuros forma myuros*	Y		
2153.		*Vulpia sp.*			
2154.	7384	*Wahlenbergia capensis (Cape Bluebell)*	Y		
2155.	7386	*Wahlenbergia gracilenta (Annual Bluebell)*			
2156.	7389	*Wahlenbergia preissii*			
2157.	8275	*Waitzia acuminata (Orange Immortelle)*			
2158.	18108	*Watsonia meriana var. bulbillifera*	Y		
2159.	6939	*Westringia dampieri*			
2160.	9247	*Westringia rigida (Stiff Westringia)*			
2161.	6658	*Wilsonia backhousei (Narrow-leaf Wilsonia)*			
2162.	6659	*Wilsonia humilis (Silky Wilsonia)*			
2163.	6660	*Wilsonia rotundifolia (Round-leaf Wilsonia)*			
2164.	27364	*Wollastoniella myriophylloides*			
2165.	27369	*Wrangelia velutina*			
2166.	1389	*Wurmbea cernua*			
2167.	1394	*Wurmbea dioica (Early Nancy)*			
2168.	1255	*Xanthorrhoea platyphylla*			
2169.	6289	*Xanthosia huegelii*			
2170.	16992	*Yucca aloifolia*	Y		

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

[1] For NatureMap's purposes, species flagged as endemic are those whose records are wholely 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.